Turnover in the Polish Foreign Exchange and OTC Derivatives Markets in April 2010

SUMMARY OF THE RESULTS

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 2010 central banks and monetary authorities of over 50 countries participated in the survey. These institutions collected data from 1309 entities – the most active institutions in the foreign exchange and OTC derivatives markets. The preliminary results of the survey on global turnover in the foreign exchange and OTC derivatives markets have been published by the Bank for International Settlements and are available at: http://www.bis.org/publ/rpfx10.htm. The website 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 2010 Poland took part in the *Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Market Activity* in its full scope for the third time, collecting data concerning all market segments according to the methodology of the Bank for International Settlements. The presented results are fully comparable to the results of the study conducted by the National Bank of Poland (NBP) in 2004 and 2007 (they are available at: http://www.nbp.pl/homen.aspx?f=/en/systemfinansowy/obroty.html). The data collected in the surveys served as the basis for analyses of changes in the volume and structure of the foreign exchange and OTC derivatives markets in Poland in the last three years.

Seventeen most active banks and branches of credit institutions operating in Poland were surveyed in the 2010 study (listed in Appendix 1). They provided data concerning the value of transactions concluded in April 2010 in accordance with the reporting forms and guidelines specified by the Bank for International Settlements.[1] The accuracy of the reports with respect to the methodology presented in Appendix 2 was verified by the NBP. The

[1] 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 Polish zloty market was added.

aggregates for Poland calculated by the NBP were sent to the Bank for International Settlements and are included in the global results.

One major change has been introduced compared to the previous studies regarding the definition of the foreign exchange market. It now comprises the **spot market** and the **foreign exchange derivatives market** (which includes outright-forwards, fx swaps, CIRS and currency options).[2] The **OTC interest rate derivatives market** includes forward rate agreements (FRA), interest rate swaps (IRS, including overnight index swaps – OIS) and interest rate options.

This summary presents the aggregated data on **net turnover** registered in April 2010 and in April 2007 in the foreign exchange market and the OTC interest rate derivatives market. 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 reporting dealer status. The term "net turnover" means that the data represent the nominal value of transactions. 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 instruments denominated in the Polish zloty are traded in the offshore market, mainly in London). The value of turnover for all transactions involving the Polish zloty will be published in a report by the Bank for International Settlements in November 2010. Then the NBP will also provide the results of the survey in more detailed breakdowns.

The presented data are not adjusted for gaps in reporting. The National Bank of Poland estimates that the value of transactions reported by 17 banks and branches of credit institutions constitutes approximately 93% of the total turnover in the domestic foreign exchange market and 98% in the domestic OTC derivatives market. Average daily turnover has been calculated according to the number of business days – **in April 2010 there were 21 business days in Poland**.[3] All data are presented **in USD million**, which is consistent with the standard adopted in the survey.

Turnover in the foreign exchange market

According to the BIS methodology the foreign exchange market comprises the spot market and the foreign exchange derivatives market (which includes outright-forwards, fx swaps, CIRS and currency options). Average daily net turnover in the domestic foreign exchange market in April 2010 amounted to USD 7,848 million and was 15% lower (at current exchange rates) than in April 2007.[4] Transactions that involved the Polish zloty were the majority of transactions concluded in the domestic foreign exchange market. Their average

[2] In the previous surveys the foreign exchange market only comprised the spot, outright-forward and fx swap markets.

[3] There were 20 business days in Poland in April 2007.

[4] Due to relatively small changes in exchange rates between April 2007 and April 2010 (the Polish zloty depreciated by 1.3% to the euro and 1.8% to the dollar in the given period of time) the figures in this document refer to changes in current exchange rates only. For the sake of transparency, the changes in turnover at fixed exchange rates are given in tables 1 and 4 (calculated according to the methodology described in Appendix 2 on page 16).

daily value in April 2010 amounted to USD 5,897 million. Over 90% of transactions in this market were concluded with financial entities. The transactions of banks operating in Poland concluded with affiliated firms constituted approx. 24% of the net turnover.

