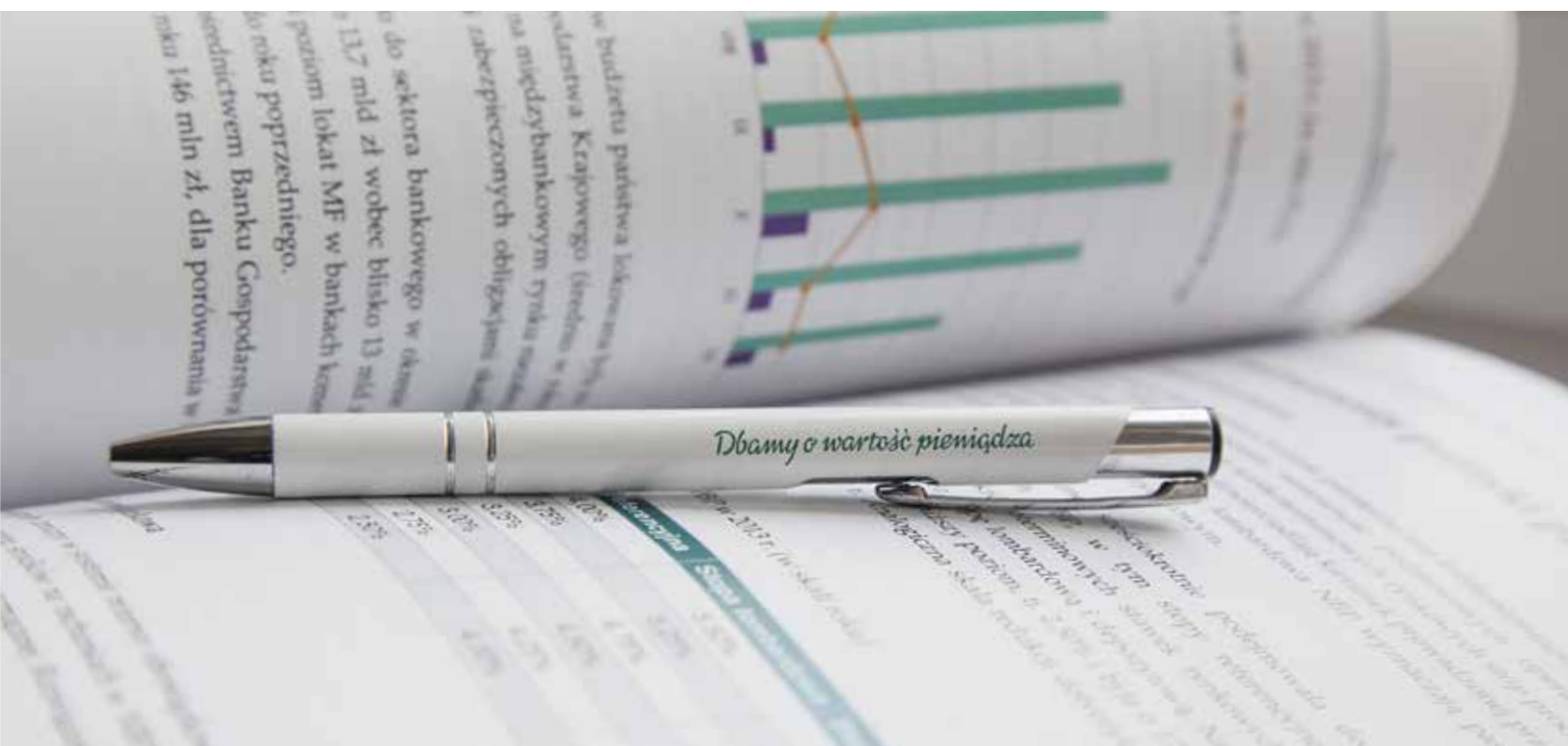


Annual Report 2016

Banking Sector Liquidity Monetary Policy Instruments of Narodowy Bank Polski



Annual Report 2016

Banking Sector Liquidity Monetary Policy Instruments of Narodowy Bank Polski

Warsaw, 2017

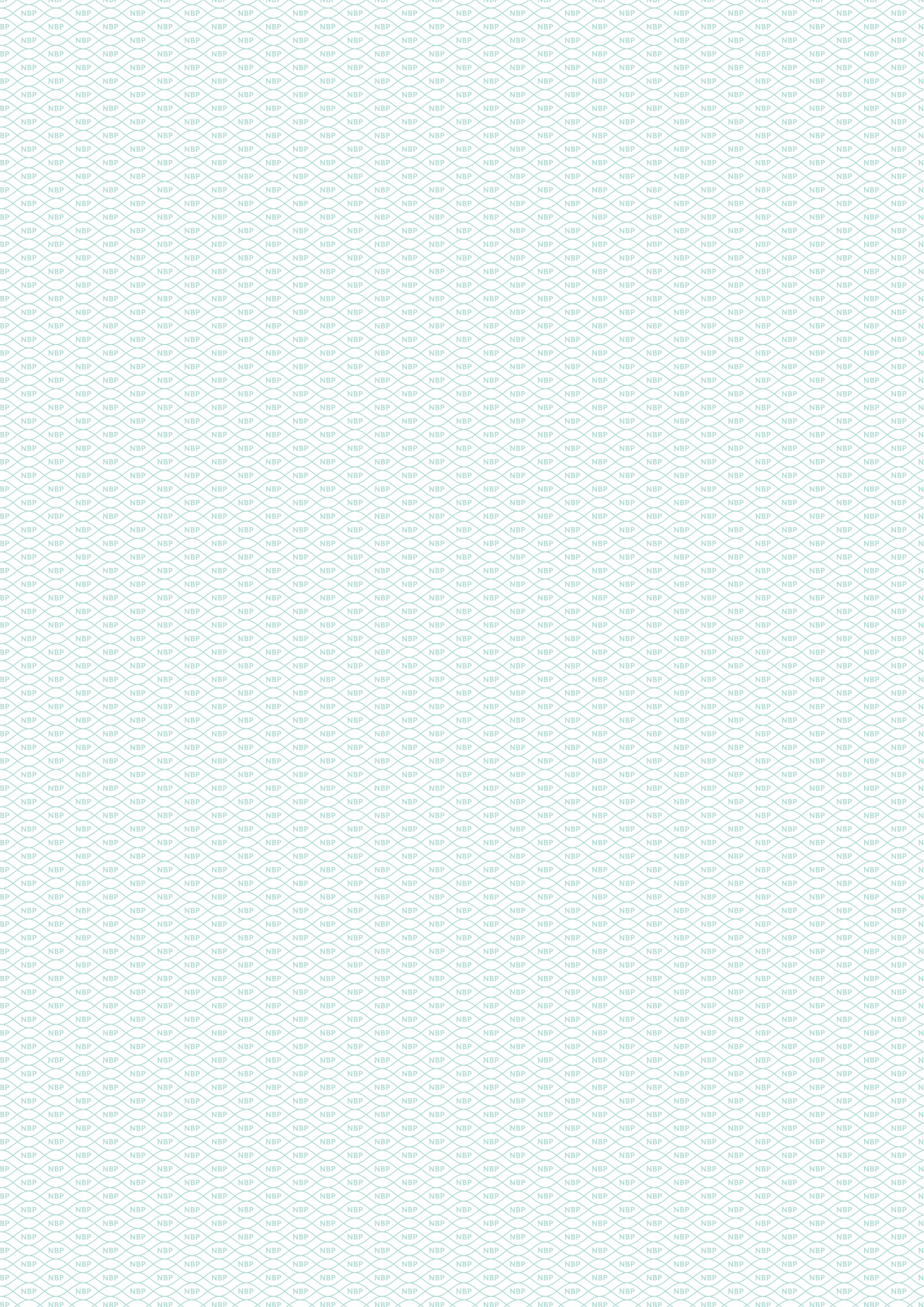
Developed by:
Domestic Operations Department

Published by:
Narodowy Bank Polski
ul. Świętokrzyska 11/21
00-919 Warszawa,
www.nbp.pl

© Copyright Narodowy Bank Polski, 2017

Table of contents

Introduction	5
Chapter 1 Banking sector liquidity	9
1.1 Liquidity developments in 2016	10
1.2 Impact of autonomous factors on changes in banking sector liquidity	12
1.2.1 Currency in circulation	12
1.2.2 Purchase and sale of foreign currencies by NBP	13
1.2.3 Public sector deposits held with the central bank	16
Chapter 2 Monetary policy instruments	19
2.1 Interest rate	20
2.2 Open market operations	20
2.2.1 Main operations	21
2.2.2 Fine-tuning operations	22
2.3 Reserve requirement	24
2.4 Standing facilities	25
2.4.1 Deposit facility	25
2.4.2 Marginal lending facility	26
Chapter 3 Other operations	27
3.1 Intraday credit facility	28
3.2 Intraday credit facility in euro	28
Glossary	29
Annexes	33
Annex 1 Volatility of the short-term interest rates in the years 1998–2016	34
Annex 2 The NBP monetary policy instruments in the years 1990–2016	35
Annex 3 Main operations in 2016	36
Annex 4 Fine-tuning operations in 2016	37
Annex 5 Agreements with the Ministry of Finance	38
Annex 6 Money Market Dealers in 2016	39
Annex 7 Daily information (as at the month-end)	40
List of Tables	41
List of Figures	42



Introduction



Introduction

In 2016, Narodowy Bank Polski (NBP) pursued monetary policy in accordance with the Monetary Policy Guidelines for 2016.

The basic instrument of the monetary policy in 2016 was the short-term interest rate – the NBP reference rate. By setting the level of the NBP reference rate, the Monetary Policy Council determines the yields on the monetary policy instruments. Changes in the level of this rate determine the course of monetary policy and affect the path of market rates. The deposit rate and the lombard rate set the fluctuation band for overnight interest rates in the interbank market, which is symmetric with respect to the reference rate.

In 2016, the Monetary Policy Council made no changes in interest rates. The last change (lowering by 50 basis points) took place in March 2015. Throughout 2016 the reference rate stood at 1.5%, the deposit rate at 0.5%, and the lombard rate at 2.5%.

NBP manages the banking sector liquidity and implements the adopted monetary policy guidelines by carrying out open market operations in a manner allowing short-term market rates to be maintained at a level conducive to the implementation of the inflation target assumed by the Monetary Policy Council. In 2016, the main open market operations involved the issuance of 7-day NBP bills on a regular basis. The fine-tuning operations involved the regular (on the last working day of the reserve maintenance period) and ad hoc (during the reserve maintenance period) issuance of NBP bills with shorter maturities than the main operations and were aimed to reduce the volatility of short-term market interest rates.

