Turnover in the Polish Foreign Exchange and OTC Derivatives Markets in April 2007

RESULTS SUMMARY

Introduction

Every three years the Bank for International Settlements together with national central banks conduct a survey on developments in the foreign exchange and OTC derivatives markets. The purpose of the ***Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Market Activity*** is to obtain comprehensive and internationally comparable statistical information on the liquidity and structure of the above markets. The Bank for International Settlements defines the scope of data reporting and the uniform methodology of their collection. At national level the survey is coordinated by central banks. In 2007 central banks and monetary authorities of 54 countries participated in the survey. These institutions collected data from approximately 1280 entities – the most active institutions in the foreign exchange and OTC derivatives markets. Preliminary results of the global turnover in the foreign exchange and OTC derivatives markets have been published by the Bank for International Settlements and are available on its website at www.bis.org/press/p070925.htm . It also contains links to press releases of other central banks, where the results of the survey for their national markets are presented.

Methodological remarks

In 2007 Poland took part in the *Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Market Activity* in its full scope for the second time, collecting data concerning all segments of the markets in question, in accordance with the methodology of the Bank for International Settlements. The results presented are fully comparable to the results of the study conducted by the National Bank of Poland (NBP) in 2004 (they are available at www.nbp.pl/Home.aspx?f=SystemFinansowy/obroty.html)[1]. The data collected in these two surveys served as the basis for an analysis of changes in the volume and structure of the foreign exchange and OTC derivatives markets in Poland in the last three years.

In the 2007 study, eighteen of the most active banks and branches of credit institutions operating in Poland were surveyed (listed in Appendix 1). They provided, in accordance with the reporting forms and guidelines specified by the Bank for International Settlements, data concerning the value of transactions concluded in April 2007.[2] The accuracy of the reports with the methodology presented in Appendix 2 was verified by the NBP. The aggregates for Poland calculated by the NBP were sent to the Bank for International Settlements and are included in the global results.

[1] In earlier editions of the study in 1998 and 2001, the NBP did not conduct separate statistical survey. Relying on information received in monthly reports from banks, the NBP provided the Bank for International Settlements only with data concerning turnover in the most developed segments of the Polish domestic foreign exchange and OTC derivatives markets. Therefore, data from previous years are not fully comparable with the results of surveys conducted in 2004 and 2007.

[2] The reporting forms used in Poland have been slightly modified by the NBP. Overnight index swap transactions were distinguished, and a table on the execution method for transactions in the zloty market was added.

This summary presents the aggregated data on **net turnover** registered in April 2007 in the domestic foreign exchange and OTC derivatives markets. The data include only those transactions in which at least one of the parties was a bank or branch of a credit institution operating in Poland with the status of a reporting dealer. The term "net turnover" signifies that the data represent the nominal value of the transaction. The results are adjusted for local inter-dealer double-counting (i.e. **the effect of double reporting** of transactions concluded between two domestic reporting dealers **has been eliminated**). The presented data **do not cover transactions concluded between non-residents** (the zloty, zloty derivatives and zloty interest rate derivatives are traded on the offshore market, mainly in London). The value of turnover for all transactions involving the zloty will be published in a report of the Bank for International Settlements in December 2007. The NBP will then also provide survey results in more detailed breakdowns.

Similar to Bank for International Settlements reports presenting global results, the data for Poland are presented in breakdowns for the foreign exchange and OTC derivatives market. The **foreign exchange market** is defined as spot, fx swaps and outright-forwards. The **OTC derivatives market** comprises the following instruments: currency interest rate swaps (CIRS), fx options and interest rate derivatives - forward rate agreements (FRA), interest rate swaps (IRS), including overnight index swaps (OIS) and interest rate options. **The presented data are not adjusted for estimated gaps in reporting**. The National Bank of Poland estimates that the value of transactions reported by 18 banks and branches of credit institutions constitutes approximately 95% of the total turnover in the domestic foreign exchange market and 97% in the domestic OTC derivatives market. Average daily turnover has been calculated according to the number of business days – **in April 2007 there were 20 business days in Poland**. All data are presented in **millions of US dollars**, which is consistent with the standard adopted in the ***Triennial Central Bank Survey***.

Turnover in the foreign exchange market

In April 2007 the average daily turnover in the domestic foreign exchange market amounted to 8,813 million US dollars, which at current exchange rates constitutes a 39% increase compared to the value of transactions in April 2004. Data adjusted by movements in exchange rates (such as zloty appreciation)[3] indicate an 18% turnover increase in Poland. In the domestic market, transactions in which zloty was exchanged were most common. The average daily value of these transactions amounted to 6,510 million US dollars (an increase of 37% at current rates and 14% at constant rate). Transactions with financial institutions prevailed, constituting over 88% of the turnover.

Table 1. Average daily turnover in the domestic foreign exchange market in April 2004 and April 2007 (in million US dollars)

	2004	2007	Percentage change (at current exchange rates)	Percentage change (at constant exchange rate)
Spot transactions	1,930	2,405	25	8
Outright-forwards	329	527	60	38
FX swaps	4,095	5,881	44	22
Foreign exchange market	**6,354**	**8,813**	**39**	**18**

[3] More information in the survey methodology on p. 16.