Table 1. Average daily turnover in the domestic foreign exchange market in April 2007 and April 2010 (in USD million)

	2007	2010	Percentage change (at current exchange rates)	Percentage change (at a constant exchange rate)
Foreign exchange market	**9,224**	**7,848**	**-15**	**-14**
Spot transactions	2,405	1,955	-19	-18
Foreign exchange derivatives	6,819	5,893	-14	-13
Outright-forwards	527	318	-40	-39
Fx swaps	5,881	5,368	-9	-8
CIRS	68	79	16	14
Currency options	343	128	-63	-62

Table 2. Average daily turnover in segments of the domestic foreign exchange market in April 2010 (in USD million)

	Foreign currencies/ PLN	Foreign currencies/ Foreign currencies	TOTAL
Foreign exchange market	**5,879**	**1,969**	**7,848**
Spot transactions	1,405	550	1,955
Foreign exchange derivatives	4,474	1,419	5,893
Outright-forwards	306	12	318
Fx swaps	3,970	1,398	5,368
CIRS	72	7	79
Currency options	126	2	128

Spot market

The average daily net turnover in the spot market decreased in April 2010 to USD 1,955 million, of which USD 1,493 million involved transactions with financial institutions, mainly non-residents. The average daily value of the Polish zloty transactions amounted to USD 1,405 million and was 9% lower (at current rates) compared to the survey results in 2007. There was a decrease by 10% in the value of transactions with domestic non-financial entities, mainly due to a smaller size of foreign exchange operations. Despite an increase of trade the average daily value of transactions involving the Polish zloty concluded by domestic non-financial institutions changed only slightly and amounted to USD 455 mln. Compared to April 2007 there was a significant decrease of the value of transactions with foreign financial institutions. This was due to international banking groups operating in Poland moving their activity to the offshore market, as well as domestic banks sharp limiting their speculative activities, as the risk aversion increased in the aftermath of the global financial crisis and a higher volatility of the Polish zloty exchange rate.

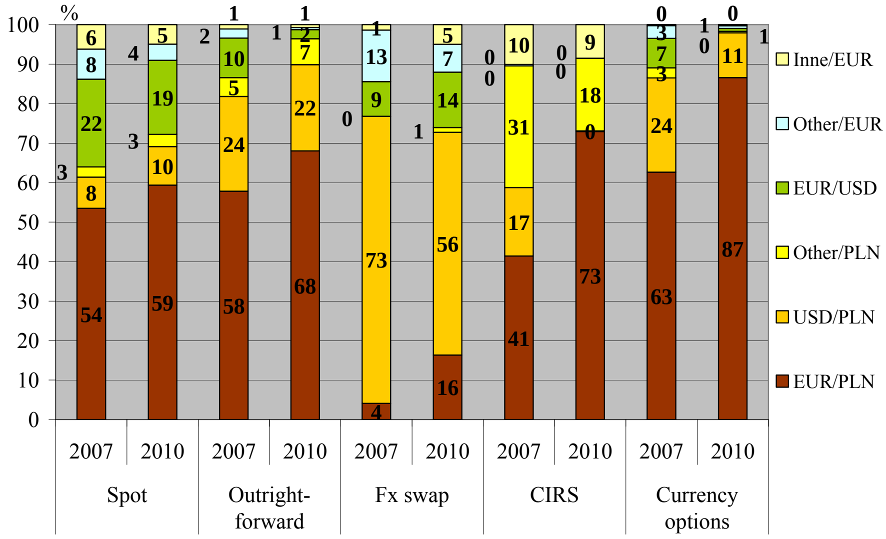
Table 3. Turnover in the domestic foreign exchange market by counterparty (average daily net turnover in April 2010, in USD million)

	Residents	Non-residents	TOTAL
Foreign exchange market	**2,110**	**5,738**	**7,848**
with financial institutions	**1,350**	**5,726**	**7,076**
with non-financial institutions	**760**	**12**	**772**
Spot transactions	755	1,200	1,955
with financial institutions	296	1,197	1,493
with non-financial institutions	459	3	462
Foreign exchange derivatives	1,355	4,538	5,893
with financial institutions	1,054	4,529	5,583
with non-financial institutions	301	9	310
Outright-forwards	293	25	318
with financial institutions	72	24	96
with non-financial institutions	221	1	222
Fx swaps	998	4,370	5,368
with financial institutions	970	4,362	5,332
with non-financial institutions	28	8	36
CIRS	2	77	79
with financial institutions	2	77	79
with non-financial institutions	0	0	0
Currency options	62	66	128
with financial institutions	10	66	76
with non-financial institutions	52	0	52