Access to the open market operations, the main ones and the regularly conducted fine-tuning ones, was granted to all banks complying with the terms and conditions set by NBP; also the Bank Guarantee Fund (BFG) had access to the main open market operations. Banks operating as Money Market Dealers had access to the ad hoc fine-tuning operations. In 2016, 15 banks most active in the money market and foreign currency markets obtained the status of a Money Market Dealer.

Commercial banks also had the possibility of using standing facilities, placed at their disposal by NBP, to facilitate their short-term liquidity management. Banks were able to deposit excess funds with NBP via overnight deposit facility and to cover liquidity shortages via the marginal lending facility.

In 2016, NBP did not carry out any structural operations targeted at a long-term change in the banking sector liquidity.

In the year mentioned above, short-term banking sector liquidity level, measured as the average annual balance of central bank operations, was reduced. These operations comprised of the NBP bills issuance and standing facilities.

Table I Average level open market operations (NBP bills and repo), FX swaps and standing facilities in the years 2001–2016 (in PLN million)

Period	NBP bills	Repos	FX swaps	Standing facilities		
				deposit facility	marginal lending facility	balance (deposit – credit)
2016	72 438	0	0	772	4	768
2015	89 092	0	0	500	0	500
2014	108 518	0	0	298	0	298
2013	126 078	0	0	463	0	463
2012	95 913	0	0	393	0	393
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	-90
2001	14 701	–	–	715	234	481

Note: the average values are quoted in annualized terms in the reserve maintenance periods.

Source: NBP.

In 2016, the average level of short-term banking sector liquidity was PLN 73.206 billion. Compared to the average level of the previous year, liquidity decreased by PLN 16.386 billion. In the course of the year, the level of short-term banking sector liquidity dropped from PLN 87.664 billion in December 2015 to PLN 76.944 billion in December 2016, which means a decline by PLN 10.720 billion. The reduction in liquidity resulted mainly from an increase in currency in circulation and the required reserve.

In 2016, the average issue of NBP bills amounted to PLN 72.438 billion, of which 98.3% (PLN 71.175 billion) was sold under main operations and 1.7% (PLN 1.263 billion) – under fine-tuning operations. The yield on main open market operations was determined at the reference rate level.

The average level of standing facilities was PLN 768 million. The deposit rate determined the yield on the overnight deposit facility and the lombard rate – costs of the marginal lending facility.

The year 2016 saw a slightly higher volatility of the POLONIA rate in comparison with 2015. The average absolute deviation of the POLONIA rate from the reference rate in 2016 was 16 bps (versus 12 bps in 2015). Maintaining the POLONIA rate near the reference rate was achieved by means of main open market operations as well as regular and irregular fine-tuning operations.

Table II Market rates in the years 2001–2016

Period	Average reference rate (in %)*	Deviation of rates from reference rate in basis points (annual average)**				
		O/N	SW	2W	1M	POLONIA
2016	1.50	15	7	8	10	16
2015	1.58	10	9	10	12	12
2014	2.39	9	6	6	7	11
2013	2.94	8	5	5	7	18
2012	4.61	10	3	5	11	21
2011	4.22	21	3	3	9	43
2010	3.50	49	17	10	7	69
2009	3.77	69	23	14	11	89
2008	5.72	30	16	19	30	32
2007	4.40	19	9	11	16	23
2006	4.06	10	6	6	7	16
2005	5.34	21	6	6	9	29
2004	5.79	40	11	10	15	–
2003	5.67	28	8	7	9	–
2002	8.82	90	60	–	32	–
2001	16.13	142	–	–	42	–

* Average reference rate was weighted by its duration.

** Deviations of rates against the reference rate – an uniform basis of 365 days per year was used.

Source: NBP.

The arrangement used by NBP, which helps to smooth the fluctuations in short-term interest rates and to stabilise the banking sector liquidity is the required reserve system. An essential feature of this instrument is the committing of the banks to maintain, in the required reserve period, funds on accounts with NBP at an average level not lower than the required reserve. In 2016, the basic required reserve rate did not change and amounted to 3.5%. Interest on the required reserve was 0.9 of the reference rate.

Chapter 1

Banking sector liquidity

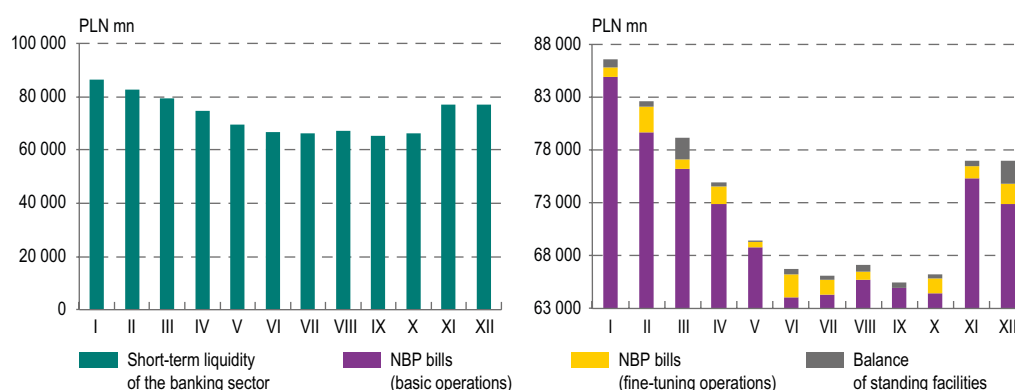


Banking sector liquidity

1.1 Liquidity developments in 2016

In 2016, monetary policy was conducted – as in previous years – in an environment of excess liquidity of the banking sector. Short-term banking sector liquidity (measured by the level of NBP bills issuance and standing facilities) reached PLN 86.504 billion in January 2016 as compared to PLN 76.944 billion in December 2016.

Figure 1.1 Short-term liquidity of the banking sector in 2016



Source: NBP.

In 2016, the average level of short-term banking sector liquidity decreased by PLN 10.720 billion, i.e. by 12.2%, as compared with December 2015.

Among autonomous factors affecting the decline in the liquidity of the banking sector the increase in currency in circulation was of the key importance. Currency growth amounted to PLN 24.190 billion (December 2016 to December 2015). The annual growth in currency in circulation in 2016¹ amounted to 14.9%, compared to 15.6% in 2015.

Another factor reducing liquidity was an increase in the level of banks' required reserve, amounting to PLN 2.984 billion in 2016, which means a 4.59% growth as compared to 2015. The growth in the level of the reserve requirement in 2016 reflected a regular increase in banking sector deposits.

The deposits of the public sector had a relatively low impact on the decline in the banking sector liquidity, having increased, on average, by PLN 51 million in December 2016, compared to December 2015.

The factor adding the most to the increase in the liquidity of the banking sector in 2016 was the purchase of foreign currencies by NBP. The central bank purchased foreign currencies mainly from the Ministry of Finance. Throughout the entire 2016, NBP purchased foreign

¹ Calculated as a comparison of the average level in December 2016 compared to the level in December of the previous year.

currency in the total amount equivalent to PLN 28.950 billion (in the previous year this amount reached PLN 35.314 billion). However, it should be emphasized that the purchase of foreign currency by NBP took place mainly in the fourth quarter of 2016, amounting to PLN 27.997 billion in this period. During the year, sale of foreign currency to convert Poland's membership fee paid to the European Union (EU) took place on a regular basis. The total sale of foreign currency by NBP amounted to PLN 21.987 billion. The given amounts of foreign currency purchase and sale also comprised foreign exchange operations related to services provided to the central government entities. In December 2016 to December 2015 terms, the average growth in the banking sector liquidity due to the balance of the purchase and sale of foreign currency by NBP amounted to PLN 6.042 billion.

The growth in liquidity was also driven by the payment of PLN 7.862 billion to the state budget from NBP profit effected on 12 July 2016.

In addition, the payments made by NBP to the banking sector arising from the discount of the NBP bills and required reserve remuneration caused an increase of banking sector liquidity. These factors resulted in the average total growth in liquidity by the amount of PLN 1.643 billion.

In order to maintain market interest rates at a stable level, in accordance with the Monetary Policy Guidelines for 2016, NBP absorbed the liquidity surplus by issuing NBP bills with a maturity of 7 days as main open market operations (the average value in 2016 was PLN 71.175 billion), and NBP bills with shorter maturities as fine-tuning operations (the average value in 2016 was PLN 1.263 billion). The total of 53 main open market operations and 15 fine-tuning operations were executed in 2016.

Table 1.1 Absorption of short-term liquidity as part of operations executed by NBP in 2016 (in PLN million)

	Average level of NBP bills (main operations)	Average level of NBP bills (fine-tuning operations)	Average level of overnight deposit	Average level of marginal lending facility	Average level of short-term banking sector liquidity
	(1)	(2)	(3)	(4)	(1) + (2) + (3) - (4)
January	84 878	904	725	3	86 504
February	79 598	2 518	520	0	82 636
March	76 139	966	2 037	0	79 142
April	72 868	1 602	445	39	74 876
May	68 822	426	177	0	69 425
June	63 995	2 219	570	0	66 784
July	64 246	1 481	352	0	66 079
August	65 745	672	654	0	67 071
September	64 994	0	427	0	65 421
October	64 470	1 340	454	0	66 264
November	75 353	1 052	563	0	76 969
December	72 807	1 951	2 186	0	76 944
On average	71 175	1 263	772	4	73 206

Note: average values during required reserve maintenance periods.

Source: NBP.

The excess funds not invested in open market operations were placed by banks as overnight deposit with NBP. In 2016, an average deposit amounted to PLN 772 million.

The direction of changes in banking sector liquidity during the year was not stable. The period from January to July 2016 saw a gradual decrease in banking sector liquidity, caused mainly by a growth in currency in circulation and sale of foreign currency by NBP in favour of the European Commission (EC) in connection with the conversion of the membership fee paid to the EU. In the subsequent three months, the level of the banking sector liquidity remained at a stable level. In November, the sharp increase in liquidity was associated with the purchase of foreign currency by NBP from the Ministry of Finance. The impact of the continued foreign currency purchase on the liquidity level in December was set off by a very high growth in currency in circulation.