Table 2 Average daily turnover in specific segments of the domestic foreign exchange market in April 2007 (in million US dollars)

	Foreign currencies / PLN	Foreign currencies / foreign currencies	TOTAL
Spot transactions	1,540	865	2,405
Outright-forwards	456	71	527
FX swaps	4,514	1,367	5,881
Foreign exchange market	**6,510**	**2,303**	**8,813**

The spot market

The average daily net turnover in the spot market increased to 2,405 million US dollars, of which 1,895 million involved transactions with financial institutions, mainly non-residents. The average daily value of zloty exchange transactions amounted to 1,540 million US dollars and was 47% (at current rates) and 19% (at constant rate) higher compared to the survey results in 2004. There was a significant increase (over 60% at current rates) in the value of transactions with domestic non-financial entities. This was mainly due to significant growth in the foreign trade.[4] There was also an increase in the segment of transactions with foreign financial institutions, which resulted from higher activity of institutions operating in the zloty offshore market.

Table 3. Turnover in the foreign exchange market by counterparty (average daily turnover in April 2007, in million US dollars)

	Residents	Non-residents	TOTAL
Spot transactions	806	1,599	2,405
with financial institutions	309	1,586	1,895
with non-financial institutions	497	13	510
Outright-forwards	440	87	527
with financial institutions	21	86	107
with non-financial institutions	419	1	420
FX swaps	665	5,216	5,881
with financial institutions	584	5,207	5,791
with non-financial institutions	81	9	90
Foreign exchange market	**1,911**	**6,902**	**8,813**
with financial institutions	**914**	**6,879**	**7,793**
with non-financial institutions	**997**	**23**	**1,020**

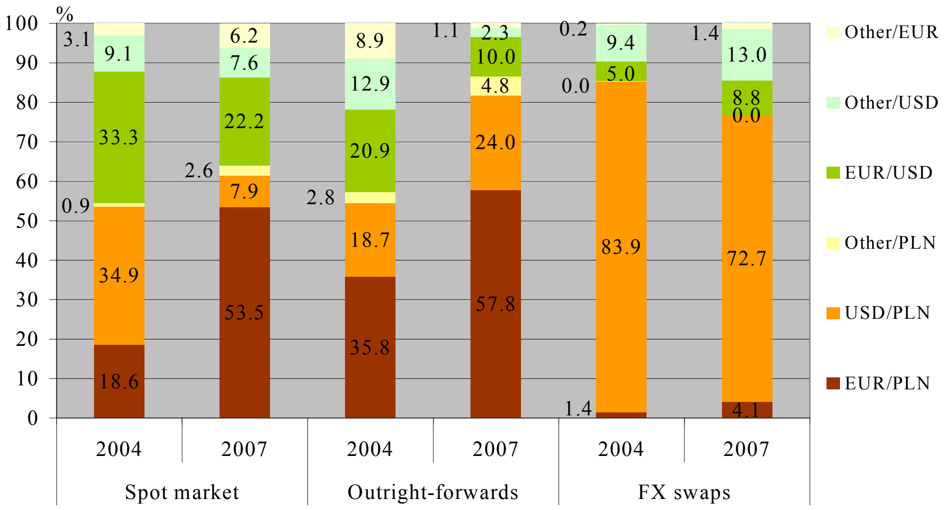
A significant change in the currency composition of spot transactions has been observed. In April 2004, USD/PLN transactions prevailed in the domestic market, while in April 2007, EUR/PLN transactions dominated. From the second quarter of 2004, there was a gradual increase in share of euro transactions in the currency structure of the zloty interbank market. This was due to the fact that following Poland's accession to the European Union in May 2004, foreign exchange dealers presumed that the EUR/PLN pair would be the main currency pair in the zloty interbank market. In the months that followed, banks performing the function of market-makers shifted their activity to the EUR/PLN pair. By 2005 all banks were quoting the zloty in relation to the euro, and the USD/PLN rate was treated as a resultant rate, dependent on the EUR/PLN and EUR/USD rates. The zloty ceased to be a basket currency – in

[4] The value of exports and imports of products and services expressed in EUR was in the first half of 2006 over 60% higher compared to the first half of 2004.

the long term, the euro's share in the EUR/PLN and USD/PLN basket with a minimum variance of daily returns amounted to 100%. This means that the EUR/PLN exchange rate was the best indicator of the strength of the Polish currency. As a result, in April 2007 in transactions between financial institutions, EUR/PLN exchange prevailed (the average daily turnover amounted to 978 million US dollars, with a 90% share of transactions in the zloty market). The share of USD/PLN transactions in this market segment decreased from 76% in April 2004 to 7.5% in April 2007. The loss of basket nature by the zloty caused also a fall in turnover in the EUR/USD market (the average daily value of transactions at current exchange rates declined by 15% and amounted to 535 million UD dollars), because the activity of banks in this segment of the FX market decreased. Dealers opening positions in the EUR/PLN market did not have to conclude EUR/USD transactions to convert the part of their exposure to dollars in order to minimise effects of EUR/USD exchange rate fluctuations.

The currency structure of turnover in the customer market (zloty exchange transactions with non-financial entities) did not change significantly and reflected the composition of payments in Poland's foreign trade. The prevalence of EUR/PLN transactions (67.5%) was the result of strong connections between the Polish economy and the European Union. USD/PLN transactions constituted 23.5% of turnover, while operations in which zloty was exchanged against other foreign currencies accounted for 9% of turnover.[5]

Figure 1. Turnover in the domestic foreign exchange market by currency pairs, April 2007 (%)



Note: the share of remaining currency pairs amounted to less than 0.05%.