A significant change in the currency composition of spot transactions has been observed. The share of EUR/PLN transactions increased to almost 60%. This currency pair is the prevailing one in the interbank market, and it conveys most information on the Polish zloty's intrinsic value. Average daily net turnover in the EUR/USD market amounted to USD 366 mln, which constituted 19% of transactions in the domestic spot market. The EUR/PLN currency pair prevailed in operations between financial institutions (average daily net turnover in April amounted to USD 869 mln, which was app. 90% of the spot transactions that involved the Polish zloty). The share of USD/PLN transactions in this market segment amounted to 6.3%. The currency structure of turnover in the customer market changed slightly compared to April 2007 and was similar to the structure of payments in Poland's international trade. Tight economic links of the EU economy, and the euro area countries in particular, were the most likely reason behind the EUR/PLN currency pair's prevalence (approx. 62% of the Polish zloty spot transactions in the customer market). The USD/PLN transactions' share in the customer market amounted to approx. 28%.

Transactions concluded with the use of electronic conversational systems (direct dealing systems) and by phone constituted approx. 41% of gross turnover in the spot market. The share of transactions executed via automated order matching systems (electronic broking systems) was roughly the same. The last three years witnessed a significant increase in the use of single- and multi-bank electronic trading systems, including systems designed by banks operating in Poland for their clients. In April 2010 approx. 13% of all domestic spot transactions were concluded on such platforms, whereas in April 2007 it was approx. 2%. Spot transactions were also executed via voice brokers (5%). The direct execution methods were prevalent in the Polish zloty spot market: approx. 48% of operations were concluded via electronic conversational systems, and approx. 36% – via electronic broking systems, which was equivalent to 52% of all transactions concluded between financial institutions (the only users of these systems). Transactions executed via voice brokers constituted approx. 4% of gross turnover in the domestic spot market for the Polish zloty. The standard value of transactions concluded in the Polish zloty market between financial institutions amounted to EUR 3 million and USD 3 million, for EUR/PLN and USD/PLN currency pairs, respectively.

Figure 1. Turnover in the domestic foreign exchange market by currency pairs in April 2010 (%)



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

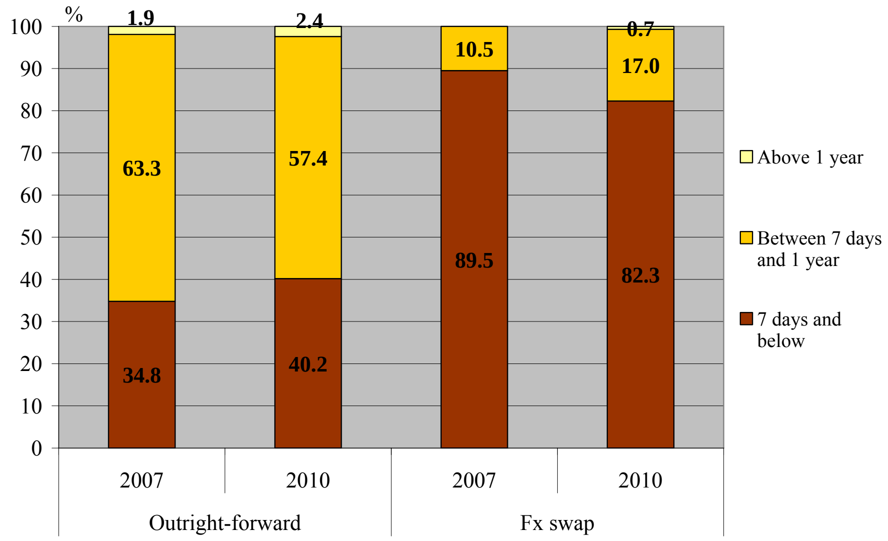
Outright-forward market

The average daily net turnover in the outright-forward market decreased compared to the previous study and in April 2010 amounted to USD 318 million. This was the only segment of the domestic foreign exchange market where transactions with domestic non-financial entities prevailed (nearly 70% of turnover) and it was the decrease in domestic corporations' demand for foreign exchange derivatives that caused the market to contract. The slump in demand, in turn, was caused by the reluctance of some entities to enter transactions which brought about significant losses in 2008-2009, as well as by the increasing requirements by banks as regards their counterparties' creditworthiness and collaterals. As in 2007, banks relatively rarely concluded outright-forward transactions, as they preferred synthetic forwards in the form of spot transactions and fx swaps, concluded in more liquid segments of the foreign exchange market.