1.2 Impact of autonomous factors on changes in banking sector liquidity

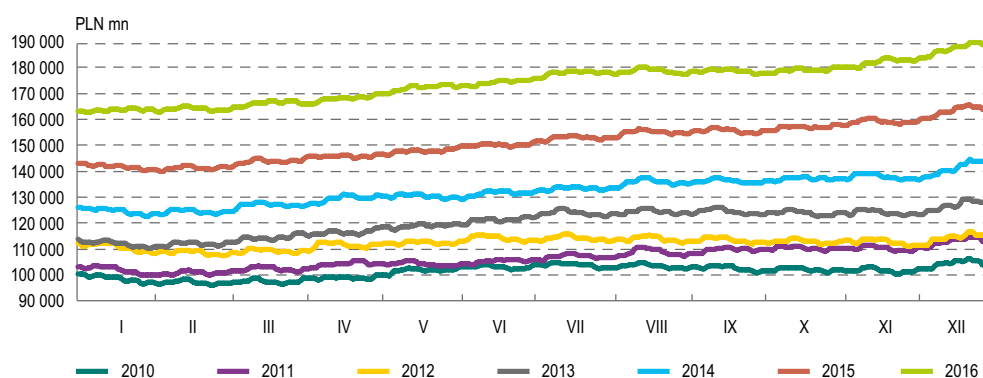
1.2.1 Currency in circulation

Currency in circulation is a monetary aggregate which has been growing steadily for many years. The average level of currency in circulation in December 2016 stood at PLN 186.890 billion, which means an increase of PLN 24.190 billion compared to December 2015 (in 2015 this growth totalled PLN 21.985 billion). The annual growth rate of currency in circulation in 2016 reached a level of 14.9%. Considerable increase in currency in circulation may be attributed, like in 2015, to NBP interest rates being maintained at a low and stable level. Given the absence of inflation, higher level of currency in circulation did not translate directly into public perception of lost profits.

The amount of currency in circulation was also affected by seasonal factors, which explain the changes in the level of this monetary aggregate in certain periods of 2016 (from weekly to yearly seasonality as well as increases observed in holiday periods).

In 2016, the path of changes in currency in circulation did not differ significantly from that observed in previous years. The growth rate of currency in circulation, however, was larger than in previous years. In subsequent months of 2016, the growth rate of currency in

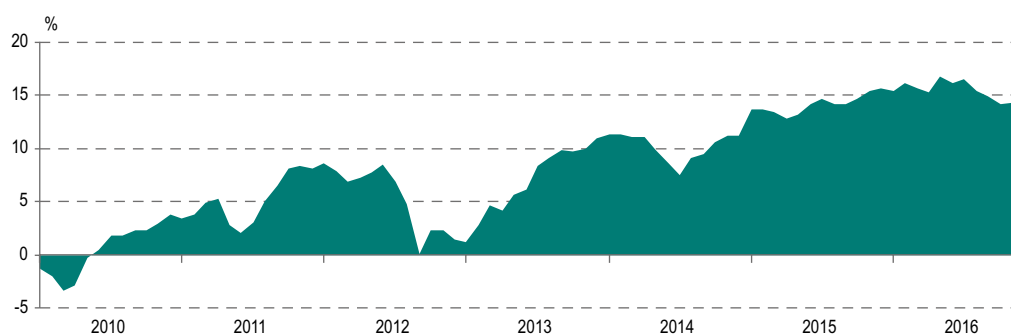
Figure 1.2 Currency in circulation in the years 2010–2016



Source: NBP.

circulation ranged between 14.1–16.7%. The most intensive growth in currency in circulation was recorded in the period from May 2016 (16.7%) to August 2016 (15.4%), whereas in the last month of 2016, the annual growth rate of this monetary aggregate amounted to 14.9%. Increased demand for currency in circulation at the end of the year was typical for the Christmas and New Year season.

Figure 1.3 Growth rate of currency in circulation in the years 2010–2016 (y/y)



Source: NBP.

1.2.2 Purchase and sale of foreign currencies by NBP

In 2016, purchase of foreign currencies by NBP prevailed over their sale. As a result of foreign exchange operations conducted by the central bank, the banking sector liquidity increased by PLN 6.042 billion, in December 2016 to December 2015 terms.

The purchase of foreign currencies by NBP included:

- purchase of foreign currencies from the Ministry of Finance within the limit set for 2016, amounted to PLN 27.915 billion; the largest item among those transactions was the purchase of foreign currency from the foreign currency account of the Ministry of Finance held with NBP (PLN 26.816 billion),
- services provided to the central government entities whose accounts are held with NBP, in the amount of PLN 828 million,
- conversion of EU funds into PLN directly from the EU fund accounts, equivalent to PLN 207 million.

Throughout 2016, NBP purchased foreign currencies amounting to a total of PLN 28.950 billion (in 2015, this amount reached PLN 35.314 billion). The purchase of foreign currency by NBP was mainly performed in the fourth quarter of 2016, amounting to PLN 27.997 billion in this period.

The sale of foreign currencies by NBP was related to:

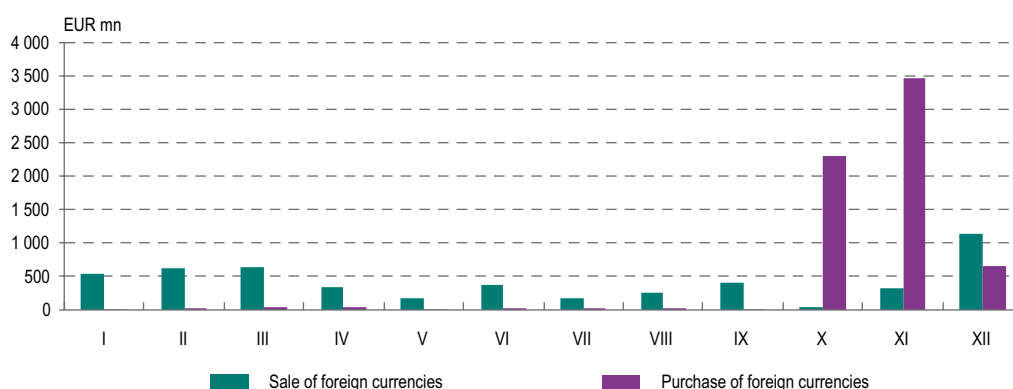
- the conversion of the membership fee paid to the account of the European Commission (EC) in the amount of PLN 16.973 billion,
- services provided to the central government entities whose accounts are held with NBP, in the amount of PLN 5.014 billion.

In 2016, NBP sold foreign currencies in the total amount of PLN 21.987 billion.

In 2016, the sale of foreign currencies was mainly a result of the conversion into EUR the membership fee paid by Poland to the European Union budget. The European Commission set the moments and the levels of conversion of funds in PLN into foreign currency. The currency conversion was uneven throughout the year; the highest amount of foreign currencies was sold in December (15.70%) and February (14.56%). October was the only month when no transaction was performed.

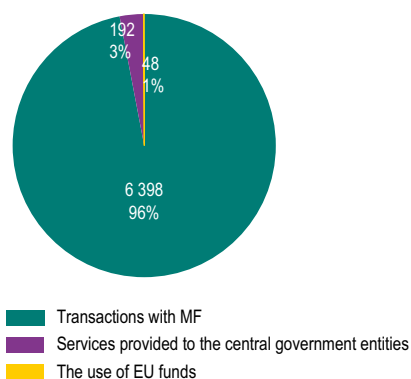
Other transactions associated with the sale of foreign currencies included services to central government entities, performed relatively evenly in individual months. December was an exception, when NBP sold foreign currencies for the needs of central government entities in the amount of PLN 2.371 billion (EUR 532 million), which accounted for 47.28% of the total sale of foreign currencies to those entities.

Figure 1.4 Purchase and sale of foreign currencies by NBP in 2016



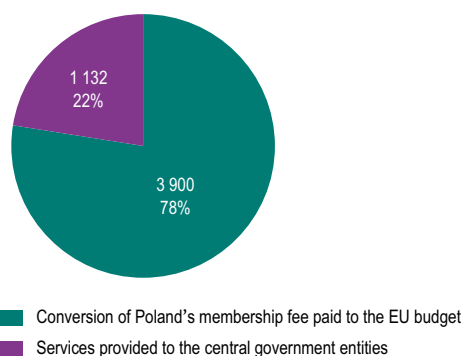
Source: NBP.

Figure 1.5 The structure of currency purchase by NBP in 2016 (in EUR million)



Source: NBP.

Figure 1.6 The structure of currency sale by NBP in 2016 (in EUR million)



Source: NBP.

As the continuation of the foreign currency management policy, the Ministry of Finance sold foreign currency in the interbank market. These transactions did not affect the banking sector liquidity.

FX operations carried out by the central bank as part of its currency purchase and sale activities in 2016

Foreign operations of the State Treasury

In 2016, as in the previous years, the State Treasury services foreign debt with the funds from the Ministry of Finance's foreign currency account with NBP. This means that NBP did not sell foreign currencies to the Ministry of Finance. The Ministry of Finance's foreign currency account was mainly credited by foreign currencies coming from the European Union in the form of funds transferred by the European Commission using the fund accounts (EUR 9.834 billion), issuance of bonds to foreign markets (EUR 6.247 billion), as well as loans incurred in international financial institutions (EUR 700 million).

Foreign currency transactions related to foreign debt servicing were carried out by the central bank on behalf of the Ministry of Finance.

Payments made from the foreign currency account involved liabilities payable to holders of foreign Treasury bonds and repayments of incurred foreign loans, payment of shares and other transactions.

Transactions resulting from the European Union membership

In 2016, as in the previous years, the main transactions related to Poland's membership in the European Union were operations involving the sale of foreign currencies by NBP to the European Commission. The membership fee is paid to the EU budget in national currencies. For the needs of free transfer of EU funds to the fund accounts to other Member States, the European Commission converts funds originating from the membership fee into the single currency.

In 2016, the value of transactions associated with the currency conversion of the membership fee amounted to EUR 3.900 billion (equivalent of PLN 16.973 billion). Those operations were ordered by the European Commission, depending on its needs associated with the progress in the implementation of EU projects in Member States. The European Commission converted the largest amounts of funds into EUR in the first quarter of 2016 (PLN 6.632 billion), when it transferred considerable amounts intended for the programmes under the Common Agricultural Policy.

The European Commission is not obliged to convert all PLN funds received in a given year into EUR during that year. Accordingly, at the end of the year, a part of funds in PLN paid to the European Union by Poland remains on the European Commission's PLN account with NBP. The balance of EC funds as at 31 December 2016 amounted to PLN 4.360 billion, as compared with the amount of PLN 2.240 billion as at 31 December 2015.