Transactions concluded with the use of electronic conversational systems (direct dealing systems) and by phone constituted 44.5% of gross turnover in the spot market. There was an increase in the share of transactions executed via automated order matching system (electronic broking system), which amounted to 42%, representing 52% of transactions concluded between financial institutions – the only users of these systems. Transactions were also executed using voice brokers (11.5%) and single-bank proprietary platforms (2%). A breakdown of transactions in the zloty market according to the execution method presents similar results. The standard value of transactions concluded in the zloty market between financial institutions amounted to 3 million euros and dollars – for EUR/PLN and USD/PLN accordingly. In electronic broking system, transactions with value of more than 1 million euro and 1 million US dollars were much more common than in 2004.

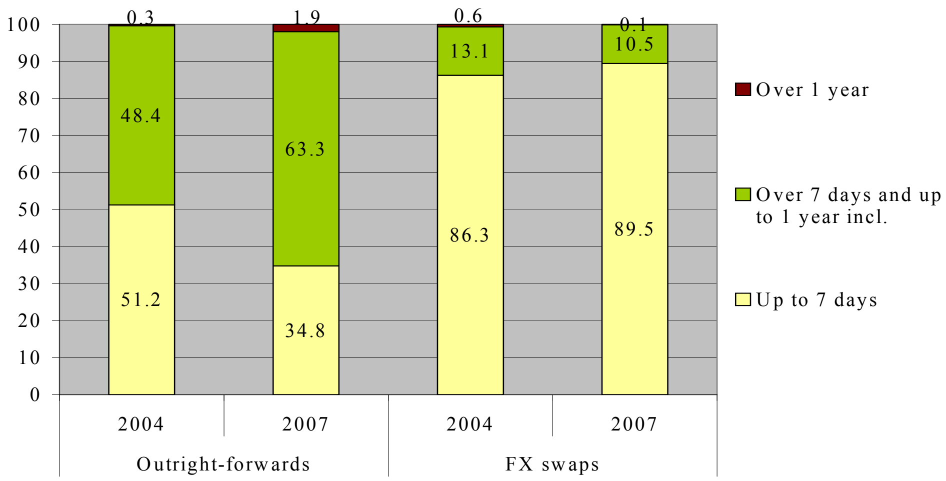
[5] In 2006 the share of currencies in export and import payments (respectively) was as follows: euro - 5% and 29%, US dollar - 18% and 57.5%, other foreign currencies – 11.5% and 13.5%

The outright-forward market

Since the previous study, the average daily net turnover in the outright-forward market has increased and in April 2007 reached the level of 527 million US dollars. This was the only segment of the domestic foreign exchange market where transactions with domestic non-financial entities prevailed (nearly 80% of turnover). The growth in the foreign trade mentioned above, as well as increased risk-awareness, were the reasons why companies started using this instrument more frequently in order to hedge the value of future payments against movements in the zloty exchange rate. A second group of non-financial entities, active in this market, were private banking customers, who bought/sold currencies, mainly the zloty, for speculative purposes. As a result, the daily average volume of outright-forwards involving the zloty increased by 141% at current rates (95% at constant rate) and amounted to 456 million US dollars. As in 2004, banks rarely concluded outright-forward transactions because they preferred synthetic forwards that combined transactions concluded in more liquid segments of the foreign exchange market, i.e. spot transactions and fx swaps.

The main purposes of concluding outright-forward transactions on the domestic market explain their term structure. Operations with maturity up to 7 days were used as short-term speculation instruments; however transactions with longer maturity were applied by Polish companies to hedge their exposure on currency risk. Currency structure of turnover was strictly connected with the payments currency structure for goods. The transactions EUR/PLN prevail on the outright-forward market – almost 58% of the value of transactions. Their share in turnover on the zloty market constitutes 67%. The share of USD/PLN operations amounted to, respectively, 24% and 28%. Non-deliverable forwards were almost exclusively concluded with non-financial customers and constitute ca. 16% of turnover on outright-forward customer market.

Figure 2. Term structure of turnover in the *outright-forward* and *fx swap* markets, April 2004 and 2007 (%)



The fx swap market

FX swaps remain the most liquid instrument of the Polish foreign exchange market. In April 2007, the average daily net turnover in fx swap market amounted to 5,881 million US dollars (compared to 2004, an increase of 44% at current rates and 22% at constant rate), of which 4,514 million US dollars represented transactions where the zloty was one of the currencies. Higher activity in this market resulted mainly from the growing investments of non-residents in the zloty denominated Treasury bonds. As of the end of April 2007, non-residents owned Polish T-bonds worth 79 billion zlotys, i.e. 34 billion zlotys more than at the end of April 2004. Part of this increase was financed using zlotys obtained in the short-term fx swaps market. Foreign banks borrow low interest rate currencies in the interbank market and exchange them to US dollars. Then, in the fx swap market, mainly in T/N transactions, they borrow everyday zlotys in exchange for US dollars. This is confirmed by the currency composition of turnover – in April 2007, USD/PLN swaps represented 95% of the transactions involving zloty and conducted between financial institutions. Higher turnover in the market of FRA contracts on Polish interest rates could have also contributed to the improved liquidity in the fx swap market, as fx swaps allow banks to hedge interest rate risk, which results from concluding FRA transactions.

The use of the above strategy of financing positions in Polish securities, limiting FX risk, explains both the high share of transactions with financial institutions from outside Poland (88.5% of net turnover) and also the prevalence of transactions with a maturity of up to 7 days (89%). Compared to April 2004, there was a significant rise (over 125% at current rates) in the volume of fx swaps not involving the zloty. This was reflected in the currency composition of turnover (the share of such transactions grew to around 22%). Higher activity in this segment of the market was partly the result of a rise in speculative transactions (taking FX positions, mainly in EUR/USD, by concluding spot transactions and short-term fx swaps).

The standard value of transactions in the domestic fx swap market amounted to 100 million USD and EUR for transactions of up to 7 days, with values of 25 and 50 million USD and EUR for longer maturities. Most fx swaps were concluded using electronic conversational systems and by phone (over 62% of gross turnover). Transactions concluded by voice brokers constituted approximately 31%. In April 2007, banks operating in Poland also used electronic broking systems (over 6% of gross turnover).

Turnover in the OTC derivatives market

The survey results confirm dynamic development of the OTC derivatives market in Poland in the last three years. Compared to April 2004, the average daily net turnover in the foreign exchange and interest rate derivatives market increased more than twofold (at current rates) and amounted to 412 million and 2,681 million US dollars, respectively. Transactions with exposure in the zloty exchange rate and Polish interest rates prevailed. Foreign financial institutions continued to be very active in the domestic market.

Table 4. Average daily turnover in the domestic OTC derivatives market in April 2004 and April 2007 (in million US dollars)

	2004	2007	Percentage change (at current exchange rates)	Percentage change (at constant exchange rate)
Foreign exchange derivatives	180	411	129	91
CIRS	3	68	2,167	1,943
FX options	177	343	94	62
Interest rate derivatives	958	2,681	180	105
FRA	691	1,435	108	51
IRS	267	1,240	364	247
Interest rate options	0	6	-	-
Derivatives market	**1,138**	**3,092**	**172**	**103**

FX derivatives

In recent years in the Polish domestic OTC derivatives market there has been a significant increase in the volume of CIRS transactions. In April 2007, the average daily turnover in this market amounted to 68 million US dollars, which is more than a dozen times higher than the volume recorded in April 2004. This was the result of a considerable rise in the number of transactions concluded by domestic banks in order to hedge FX and interest rate risk resulting form mismatches between the structure of loans granted and deposits accepted.

Table 5. Average daily turnover in specific segments of the domestic FX derivatives market in April 2007 (in million US dollars)

	Foreign currencies / PLN	Foreign currencies / foreign currencies	TOTAL
Foreign exchange derivatives	**367**	**44**	**411**
CIRS	61	7	68
FX options	306	37	343

The growth of the CIRS market was closely connected to a dynamic increase in the value of mortgage loans indexed to foreign currencies (mainly CHF). As of the end of April 2007, the value of such loans amounted to 54 billion zlotys, which is an increase of 165% compared to the end of April 2004. The resulting discrepancy in currency exposure of the assets and liabilities of banks impacted upon the currency composition of turnover in CIRS market. Transactions in which CHF/PLN payments were exchanged prevailed (38% of the value of contracts concluded with financial institutions). The share of EUR/PLN and USD/PLN transactions amounted to 26 and 22%, respectively. CIRS contracts involving payments in EUR and CHF (13%) were also popular. This was because some banks which granted mortgage loans indexed to CHF financed their credit activity by issuing Eurobonds denominated in EUR. In the domestic market, CISR transactions concluded with non-financial entities (mainly companies financing in the international market) continued to be scarce.

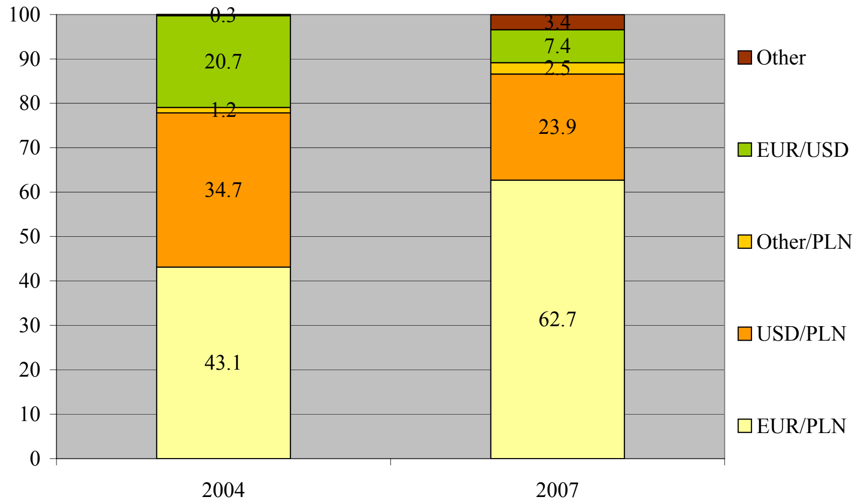
Table 6. Turnover in the FX derivatives market by counterparty (average daily turnover in April 2007, in million US dollars)

	Residents	Non-residents	TOTAL
CIRS	43	25	68
with financial institutions	28	25	53
with non-financial institutions	15	0	15
FX options	228	115	343
with financial institutions	16	111	127
with non-financial institutions	212	4	216
Foreign exchange derivatives	**271**	**140**	**411**
with financial institutions	**44**	**136**	**180**
with non-financial institutions	**227**	**4**	**231**

In April 2007, the average net turnover in the fx options market amounted to 343 million US dollars and was 94% higher (at current rates) compared to the value of transactions concluded in April 2004. Data adjusted by exchange rates movements indicate a 62% increase in activity, while in the market of options on zloty exchange rate, the rise was higher and amounted to 77%. This was mainly due to a manifold increase in the volume of transactions concluded with domestic non-financial entities (in April 2007, transactions with this group of counterparties represented 62% of net turnover, while in April 2004, this share amounted only to 31%). The increase in foreign trade caused greater demand from some companies for instruments that would hedge the value of future payments denominated in foreign currencies. In the management of FX risk, it became more common for Polish companies to use option strategies tailor-made to their risk aversion and payment profiles. The number of banks offering exotic options to their non-financial customers also increased.