In 2016, the funds received by Poland from the European Union were exchanged into PLN directly from the fund accounts with NBP in the amount of PLN 207 million.

In 2016, as in previous years (since the time of their consolidation by the Ministry of Finance in September 2013), the EU funds were mostly transferred from the fund accounts to the foreign currency account held by the Ministry of Finance with NBP. They accounted for a significant part of the foreign currency (58.6%) credited to this account. In 2016, the Ministry of Finance held a high level of foreign currency funds on the account with NBP. Its average level amounted to PLN 4.532 billion throughout the year. A particularly high level of foreign currency holdings was in Q3 when it amounted to an average of EUR 6.543 billion.

Foreign currency funds of the Ministry of Finance deposited on the account with NBP were partially transferred to Bank Gospodarstwa Krajowego (BGK). Depending on the situation on the FX market, the Ministry of Finance decided how to use this funds, among others, to convert them into PLN on the interbank market.

Services to central government entities

Apart from foreign currency operations related to servicing foreign payables and receivables of the State Treasury and transactions involving the use of funds related to EU membership, the central bank carried out foreign currency operations with other entities authorised to exchange foreign currencies at NBP under bank account agreements. In 2016, the value of transactions involving the purchase of foreign currencies by NBP amounted to the equivalent of PLN 828 million. The value of the sale of foreign currencies by the central bank amounted to the equivalent of PLN 5.014 billion.

1.2.3 Public sector deposits held with the central bank

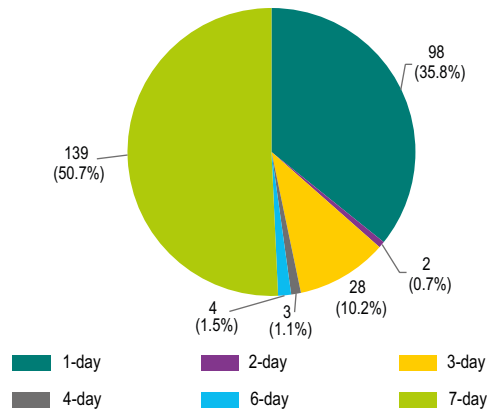
Public sector deposits with the central bank include mainly funds on current accounts and term deposits of the State Budget in PLN (from 1-day to 7-day).

The level of public sector deposits with NBP was an outcome of the following factors:

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

The average level of public sector deposits in 2016 stood at PLN 3.182 billion and was lower by PLN 1.120 billion comparing to the previous year (PLN 4.302 billion). The average level of the public sector deposits held on current and subsidiary accounts with NBP amounted to PLN 2.380 billion (against PLN 3.539 billion in 2015), whereas the Ministry of Finance's term deposits with NBP, representing 25.2% of total deposits, amounted to PLN 802 million against PLN 763 million (17.7%) in 2015.

Figure 1.7 The quantitative structure of Ministry of Finance’s term deposits with NBP in 2016

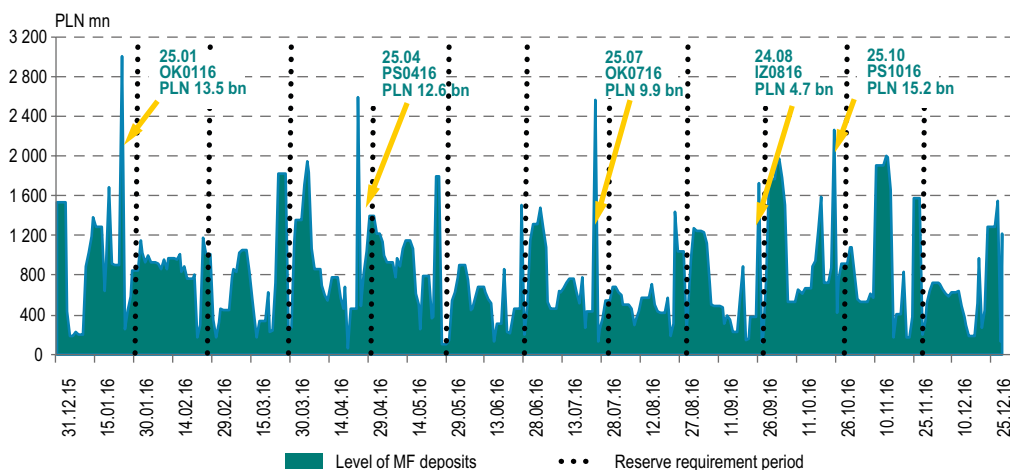


Source: NBP.

The Ministry of Finance invested surplus funds of the State Budget on a temporary basis in the form of PLN deposits for periods of 1 to 7 days with NBP. A total of 274 deposits were made in 2016, mainly with a 7-day period of maturity (139 deposits) and 1- to 3-day periods of maturity² (128 deposits).

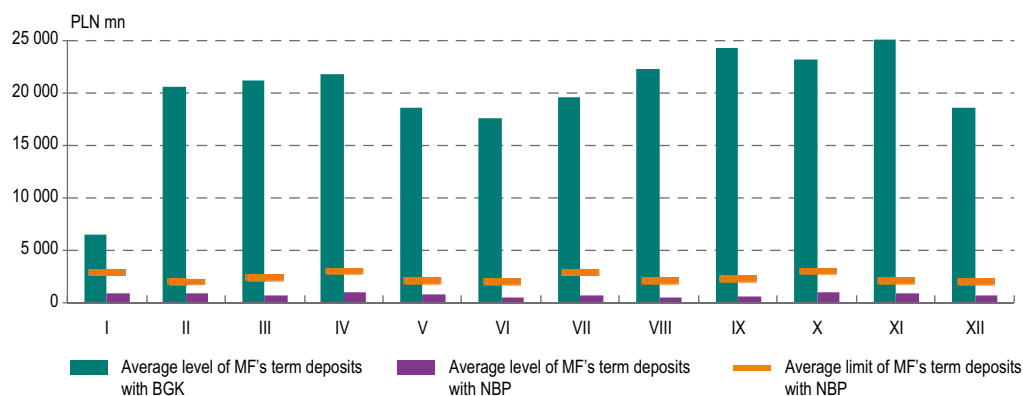
In the period under discussion, the average level of overnight deposits amounted to PLN 10 million (against PLN 48 million in 2015).

Figure 1.8 Redemption of bonds and Ministry of Finance’s deposits with NBP in 2016



Source: NBP.

² 3-day deposits were made mainly on Fridays, so they are also treated as deposits with the shortest maturity periods.

Figure 1.9 The average level of Ministry of Finance's term deposits in PLN in 2016

Source: NBP.

The level of Ministry of Finance's PLN term deposits with NBP in 2016, as in previous years, was variable and its average levels in individual months ranged between PLN 564 million and PLN 1.045 billion. Deposits reached their highest level in Q4, amounted to an average of PLN 913 million. The volume of deposits placed in 2016 accounted for 32.9% of the established daily limit (for comparison in 2015 this figure represented 28.9%).

In 2016, redemption of Treasury bonds by the Ministry of Finance was held five times: on 25 January 2016 – bond series OK0116, 25 April 2016 – bond series PS0416, 25 July 2016 – bond series OK0716, 24 August 2016 – bond series IZ0816, 25 October 2016 – bond series PS1016, which was associated with the temporary increase of limits of MF deposits with NBP.

In 2016, as in the previous year, part of funds from the State Budget was invested on the interbank market through Bank Gospodarstwa Krajowego (an average of PLN 19.890 billion annually). A significant increase in the average level of MF's deposits with commercial banks in relation to the previous year reached PLN 11.400 billion (i.e. approximately 134.3%). In 2016, the average levels of deposited funds ranged from PLN 6.553 billion in January to PLN 25.092 billion in November. The MF transferred most funds to the banking sector in the period from August to November – on average, PLN 23.713 billion monthly.

The Ministry of Finance placed available funds on the interbank market of uncollateralised term deposits. A part of the funds were placed through BGK as a deposit facility with NBP (on average PLN 166 million per year).

Chapter 2

Monetary policy instruments



Monetary policy instruments

2.1 Interest rate

The primary instrument of the monetary policy is the short-term interest rate – the NBP reference rate which 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 reflect the course of the monetary policy pursued by the central bank. The NBP deposit and lombard rates set the overnight interest rate corridor in the interbank market.

In 2016, the Monetary Policy Council did not make a decision to change the basic short-term interest rate, i.e. the NBP reference rate. Throughout the entire 2016 the reference rate was maintained at the level applicable as of 5 March 2015 when it was lowered by 50 basis points.

In 2016, the basic NBP interest rates were at the following levels:

- the reference rate – 1.50%,
- the lombard rate – 2.50%,
- the deposit rate – 0.50%.

2.2 Open market operations

In accordance with the Monetary Policy Guidelines for 2016, implementing the operational objective of the monetary policy, NBP made efforts to determine the POLONIA rate to keep it close to the NBP reference rate. The key instruments used to shape market interest rates were open market operations:

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

Open market operations were carried out by NBP in order to ensure adequate conditions for commercial banks to balance their own liquidity positions in the required reserve maintenance periods.

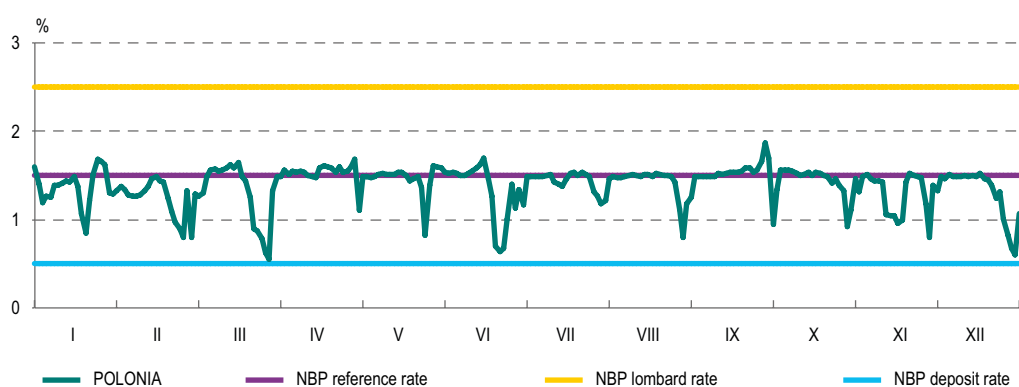
Open market operations in 2016 were carried out amid continued (despite changes during the year) high banking sector liquidity. From the beginning of the year to July 2016, banking sector liquidity, measured by the issuance of NBP bills,³ was characterised by a downward trend and decreased from PLN 85.782 billion in January to PLN 65.727 billion in July (on average during the reserve maintenance period). In the subsequent three months, liquidity was stable and after that in November, as a result of a considerable purchase of foreign currencies from the Ministry of Finance, increased to the level of PLN 76.406 billion on average during the reserve maintenance period. In December the level of open market operations dropped again to PLN 74.758 billion.