Compared to April 2004, there was a slight fall of turnover in the segment of transactions with financial institutions. In 2007 only several banks operating in Poland managed FX options portfolio, and therefore liquidity in the market of transactions with financial institutions was largely generated by non-residents (approximately 87% of net turnover). Many banks offering options to non-bank institutions were closing their exposure resulting from the sale of option strategies by concluding opposite transactions in the interbank market. The counterparties of hedge back-to-back transactions were mainly the foreign dominant companies of those banks. Along with a considerable increase in transactions with non-financial entities, the share of EUR/PLN rate options in the turnover composition continued to grow. In April 2007, the value of EUR/PLN transactions represented over 70% of the turnover in the zloty options market. There was also a drop in the share of USD/PLN options, which in 2004, due to the zloty's basket nature, were conducted more frequently between financial institutions. The standard value of the at-the-money straddle option strategy, commonly quoted by banks, amounted to 10 million EUR and USD in the domestic market and was much lower than the values of zloty option strategies traded in the offshore market. Transactions executed by phone and electronic conversational systems prevailed (over 95% of gross turnover).

Figure 3. Currency composition of the turnover in the fx options market, April 2004 and 2007 (%)



Interest rate derivatives

The average daily net turnover in the OTC interest rate derivatives market in Poland in April 2007 amounted to 2,681 million US dollars, which is an increase of 105% (at the constant exchange rate) compared to data from April 2004. The factors contributing to the increased liquidity of all instruments, except options, included: a growing number of active market participants, and the fact that the last sudden and sharp correction in the Polish T-bond market occurred in autumn of 2003. Polish companies were still reluctant to hedge against interest rate risk, and that is why the value of transactions with non-financial entities was very low in all segments of the market. Compared to previous years, banks operating in Poland were much more active in the foreign interest rates derivatives market (average daily net turnover in April 2007 amounted to 615 million US dollars, while in April 2004 – to 110 million dollars).

Table 7. Average daily turnover in specific segments of the domestic interest rate derivatives market in April 2007 (in million US dollars)

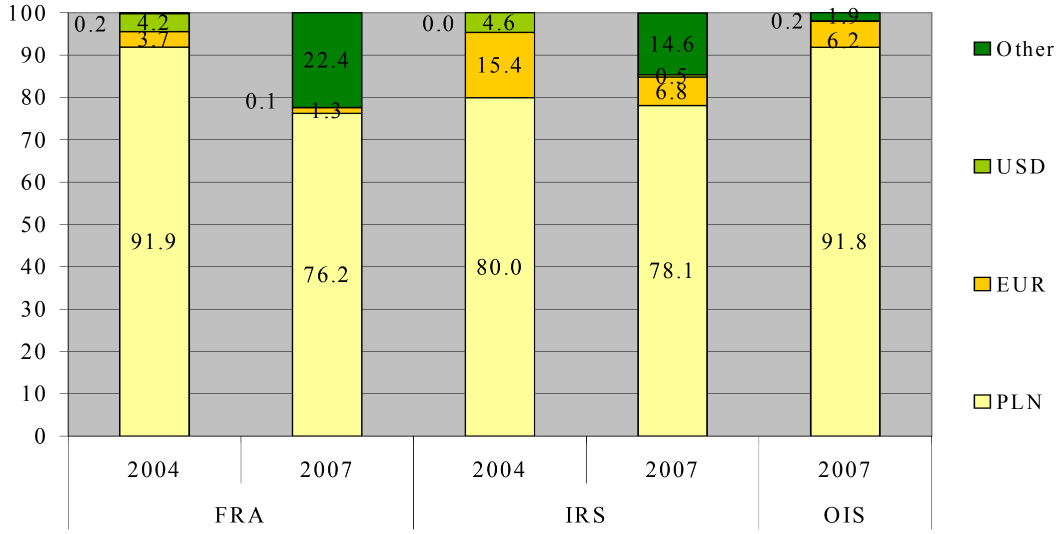
	PLN	Foreign currencies	TOTAL
Interest rate derivatives	**2,066**	**615**	**2,681**
FRA	1,094	341	1,435
IRS	968	272	1,240
OIS	*606*	*54*	*660*
Interest rate options	4	2	6

FRA contracts were, as in 2004, the most liquid interest rate derivatives. The average daily turnover in the FRA market amounted to 1,435 million US dollars (a 51% increase at the constant rate), which almost exclusively involved transactions between financial entities. The increased liquidity was a result of new banks joining the group of animators and a rise in speculative transactions on changes in NBP interest rates concluded by current market participants. This was reflected in the decrease in the share of transactions with foreign financial entities (from 72% in 2004 to 50% in 2007). Transactions on Polish interest rates prevailed, representing a 76% share in turnover. Domestic banks were more frequently concluding FRA transactions with a settlement period of more than one year and were very active in the Hungarian interest rate derivatives market. Contracts denominated in HUF constituted over 20% of turnover. The standard value of FRA transactions in the interbank market was higher than in 2004 and amounted to 500 million zlotys for contracts based on 1-month WIBOR and 250 million zlotys for contracts based on 3-month WIBOR.

Table 8. Turnover in the interest rate derivatives market by counterparty in April 2007 (average daily turnover in April 2007, in million US dollars)

	Residents	Non-residents	TOTAL
FRA	714	721	1,435
with financial institutions	713	721	1,434
with non-financial institutions	1	0	1
IRS	555	685	1,240
with financial institutions	549	685	1,234
with non-financial institutions	6	0	6
including OIS	*426*	*234*	*660*
with financial institutions	*426*	*234*	*660*
with non-financial institutions	*0*	*0*	*0*
Interest rate options	4	2	6
with financial institutions	0	2	2
with non-financial institutions	4	0	4
Interest rate derivatives	**1,273**	**1,408**	**2,681**
with financial institutions	**1,262**	**1,408**	**2,670**
with non-financial institutions	**11**	**0**	**11**

Figure 4. Currency composition of turnover in domestic FRA, IRS and OIS markets, April 2004 and 2007 (%)



The segment of interest rate derivatives market that has developed most dynamically for the last three years is the IRS market. An over 350% increase in turnover (at the constant exchange rate) was the result of several factors. Firstly, in the years 2005-2006 there was a significant rise of liquidity in the OIS segment. In April 2007, OIS contracts represented over 53% of the value of all IRS transactions, while in 2004 such contracts were rarely concluded. Having established risk management procedures and adjusting operating systems to the daily monitoring of transaction value, new banks became active participants of the OIS market. Contributing to the growth of this market was the introduction, in January 2005, of a new and more representative fixing rate for interbank deposits – the POLONIA rate (equivalent of EONIA rate in the eurozone). Banks were also more active in the IRS market involving instruments other than OIS. The average daily value of such transactions in April 2007 amounted to 580 million zlotys. Banks more frequently took off-balance sheet positions in 1-year interest rate derivatives, using 1-year IRS vs. 3-month WIBOR, as this was more efficient than purchasing three FRA contracts with appropriate parameters. In addition, some banks improved their legal documentation by signing credit support annexes and using the break clause, which reduced the risk of settling transactions and burden on credit limits set upon customers. These limits could be used to take up exposure in new transactions.

In the IRS market involving instruments other than OIS, transactions with foreign financial entities prevailed. Their share in turnover increased from 67% in April 2004 to 78% in April 2007. Liquidity of the OIS market was to a much greater extent dependent on domestic banks. Transactions concluded between domestic financial institutions represented 65% of turnover. Transactions with non-financial entities were rarely concluded. In the currency composition of OIS contracts, Polish interest rate transactions prevailed, with a nearly 92% share in the volume of transactions registered in April 2007. Some banks also concluded swaps settled according to the EONIA rate. In the IRS market involving instruments other than OIS, contracts denominated in zlotys were concluded most frequently (62% of turnover). As in the FRA market, banks operating in Poland took up off-balance sheet positions on Hungarian interest rates (contracts denominated in HUF constituted 12.5% of all transactions concluded in April 2007).

The standard nominal value of a 5-year IRS contract based on the Polish money market rate amounted to 50 or 100 million zlotys (compared to 25 or 50 million in April 2004). For most OIS transactions (approx. 75%), the POLONIA was the reference rate. However, some domestic and foreign banks preferred transactions settled according to the O/N WIBOR rate. The standard value of OIS contracts amounted to 500 million zlotys for transactions with a settlement period of up to 1 week and 100 million zlotys for transactions with a settlement period of over 3 months.

The interest rate options market remained the least developed segment of the domestic OTC derivatives market. The average daily value of transactions concluded in April 2007 amounted to 6 million US dollars. No domestic bank had a transaction portfolio for these instruments and could not therefore be an active participant of the interbank market. Several banks offered this product to non-financial entities. Companies showed limited interest in options as well as in interest rate derivatives.

Warsaw, 25 September 2007
Financial System Department

Appendix 1

Reporting dealers in Poland*:

1. ABN AMRO Bank (Polska) SA
2. Bank Gospodarki Żywnościowej SA
3. Bank Handlowy w Warszawie SA
4. Bank Polska Kasa Opieki SA
5. Bank BPH SA
6. Bank Millennium SA
7. Bank Zachodni WBK SA
8. BNP Paribas SA Oddział w Polsce
9. BRE Bank SA
10. Deutsche Bank Polska SA
11. ING Bank Śląski SA
12. Kredyt Bank SA
13. Powszechna Kasa Oszczędności Bank Polski SA
14. Société Générale SA Oddział w Polsce
15. WestLB Bank Polska SA
16. Bank Gospodarstwa Krajowego
17. Fortis Bank SA
18. HSBC Bank Polska SA

* Institutions operating in Poland which participated in the turnover Survey in 2007 (they were referred to in the Survey as reporting dealers). The listed banks and branches of credit institutions reported the data on their transactions conducted in April 2007 to the National Bank of Poland. On the basis of the data received from these banks, the NBP has calculated aggregated values of the turnover in the foreign exchange and OTC derivatives markets in Poland. The aggregates for Poland have been reported to the Bank for International Settlements and included in global results.