The objective of the banking sector liquidity management policy adopted by NBP, as in the previous year, was to establish the optimal, from the point of view of influencing the shortest-

³ In this chapter we disregard standing facilities.

-term market rates (in particular, the POLONIA rate), liquidity conditions in the banking sector. Setting the levels of individual open market operations, the central bank endeavoured to maintain balanced liquidity conditions in the banking sector in the reserve maintenance period. Supply was determined at a level (based on the prepared forecasts of banking sector liquidity in the maturity period of a given operation) intended to allow market participants to minimise the average deviation of the aggregate level of current accounts held with NBP from the value of the reserve requirement (in a given reserve maintenance period).

Figure 2.1 Short-term market rate POLONIA against NBP rates in 2016



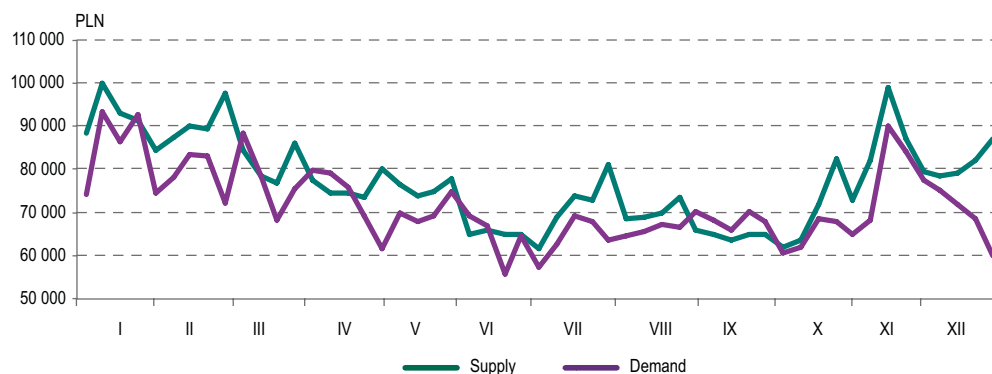
Source: NBP.

2.2.1 Main operations

In 2016, NBP carried out main open market operations which involved the issuance of NBP bills, usually with a maturity of 7 days.⁴ NBP bills were issued regularly once a week, on Fridays. Access to main open market operations was available to all banks participating in the SORBNET2 system with an account in the SKARBNET4 system operated by NBP, as well as the Bank Guarantee Fund (BFG). Tenders for NBP bills had the settlement period of $t + 0$ and the yield equal to the NBP reference rate.

In 2016, the average level of NBP bills issued under the main operations amounted to PLN 71,175 billion and was lower by PLN 16.809 billion as compared to the average level in 2015. In 2016 (in reserve maintenance periods), the central bank offered NBP bills totalling PLN 4,083.500 billion for sale under the main operations. In that period, the bids received from banks amounted to PLN 3,801.662 billion, whereas the value of bids accepted by the central bank amounted to PLN 3,764.911 billion. The aggregate values of supply in 2016 were at a higher level than the aggregate values of demand. The ratio of commercial banks' demand for NBP bills to supply offered by NBP was at an annual average of 0.93.

⁴ In 2016, the exceptions were: regular operations with a maturity of 6 days carried out on 4 November 2016 (Friday) and 30 December 2016 (Friday) and regular operations with a maturity of 8 days carried out on 31 December 2015 (Thursday) and 10 November 2016 (Thursday).

Figure 2.2 NBP bills – demand in relation to supply at tenders for main open market operations in 2016

Source: NBP.

In 2016, underbidding of the NBP bills was more frequent than overbidding (in 41 out of 53 tenders for main open market operations).

2.2.2 Fine-tuning operations

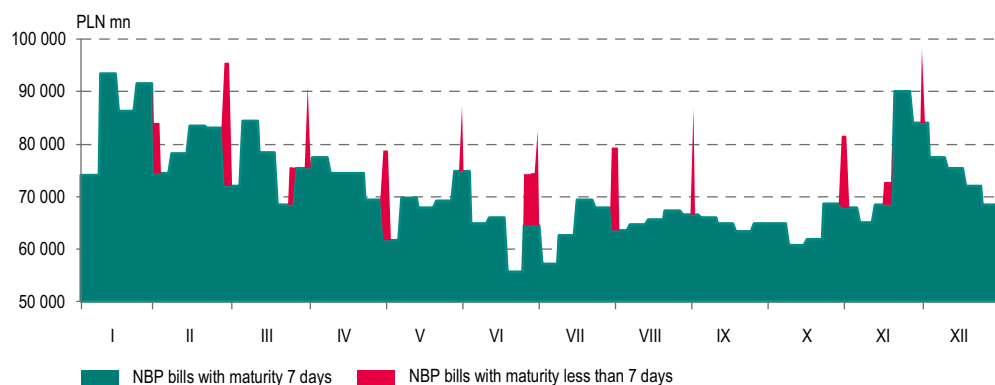
In 2016, NBP carried out fine-tuning operations in order to mitigate the fluctuations in short-term market interest rates, in the form of issuance of NBP bills with maturities shorter than in the case of main operations. As in the previous year, fine-tuning operations were conducted regularly on the last day of the reserve maintenance period⁵ and ad hoc during this period.

The goal of operations carried out on the last day of the reserve maintenance period was to balance the liquidity conditions in the banking sector on average in the entire required reserve maintenance period. In 2016, NBP conducted 11 regular fine-tuning operations. In September 2016, due to the evident segmentation of liquidity in the interbank market and a relatively high POLONIA rate, NBP decided to refrain from conducting the fine-tuning operation. Regular fine-tuning operations had the form of O/N transactions, but due to the 2016 calendar structure, these were 3-day operations in six cases.

Additionally, in 2016, four open market operations were conducted (one in March and in November, and two in June), during the reserve maintenance period in order to compensate for the deviations of market interest rates from the reference rate.

As a result of 15 fine-tuning operations which were conducted in 2016, the average level of the NBP bills with shorter maturity amounted to PLN 1.263 billion and exceeded by PLN 155 million the average level in 2015. In 2016, the central bank offered for sale under fine-tuning operations NBP bills amounting to PLN 240 billion. In this period, bids received from banks totalled PLN 214.445 billion, whereas bids accepted by the central bank amounted to PLN 212.534 billion.

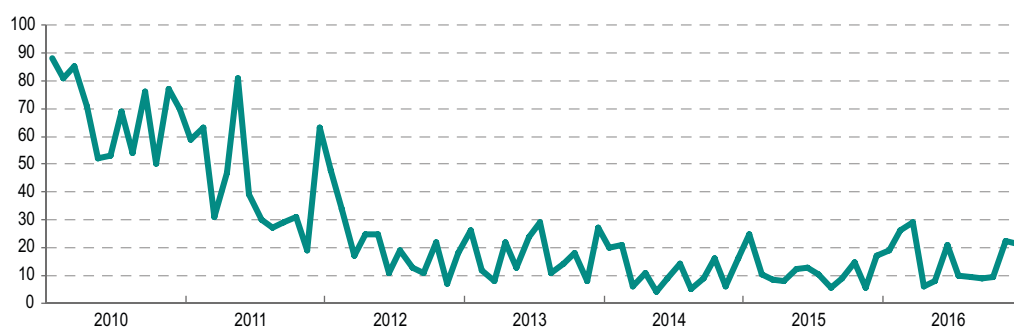
⁵ An exception was the last business day of the September reserve maintenance period, when NBP decided to abandon conducting of the fine-tuning operation.

Figure 2.3 Operations carried out by NBP in 2016


Source: NBP.

Overbidding from banks in relation to NBP bills offered by the central bank in fine-tuning operations occurred in 2 tender (on the last business day of the reserve maintenance period). The ratio of commercial banks' demand for NBP bills in fine-tuning operations in individual tenders to supply offered by NBP ranged between 0.176 to 1.080.

The method to use open market operations (both main and fine-tuning ones) adopted in 2016 allowed NBP for the effective implementation of the monetary policy operational objective. The average absolute deviation of the POLONIA rate from the NBP reference rate in 2016 reached 16 basis points, as compared to 12 basis points in 2015.⁶

Figure 2.4 Average absolute deviation of the POLONIA rate from the NBP reference rate in individual required reserve maintenance periods in the years 2010–2016 (in basis points)


Source: NBP.

⁶ Table II presents the deviation of the POLONIA rate from the NBP reference rate in the previous years.

2.3 Reserve requirement

Cooperative banks, credit unions (SKOKs) and the National Association of Credit Unions (KSKOK) are obliged to maintain average funds on accounts with NBP in the reserve maintenance period, not lower than the value of the required reserve. This solution helps to stabilise the level of short-term interest rates.

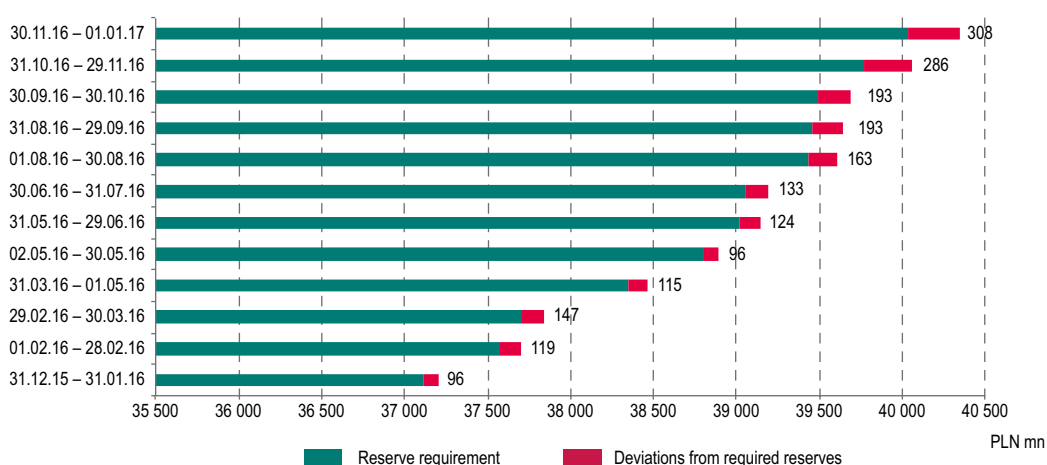
Funds on bank accounts and funds earned from the sale of securities with the exception of funds received from other domestic bank, a credit union, and the National Association of Credit Unions were the basis for calculating the required reserve. The basis for the reserve calculation in banks, branches of credit institutions and branches of foreign banks did not include funds obtained from abroad for a minimum of two years and deposited in savings and credit accounts with building societies, as well as funds accumulated on individual pension accounts or funds acquired under agreements on individual pension security accounts, and returnable funds obtained from BFG.