Appendix 2

REPORTING GUIDELINES

for the survey of turnover in the foreign exchange and OTC derivatives market

Methodology worked out by the Bank for International Settlements

Survey Coverage

The turnover survey covers all new deals entered in the foreign exchange and the OTC derivatives markets in Poland in April 2007. Reporting dealers provided data reflecting transactions in the interbank market (including prime brokerage operations) and in the customer market (transactions with non-bank institutions). Retail transactions with non-financial customers have been excluded from the reporting – only operations in which exchange rate could be negotiated have been included in the statistics.

According to the standard agreed with the Bank for International Settlements and other central banks, the **foreign exchange market covers**:
- spot transactions,
- fx swaps,
- outright-forwards.

The **foreign exchange derivatives market** is defined as:
- cross currency interest rate swaps – CIRS,
- fx options – sold and bought options, separately,

Whereas the **interest rate derivatives market** comprises:
- forward rate agreements – FRA,
- interest rate swaps – IRS, including overnight index swaps – OIS,
- interest rate options – sold and bought options, separately.

All derivatives with exposure to more than one currency are classified as fx transactions.

The subject of the survey covered also the execution method used to conduct the trades in the foreign exchange market and in the fx options market, focusing in particular on electronic transaction systems.

Reporting rules

Turnover is defined as **the nominal or notional gross amount of all transactions concluded in April 2007, regardless of their settlement date.** The term “gross” means that each transaction was considered separately. Gross turnover is defined as the absolute total value of all deals contracted. No netting was made between sales and purchases (i.e. a purchase of 5 million US dollars against the zloty and a sale of 3 million US dollars against the zloty by the same institution amounts to the turnover of 8 million US dollars). The data on turnover were broken down by currency pairs (e.g. the sale of 1 million US dollars against 4 million zloty was classified as a transaction on the USD/PLN market with the value of 1 million US dollars). Cross-currency transactions involving vehicle currency were reported as two separate deals (e.g. the sale of US dollars and the purchase of Danish krones via the euro market – first, the sale of 6 million US dollars against the euro, and then the purchase of Danish krones against the euro, amount in total to the turnover of 12 million US dollars). Contracts with variable nominal or notional amount were reported according to the value of the amount as of the conclusion date.

According to the methodology of this survey, the basis for the reporting was the location in which the dealer operates. This means that the data presented by the NBP include all transactions concluded by dealers operating in Poland, regardless of whether the transactions were booked at a bank in Poland or at its head office abroad. The data include transactions of reporting dealers concluded with affiliated firms (parent enitities, subsidiaries, branches) and between desks and offices of reporting institutions, provided that such transactions were not concluded as hedge back-to- back deals or facilitate internal book-keeping and internal risk management within a given institution.

The turnover values are expressed in **million US dollars.** The value of transactions which involve currencies other than the US dollar was converted into US dollars at the exchange rate of the transaction day, e.g. the average NBP rate on the day of transaction or a another rate slightly diverging from the market rate.

Counterparties

Tunover values provided to the NBP by reporting dealers were broken down for each instrument by counterparty as follows:

- other reporting dealers,
  - residents,
  - non-residents,
- other financial institutions,
  - residents,
  - non-residents,
- non-financial customers,
  - residents,
  - non-residents.

The criterion differentiating transactions with residents or non-residents is the location of the counterparty and not its nationality, i.e. the location from which the counterparty counucludes deals with the reporting dealer.

Reporting dealers are defined as those financial institutions that actively participate in the local and global foreign exchange and OTC derivatives markets and/or have an active business with customers. The distinction of the “reporting dealers” category is aimed at elimination of double counting which arises because transactions concluded between two reporting dealers are recorded and reported by each of them, i.e. twice. In 2007 triennial survey, coordinated by the Bank for International Settlements, approximately 1,280 reporting dealers from 54 countries participated, including 18 banks and branches of credit institutions operating in Poland. The list of Polish reporting dealers (banks that provided data on their transactions to the National Bank of Poland and via the NBP to the BIS) is presented in Appendix 1.

The “other financial institutions” category covers all other financial institutions that were not classified as reporting dealers. The group of financial institutions comprises commercial banks, investment and mortgage banks, brokerage houses, investment funds, pension funds, hedge funds, leasing companies, insurance companies and central banks. The group of non-financial institutions cover all other counterparties (mainly the corporate and government sector).

Maturities

The following maturity bands are specified for fx swaps and outright-forwards, separately:

- up to seven days (one week),
- over seven days and up to one year (over one week and up to 365 days),
- over one year (over 365 days).

The maturity for outright-forwards was calculated as the difference between the settlement date and the date of conclusion of the contract. Correspondingly the initial maturity of the fx swaps is measured on the same basis, i.e. the difference between the settlement date of the long leg and the date of the initiation of the deal.

Currency breakdown

Data on transactions in the foreign exchange market and FX derivatives market were reported in breakdown by currency pairs. Data were provided separately for trading in the zloty, US dollar and euro against each other and against other currencies. For turnover of single-currency interest rate derivatives the currency breakdown included inter alia the zloty, euro and US dollar.