The required reserves were calculated and maintained in the Polish zloty. The value of the required reserve calculated by individual entities is diminished by an equivalent of EUR 500 thousand.

In 2016, the basic required reserve ratio amounted to 3.5% on all liabilities, except for funds received from repo and sell-buy-back transactions, on which the required reserve ratio was 0%.

As at 31 December 2016, the amount of the required reserve was PLN 40.033 billion, with the banking sector reserve at PLN 39.712 billion and the credit unions' and the National Association of Credit Unions' reserve at PLN 321 million. The total required reserve was higher, compared to the level as at 31 December 2015, by PLN 2.918 billion, which means an increase of 7.86%. The main factor behind the increase of the required reserve in 2016 was an increase deposits in banking sector, which were used to calculate the required reserve.

Figure 2.5 Changes in the required reserve level and deviations from the reserve requirement in 2016



Source: NBP.

In 2016, the remuneration on the required reserve amounted to 0.9 of the NBP reference rate, determining the interest rate on the basic open market operations.

In 2016, in all the reserve maintenance periods banks recorded a small surplus of the average holdings on banks' NBP accounts over the required reserve level. It reached the lowest level in January (PLN 95.69 million), whereas the largest surplus was recorded in December (PLN 308.20 million). The average surplus of the required reserves holdings in 2016 amounted to PLN 164.5 million and accounted for 0.42% of the average level of required reserves.

The year 2016 recorded four cases of non-compliance with the reserve requirements, including two by commercial banks, one by a credit union and one by a cooperative bank.

In 2016, the Management Board of NBP released one cooperative bank from the obligation to maintain the required reserve in the period of implementation of the recovery programme.

2.4 Standing facilities

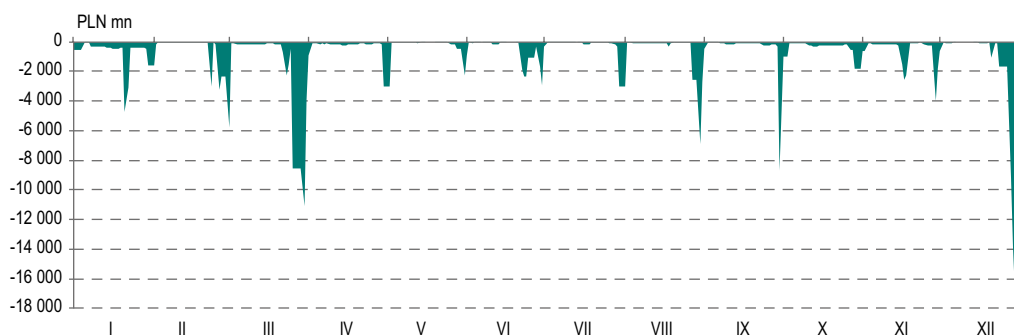
Standing facility operations (deposit facility and marginal lending facility) stabilised the level of interbank liquidity and limited the scale of overnight rates fluctuations. Standing facility operations were carried out on the initiative of commercial banks and their main goal was to increase banking sector liquidity or to invest surplus liquidity in the form of overnight deposits with NBP.

The lombard interest rate set the maximum price of funds obtained from NBP, indicating at the same time the ceiling of rate fluctuations in the interbank market, while the interest rate on deposit facility set the floor for the rate fluctuations.

2.4.1 Deposit facility

In 2016, the total value of the deposit facilities placed with NBP (calculated as the total of days of their placement) amounted to PLN 284.211 billion and was higher by 55.6% comparing to

Figure 2.6 The use of deposit facility in 2016



Source: NBP.

deposits placed in the previous year. The total value of a single deposit placed by banks with the overnight facility ranged from PLN 40 million to PLN 17.053 billion. Its average daily level amounted to PLN 722 million against PLN 500 million in 2015. Banks invested the largest amounts on the last days of the required reserve maintenance periods.

2.4.2 Marginal lending facility

In 2016, as in the previous years, banks used the marginal lending facility only occasionally. The total value of the credit used throughout the year amounted to PLN 1.350 billion. The marginal lending facility was mainly incurred in order to supplement the required reserve. The average daily use of the marginal lending facility reached PLN 4 million (against PLN 0.03 million in 2015).

Chapter 3

Other operations



Other operations

3.1 Intraday credit facility

Intraday credit facility is an instrument that helps banks to manage liquidity during the operating day and to perform interbank settlements at NBP. It is a non-interest bearing facility collateralised with securities that is taken and repaid on the same trading day. In 2016, the daily supply of operating liquidity to banks ranged from PLN 41.521 billion to PLN 52.618 billion. 2016 posted a decline in the use of intraday credit facility by approx. 6.3%.

3.2 Intraday credit facility in euro

Intraday credit facility in euro is an instrument that ensures the liquidity of settlements in the TARGET2-NBP system. The loan collateralised with Treasury bonds accepted by the ECB was incurred and repaid during an operating day. The sum of this facility increased by 20.97% compared to 2015, and amounted to EUR 11.349 billion in 2016. The average daily supply of operating liquidity to banks in EUR reached the level of EUR 44 million.

Glossary



Glossary

Banking sector short-term liquidity – liquidity defined as the balance of open market operations conducted by 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 NBP in order to limit the impact of changes in the banking sector liquidity conditions on short-term market interest rates.

Foreign exchange swaps – operations under which 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 conducted on a regular basis (once a week). In the context of the banking sector liquidity surplus, they involve the issuance of NBP bills, typically with a 7-day maturity. During tenders, a fixed yield at the level of the NBP reference rate applies.

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 NBP enters into Money Market Dealer agreements. In addition to the access to the main open market operations, these banks are involved in fine-tuning operations. Moreover, Money Market Dealers participate in the fixing of the WIBOR and the WIBID reference rates, provide NBP with information concerning overnight transactions concluded on a given day, which are the basis for the fixing of the POLONIA rate.

NBP deposit rate – determines the interest rate on deposits with NBP. It sets the floor for fluctuations of the overnight market rate. The deposit rate and the lombard rate create the fluctuation band for the overnight rate 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 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 NBP in the TM Reuters service (NBPS), Bloomberg service (PZCFPLNI Index) and at the NBP website each day at 5.00 p.m.

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

Publication of information in information services – in the TM Reuters service on the NBPM site and in the Bloomberg service on the NBP18 site, NBP provides banks with information on the current market liquidity situation, specifically concerning:

- banks' current accounts, deposit facility placed with NBP and marginal lending facility (lombard credit) provided by 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 NBP bills (under main operations) until the day preceding their maturity. Information on the forecast average balance of banks' current accounts is published on the TM Reuters at the moment the decision on the value of NBP bills on offer is taken.

Information on current auctions for NBP bills is also published on the NBPT site of the TM Reuters news service and the NBP19 site of the Bloomberg news service. The outcome of tenders is posted on the NBPU site (TM Reuters) and NBP20 site (Bloomberg).

Current information concerning the liquidity situation and auctions carried out by the NBP under open market operations is regularly published on the NBP website (www.nbp.pl).

Repo operations – short- and long-term refinancing operations aimed to supply liquidity to the banking sector, collateralised with securities approved by 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.

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

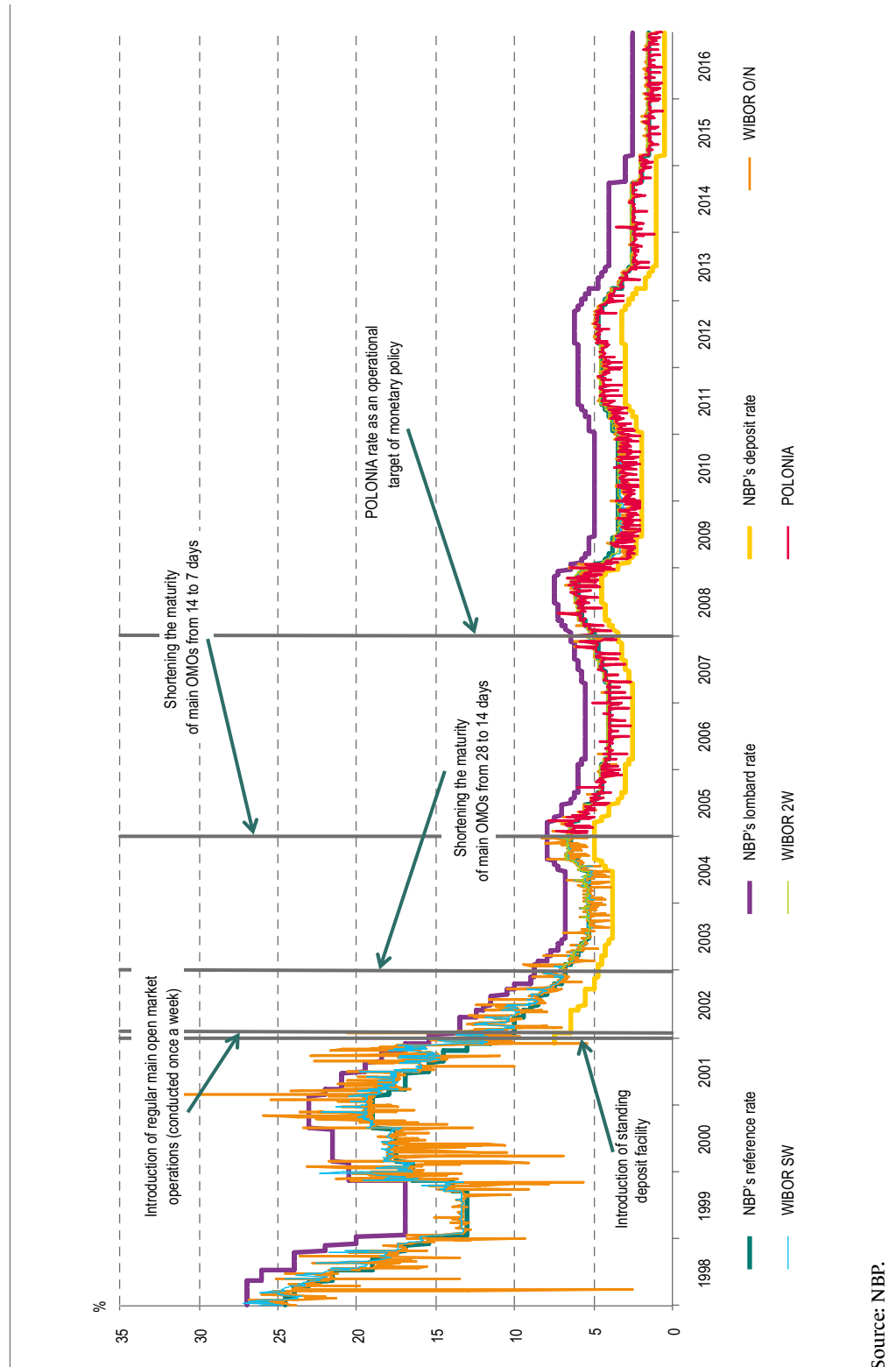
Structural operations – operations conducted in order to change the long-term structure of banking sector liquidity. Under these operations, the central bank may carry out the following structural operations: issuance of bonds, early redemption of bonds, purchase or sale of securities in the secondary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

Annexes



Annex 1

Volatility of the short-term interest rates in the years 1998–2016



Source: NBP.