Execution methods

In the survey reporting dealers were asked to provide information on execution methods of foreign exchange transactions. The following categories of deals should be identified:

- transactions executed directly via telephone communication or electronic dealing systems, that are not intermediated by a third party; this type of transactions involves interbank direct transactions concluded between two reporting dealers participating in the triennial survey and customer direct transactions concluded between the reporting dealer and either a customer or a non-reporting dealer.
- transactions executed via automated order matching system like EBS or Reuters Matching.
- transactions executed via electronic trading systems, which are geared generally towards customers; these systems involve single bank proprietary platforms and multi-bank dealing systems.
- transactions executed via telephone communication with voice broker.

Data at constant exchange rate

To ensure intertemporal comparability of data, the impact of exchange rate movements (e.g. appreciation of the zloty against dollar; between April 2004 and April 2007 the zloty gained approx. 29%) must be eliminated. Therefore, data concerning the previous reporting period should be presented at average April 2007 exchange rates. For transactions concluded in the foreign exchange market and fx derivatives markets, the impact of movements in exchange rates of both currencies is taken into account. For both currencies of each transaction, the value of turnover reported in USD is converted into original currency at the average April 2004 exchange rate and then recalculated into dollar using the average April 2007 exchange rate. After adding the amounts calculated separately for both currencies of the transaction and dividing the sum by two, we obtain the value of turnover at average April 2007 exchange rate.

Instruments

Foreign exchange transactions are defined as follows:

Spot transaction
Single outright transaction involving the exchange of two currencies at a rate agreed on the date of the contract for value or settlement within two business days. This category covers foreign exchange transactions settled on the day of their conclusion. Neither the short leg nor the long leg of foreign exchange swaps were included in this category, even for settlement within two business days (e.g.: T/N fx swap).

Outright forward
Single transaction involving the exchange of two currencies at a forward rate agreed on the date of the contract and settled at some time in the future (later than within two business days). The category also includes non-deliverable forwards (NDF) and other contracts for difference (CFD). The long leg of the fx swap transaction, regardless of the booking method is excluded form this category.

Foreign exchange swap
Contract which commits its counterparties to the exchange of two currencies on a specific date at an agreed rate (the short leg) and a reverse exchange of the same two currencies on a date further in the future (other than the settlement of the short leg) and at a rate agreed at the time of conclusion of the contract (generally different from the rate applied to the short leg). This category includes both spot/forward and forward/forward fx swaps. All fx swaps (including short-term swaps carried out as T/N fx swaps), regardless of the booking method, were reported in this category. According to the reporting guidelines, only the the long leg was presented in the turnover statistics. The short leg was not reported at all, i.e. as spot nor as fx swap transactions. This means that the turnover in the fx swap market represents the nominal value of fx swaps, and not the value of settlement flows (payments in one of the currencies).

OTC derivatives

In the turnover survey data were collected on the following derivative instruments:
- forwards,
- swaps,
- options.

All derivatives strategies (non-plain vanilla products) were broken down into plain-vanilla instruments described below and each component was reported separately. If it was not feasible and the contract had an embedded option, then such instrument was classified as an option.

Foreign exchange derivatives are defined as follows:

Cross currency interest rate swaps (CIRS)
Contract which commits both counterparties to exchange periodic streams of interest payments (calculated on a specified principal amount) within the agreed period and to exchange the principal amount (at a previously agreed rate) on the contract maturity. Interest payments are in different currencies and are calculated at interest rates specified separately for each of the counterparties.

Currency option
Option contract that gives the right to buy or sell a currency at a previously agreed rate during a specified period. This category includes European and American options, as well as all exotic options. Each option that constitutes an option strategy (straddle, strangle, butterfly, risk reversal, etc.) was reported separately.

Single-currency interest rate derivatives are defined as follows:

Forward rate agreement (FRA)
Contract, where the counterparties commit to pay interest on an agreed principal amount for a set period of time, beginning in the future. The interests are calculated at rates agreed on the day of the contract initiation. The counterparties settle only interest difference, which is proportional to the principal amount of the contract and the difference between the FRA rate (forward rate on the day of the contract initiation) and the reference rate binding two business days before the settlement date.

Single-currency interest rate swap (IRS)
Contract that commits both counterparties to exchange periodic streams of interest payments (calculated on a specified nominal amount) for an agreed period. The interest payments are related to interest rates in one currency (one rate may be fixed and the other floating, or both may be floating but based on different indices). This category includes overnight index swaps (OIS) and those swaps, whose principal changes over time, i.e. amortising and drawdown swaps.

Overnight Index Swap (OIS)
A transaction in which the parties agree to exchange the difference between interests accrued at a fixed and floating rate. The interest is calculated on an agreed notional amount. The floating rate is tied to a daily overnight reference rate. Net settlement (without the notional OIS amount) occurs at maturity.

Interest rate option
Option contract that gives the right to pay or receive a specific interest on an agreed principal for a set period of time. Caps, floors and collars are included in this category.

Interest rate cap
Option that gives the right to receive compensation in the case of increase in the short-term rate index. The compensation for the buyer of the cap is the difference between the interest calculated at the market rate and the interest set at the maximum interest rate (cap rate) specified in the contract. The interest is calculated for a predeterminated principal amount and for an agreed period.

Interest rate floor
Option that gives the right to receive compensation in the case of decrease in the short term rate index. The compensation for the buyer of the floor is the difference between the interest calculated at a minimum interest rate (floor rate) specified in the contract and the interest set at the market rate. The interest is calculated for a predeterminated principal amount and for an agreed period.

Interest rate collar
A combination of the cap and the floor, where one of the these instruments is sold and the other is purchased.