Annex 2

The NBP monetary policy instruments in the years 1990–2016

Item	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Required reserves																												
Issue of NBP bills																												
Issue / repurchase of NBP bonds																												
Repo / reverse repo operations																												
Outright operations																												
Loans for central investments																												
Rediscount loan																												
Marginal lending facility																												
Deposit facility																												
Loan limits																												
Deposits for households																												
Intraday credit																												
FX swap operations																												

Source: NBP.

Annex 3

Main operations in 2016

No.	Tender date*	Maturity date	Maturity period (in days)	Nominal value of sales offers (PLN mn)	Nominal value of offers to buy (PLN mn)	Nominal value of accepted offers (PLN mn)	Average yield on bills annual 365/360 (%)
1	31.12.2015	08.01.2016	8	88 500.00	74 121.00	74 121.00	1.5
2	08.01.2016	15.01.2016	7	100 000.00	93 492.28	93 492.28	1.5
3	15.01.2016	22.01.2016	7	93 000.00	86 410.00	86 410.00	1.5
4	22.01.2016	29.01.2016	7	91 500.00	92 660.00	91 500.00	1.5
5	29.01.2016	05.02.2016	7	84 500.00	74 440.75	74 440.75	1.5
6	05.02.2016	12.02.2016	7	87 500.00	78 311.75	78 311.75	1.5
7	12.02.2016	19.02.2016	7	90 000.00	83 527.00	83 527.00	1.5
8	19.02.2016	26.02.2016	7	89 500.00	83 120.00	83 120.00	1.5
9	26.02.2016	04.03.2016	7	97 500.00	72 088.78	72 088.78	1.5
10	04.03.2016	11.03.2016	7	84 500.00	88 304.30	84 500.00	1.5
11	11.03.2016	18.03.2016	7	78 500.00	78 432.80	78 432.80	1.5
12	18.03.2016	25.03.2016	7	77 000.00	68 402.42	68 402.42	1.5
13	25.03.2016	01.04.2016	7	86 000.00	75 433.10	75 433.10	1.5
14	01.04.2016	08.04.2016	7	77 500.00	79 817.00	77 500.00	1.5
15	08.04.2016	15.04.2016	7	74 500.00	79 199.00	74 500.00	1.5
16	15.04.2016	22.04.2016	7	74 500.00	75 776.40	74 500.00	1.5
17	22.04.2016	29.04.2016	7	73 500.00	69 365.06	69 365.06	1.5
18	29.04.2016	06.05.2016	7	80 000.00	61 762.12	61 762.12	1.5
19	06.05.2016	13.05.2016	7	76 500.00	69 841.65	69 841.65	1.5
20	13.05.2016	20.05.2016	7	74 000.00	67 972.40	67 972.40	1.5
21	20.05.2016	27.05.2016	7	75 000.00	69 214.85	69 214.85	1.5
22	27.05.2016	03.06.2016	7	78 000.00	74 898.75	74 898.75	1.5
23	03.06.2016	10.06.2016	7	65 000.00	69 281.50	65 000.00	1.5
24	10.06.2016	17.06.2016	7	66 000.00	66 982.52	66 000.00	1.5
25	17.06.2016	24.06.2016	7	65 000.00	55 768.00	55 768.00	1.5
26	24.06.2016	01.07.2016	7	65 000.00	64 630.40	64 630.40	1.5
27	01.07.2016	08.07.2016	7	61 500.00	57 261.00	57 261.00	1.5
28	08.07.2016	15.07.2016	7	69 000.00	62 572.00	62 572.00	1.5
29	15.07.2016	22.07.2016	7	74 000.00	69 382.00	69 382.00	1.5
30	22.07.2016	29.07.2016	7	73 000.00	67 964.78	67 964.78	1.5
31	29.07.2016	05.08.2016	7	81 000.00	63 658.90	63 658.90	1.5
32	05.08.2016	12.08.2016	7	68 500.00	64 714.00	64 714.00	1.5
33	12.08.2016	19.08.2016	7	69 000.00	65 645.50	65 645.50	1.5
34	19.08.2016	26.08.2016	7	70 000.00	67 418.00	67 418.00	1.5
35	26.08.2016	02.09.2016	7	73 000.00	66 655.65	66 655.65	1.5
36	02.09.2016	09.09.2016	7	66 000.00	70 162.00	66 000.00	1.5
37	09.09.2016	16.09.2016	7	65 000.00	68 179.00	65 000.00	1.5
38	16.09.2016	23.09.2016	7	63 500.00	65 981.00	63 500.00	1.5
39	23.09.2016	30.09.2016	7	65 000.00	70 341.80	65 000.00	1.5
40	30.09.2016	07.10.2016	7	65 000.00	68 066.29	65 000.00	1.5
41	07.10.2016	14.10.2016	7	62 000.00	60 822.00	60 822.00	1.5
42	14.10.2016	21.10.2016	7	63 500.00	61 886.90	61 886.90	1.5
43	21.10.2016	28.10.2016	7	72 000.00	68 732.20	68 732.20	1.5
44	28.10.2016	04.11.2016	7	82 500.00	67 828.00	67 828.00	1.5
45	04.11.2016	10.11.2016	6	73 000.00	65 040.00	65 040.00	1.5
46	10.11.2016	18.11.2016	8	82 000.00	68 410.00	68 410.00	1.5
47	18.11.2016	25.11.2016	7	99 000.00	90 167.00	90 167.00	1.5
48	25.11.2016	02.12.2016	7	87 000.00	84 123.00	84 123.00	1.5
49	02.12.2016	09.12.2016	7	79 500.00	77 569.00	77 569.00	1.5
50	09.12.2016	16.12.2016	7	78 500.00	75 355.00	75 355.00	1.5
51	16.12.2016	23.12.2016	7	79 000.00	72 053.00	72 053.00	1.5
52	24.12.2016	31.12.2016	7	82 000.00	68 574.20	68 574.20	1.5
53	30.12.2016	05.01.2017	6	87 000.00	59 846.07	59 846.07	1.5
Total in 2016				4 083 500.00	3 801 662.12	3 764 911.31	

* Day of payment for NBP bills on the tender date.

Source: NBP.

Annex 4

Fine-tuning operations in 2016

No.	Tender date*	Maturity date	Maturity period (in days)	Nominal value of sales offers (PLN mn)	Nominal value of offers to buy (PLN mn)	Nominal value of accepted offers (PLN mn)	Average yield on bills annual 365/360 (%)
1	29.01.2016	01.02.2016	3	10 000.00	9 636.74	9 636.74	1.5
2	26.02.2016	29.02.2016	3	25 500.00	23 499.24	23 499.24	1.5
3	23.03.2016	25.03.2016	2	no announced	7 145.00	7 145.00	1.5
4	30.03.2016	31.03.2016	1	18 000.00	15 674.97	15 674.97	1.5
5	29.04.2016	02.05.2016	3	18 000.00	17 089.20	17 089.20	1.5
6	30.05.2016	31.05.2016	1	13 000.00	12 357.90	12 357.90	1.5
7	24.06.2016	27.06.2016	3	10 000.00	9 595.00	9 595.00	1.5
8	27.06.2016	29.06.2016	2	10 000.00	9 885.00	9 885.00	1.5
9	29.06.2016	30.06.2016	1	18 000.00	19 434.02	18 000.00	1.5
10	29.07.2016	01.08.2016	3	17 000.00	15 794.36	15 794.36	1.5
11	30.08.2016	31.08.2016	1	21 000.00	20 156.55	20 156.55	1.5
12	28.10.2016	31.10.2016	3	14 500.00	13 848.10	13 848.10	1.5
13	14.11.2016	18.11.2016	4	25 000.00	4 390.00	4 390.00	1.5
14	29.11.2016	30.11.2016	1	14 000.00	14 476.08	14 000.00	1.5
15	30.12.2016	02.01.2017	3	26 000.00	21 462.40	21 462.40	1.5
Total in 2016				240 000.00	214 444.56	212 534.46	

* Day of payment for NBP bills on the tender date.

Source: NBP.

Annex 5

Agreements with the Ministry of Finance

The agreement regulating the operation of the bank account in foreign currencies as well as the purchase and sale of foreign currencies to service liabilities and receivables of the State Treasury defines the terms and conditions of transactions concluded between the Ministry of Finance and NBP relating to the purchase and sale of foreign currencies. The agreement sets out limits on FX transactions in 2016 in the following amounts:

- the total sales of foreign currencies by NBP to the Ministry of Finance shall not exceed the equivalent of EUR 7.0 billion,
- the total amount of foreign currencies purchased by NBP from the Ministry of Finance shall not exceed the equivalent of EUR 15.0 billion,

whereas:

- the accumulated absolute difference between the amount of foreign currencies sold and purchased as at the year-end shall not exceed the equivalent of EUR 7.0 billion,
- the accumulated absolute difference between the amount of foreign currencies purchased and sold as at year-end shall not exceed the equivalent of EUR 8.0 billion.

The agreement on the Ministry of Finance's PLN term deposits with Narodowy Bank Polski – pursuant to the Public Finance Act the Minister of Finance is authorised to make interest-bearing deposits with Narodowy Bank Polski or with another bank, in the case of temporary surplus of funds on the central account of the State Budget. In 2016 the limit for the Ministry of Finance's term deposits placed with NBP, counted in terms of daily balances, was as follows:

- PLN 3.0 billion in the period from 1 January to 2 February, 18 March to 5 May and 1 July to 3 August and from 20 September to 3 November,
- PLN 2.0 billion in the period from 3 February to 17 March, 6 May to 30 June and 4 August to 19 September and from 4 November to 31 December.

Annex 6

Money Market Dealers in 2016

The Money Market Dealers (MMD) System has been used by NBP since 1992 NBP selects entities to perform the function of MMD once a year. MMD status is granted to a given entity upon concluding the agreement between the MMD and NBP on the performance of Money Market Dealer function.

In 2016, the banks with MMD status were central bank's counterparties exclusively authorised to participate in fine-tuning open market operations, used irregularly, with maturities of up to 7 days (excluding operations used on the last business day of the reserve maintenance period).

In 2016, the following entities acted as MMD (order by bank number):

- 1 Powszechna Kasa Oszczędności Bank Polski SA
- 2 Bank Handlowy w Warszawie SA
- 3 ING Bank Śląski SA
- 4 Bank BPH SA⁷
- 5 Bank Zachodni WBK SA
- 6 Bank Gospodarstwa Krajowego
- 7 mBank SA
- 8 Bank Millennium SA
- 9 Bank Polska Kasa Opieki SA
- 10 Raiffeisen Bank Polska SA
- 11 Societe Generale SA Oddział w Polsce⁸
- 12 Deutsche Bank Polska SA
- 13 Bank BGŻ BNP Paribas SA
- 14 Getin Noble Bank SA⁹
- 15 Alior Bank SA.¹⁰

⁷ To 18 November 2016.

⁸ To 6 September 2016.

⁹ From 18 February 2016.

¹⁰ From 18 February 2016.

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

Items	XII 2015	I 2016	II 2016	III 2016	IV 2016	V 2016	VI 2016	VII 2016	VIII 2016	IX 2016	X 2016	XI 2016	XII 2016
CENTRAL BUDGET:													
revenues	289 877.82	34 906.14	59 005.64	79 791.55	108 884.61	132 482.64	154 214.37	191 734.23	218 204.28	242 324.53	272 607.57	298 319.86	315 358.81
expenses	332 203.32	28 964.98	59 263.39	86 405.49	116 510.93	142 610.67	170 295.05	202 953.16	229 468.89	259 222.44	293 270.41	322 055.48	361 479.80
deficit (-) or surplus (+)	-42 325.50	5 941.17	-257.75	-6 613.94	-7 626.32	-10 128.03	-16 080.67	-11 218.93	-11 254.62	-16 897.90	-20 662.84	-23 735.62	-46 120.99
central budget funds	14.87	7.40	6.65	6.03	6.90	6.82	6.84	6.97	7.48	20.37	6.91	6.77	9.37
MF foreign currency account	7 992.93	15 610.43	9 933.60	8 667.46	21 600.48	23 746.15	24 726.50	26 662.33	30 382.92	28 585.81	24 466.15	11 609.53	20 303.18
MF zloty term deposits in NBP	1 535.00	845.00	350.00	1 140.00	1 402.00	541.00	1 146.00	541.00	962.00	1 765.00	1 079.30	517.00	1 583.00
CURRENCY IN CIRCULATION	163 225.78	163 774.81	163 602.72	165 913.38	169 771.88	172 276.58	175 389.52	177 982.23	177 303.60	177 655.82	179 965.23	182 574.20	187 574.85
CURRENT ACCOUNT													
(including required reserve account)	48 666.91	37 940.96	43 297.17	39 431.46	29 707.88	32 060.69	38 809.78	25 831.56	40 783.81	39 033.53	42 866.96	38 468.87	25 829.72
Balance deviation from required reserve*	11 551.75	47.02	5 600.44	1 086.98	698.84	-6 959.58	-242.83	1 023.29	1 329.93	-459.44	3 093.35	-1 564.22	1 244.43
REFINANCING LOAN	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
marginal lending	0.00	30.00	0.00	0.00	416.06	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
INTRADAY CREDIT	44 839.89	45 572.73	44 185.10	50 104.33	44 722.11	47 791.91	46 482.44	45 660.48	45 444.22	45 391.46	47 321.37	51 855.53	42 902.70
DEPOSIT FACILITY	558.10	1 629.39	5 779.57	955.99	3 026.42	926.75	314.48	2 993.07	486.82	971.55	622.20	598.30	7 365.86
OPEN MARKET OPERATIONS**													
Repo (-)	74 121.00	84 077.49	72 088.78	75 433.10	78 851.32	74 898.75	64 630.40	79 453.26	66 655.65	65 000.00	67 828.00	84 123.00	81 308.47
NBP bills 7-days (+)	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 bills < 7-days (+)	74 121.00	74 440.75	72 088.78	75 433.10	61 762.12	74 898.75	64 630.40	63 658.90	66 655.65	65 000.00	67 828.00	84 123.00	59 846.07
	0	9 636.74	0.00	0.00	17 089.20	0.00	0.00	15 794.36	0.00	0.00	0.00	0.00	21 462.40
POLONIA													
Turnover	1.60	1.30	0.80	1.48	1.11	1.60	1.17	1.22	1.25	1.34	1.31	1.33	1.07
WIBOR	20.00	1 198.00	155.00	227.00	672.00	1 460.40	380.70	1 211.00	245.00	1 746.40	540.10	50.70	1 330.00
O/N	1.71	1.61	0.74	0.97	1.18	1.63	1.43	1.44	1.47	1.63	1.51	1.43	1.04
T/N	1.64	1.61	1.47	1.56	1.62	1.66	1.57	1.59	1.57	1.66	1.57	1.58	1.56
SW	1.60	1.56	1.50	1.51	1.55	1.57	1.59	1.60	1.60	1.61	1.62	1.60	1.58
2W	1.64	1.58	1.54	1.53	1.57	1.58	1.62	1.62	1.62	1.62	1.64	1.64	1.63
1M	1.65	1.60	1.56	1.57	1.56	1.59	1.65	1.65	1.65	1.65	1.66	1.66	1.66
3M	1.72	1.70	1.68	1.67	1.67	1.68	1.71	1.71	1.71	1.71	1.72	1.73	1.73
12M	1.79	1.77	1.76	1.76	1.76	1.76	1.81	1.81	1.81	1.81	1.84	1.85	1.85
WIBID													
O/N	1.41	1.32	0.44	0.67	0.88	1.33	1.13	1.14	1.17	1.33	1.21	1.13	0.74
T/N	1.35	1.32	1.17	1.27	1.33	1.36	1.27	1.31	1.29	1.38	1.27	1.30	1.28
SW	1.40	1.36	1.30	1.31	1.35	1.37	1.39	1.40	1.40	1.41	1.42	1.40	1.38
2W	1.44	1.38	1.34	1.33	1.37	1.38	1.42	1.42	1.42	1.42	1.44	1.44	1.43
1M	1.45	1.40	1.36	1.36	1.37	1.39	1.45	1.45	1.45	1.45	1.46	1.46	1.46
3M	1.52	1.50	1.48	1.47	1.47	1.48	1.51	1.51	1.51	1.51	1.52	1.53	1.53
12M	1.59	1.57	1.56	1.56	1.56	1.56	1.61	1.61	1.61	1.61	1.64	1.65	1.65
USD/PLN (fixing)	3.9011	4.0723	3.9935	3.7590	3.8738	3.9369	3.9803	3.9364	3.9082	3.8558	3.9488	4.1721	4.1793
EUR/PLN (fixing)	4.2615	4.4405	4.3589	4.2684	4.4078	4.3820	4.4255	4.3684	4.3555	4.3120	4.3267	4.4384	4.4240
EUR/USD	1.0924	1.0904	1.0915	1.1355	1.1378	1.1131	1.1119	1.1097	1.1145	1.1183	1.0957	1.0638	1.0586
OFFICIAL RESERVE ASSETS (as at the end of the month)													
in PLN	370 296.70	406 190.80	394 940.20	377 895.00	406 763.10	425 248.20	438 896.20	429 161.10	429 964.20	431 536.40	446 332.00	462 448.70	478 074.90
in EUR	86 893.50	91 474.10	90 605.50	88 533.20	92 282.60	97 044.30	99 174.40	98 242.20	98 717.50	100 078.00	103 157.60	104 192.70	108 063.90
Purchase (-) or sale (+) of foreign currency	525.72	2 459.68	2 611.51	2 595.14	1 334.39	770.18	1 534.21	761.03	982.33	1 777.90	-9 758.86	-13 707.45	2 058.43

* Average deviation of the 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.

Source: NBP.

List of Tables

Table I Average level of open market operations (NBP bills and repo), FX swaps and standing facilities in the years 2001–2016	7
Table II Market rates in the years 2001–2016	8
Table 1.1 Absorption of short-term liquidity as part of operations executed by NBP in 2016	11

List of Figures

Figure 1.1 Short-term liquidity of the banking sector in 2016	10
Figure 1.2 Currency in circulation in the years 2010–2016	12
Figure 1.3 Growth rate of currency in circulation in the years 2010–2016 (y/y)	13
Figure 1.4 Purchase and sale of foreign currencies by NBP in 2016	14
Figure 1.5 The structure of currency purchase by NBP in 2016	14
Figure 1.6 The structure of currency sale by NBP in 2016	14
Figure 1.7 The quantitative structure of Ministry of Finance's term deposits with NBP in 2016	17
Figure 1.8 Redemption of bonds and Ministry of Finance's deposits with NBP in 2016	17
Figure 1.9 The average level of Ministry of Finance's term deposits in PLN in 2016	18
Figure 2.1 Short-term market rate POLONIA against NBP rates in 2016	21
Figure 2.2 NBP bills – demand in relation to supply at tenders for main open market operations in 2016	22
Figure 2.3 Operations carried out by NBP in 2016	23
Figure 2.4 Average absolute deviation of the POLONIA rate from the NBP reference rate in individual required reserve maintenance periods in the years 2010–2016	23
Figure 2.5 Changes in the required reserve level and deviations from the reserve requirement in 2016	25
Figure 2.6 The use of deposit facility in 2016	25