Operations with maturities above one week remained prevalent (approx. 60% of gross turnover), as they were used mainly for hedging purposes. Transactions with maturities of one week or less were principally used as short-term speculation instruments and were often used by private banking clients. The currency structure of turnover was strictly connected with the payments currency structure for tradable goods. The EUR/PLN transactions were prevalent in the outright-forward market, constituting 68% of the net turnover (71% of the gross turnover in the forward market for the Polish zloty). The share of USD/PLN operations amounted to 22%.

The importance of non-delivery forwards and contracts for difference increased compared to April 2007, as they credit counterparty risk involved is significantly lower. Such operations were concluded mainly with non-financial entities, constituting 19% of the turnover in the customer market. The majority all forwards (over 85%) was executed via electronic conversational systems and by phone. The share of operations concluded on single-bank trading platforms amounted to 13% of the gross turnover in the domestic foreign exchange derivatives.

Figure 2. Turnover in the domestic *outright-forward* and *fx swap* markets by maturities in April 2007 and 2010 (%)



Fx swap market

Fx swaps remained the most liquid instrument of the domestic foreign exchange market in Poland. In April 2010 the average daily net turnover in the fx swap market amounted to USD 5,368 million (compared to 2007 a decrease of 9% at current rates), of which USD 3,970 million represented transactions involving the Polish zloty. The decrease of activity in the fx swap market originated in the financial market turmoil. As a result of increased risk aversion and a confidence crisis, foreign and domestic banks contracted the size of mutual credit limits. In consequence the value of resident-non-resident operations, which are vital to this market, significantly declined. A relatively high liquidity of the fx swap market, compared to other foreign currency market segments, was mainly due to the presence of non-residents in the Treasury bonds market denominated in the Polish zloty.[5] It was also due to the use of fx swaps by domestic banks for hedging currency exposures that result from housing loans denominated in foreign currencies. Non-residents' positions in Polish Treasury bonds issued in the local market to a large extent were financed using the Polish zloty obtained from short-term fx swap operations. Foreign banks borrowed the Polish zloty in the interbank fx swap market, mainly in T/N transactions. Such a strategy employed for the purpose of currency risk hedging explains

[5] According to the Ministry of Finance data, non-residents held in their portfolios PLN 96 billion of Treasury bonds denominated in the Polish zloty. Their share in the structure of buyers amounted to approx. 22%.

both the high share of cross-border transactions with financial institutions (81% of the net turnover), and the prevalence of operations with maturities of up to one week (82%).

The currency structure of turnover changed significantly in comparison to the results of the previous survey. The share of USD/PLN transactions concluded between financial institutions in the Polish zloty fx swap market decreased from over 95% in April 2007 to app. 77% in April 2010. The share of EUR/PLN transactions increased at the time to app. 22%. The changes in the turnover structure were connected with the global financial crisis. In the aftermath of strong disruptions in the global fx swap market, which occurred in the fourth quarter of 2008 after Lehman Brothers' collapse, access to dollar financing of domestic banks became very limited and the cost of acquiring foreign currencies became very high. However, many domestic banks still had access to acquire the euro via fx swap transactions with their parent entities from the euro area. As the situation in the global financial markets stabilised the share of USD/PLN transactions in the domestic fx swap market began to improve in 2009-2010, but did not return to the pre-crisis level in April 2010.

The standard value of transactions in the domestic fx swap market amounted to USD 50 million (EUR 50 million) for transactions of up to 7 days, and USD 25-50 million (EUR 25-50 million) for longer maturities. Most fx swaps were concluded using electronic conversational systems and by phone (approx. 48% of the gross turnover in the domestic fx swap market). The share of transactions executed by voice brokers amounted to approx. 36%. In April 2010 banks operating in Poland also used electronic broking systems (approx. 14% of gross turnover).

Cross-currency Interest Rate Swap market

In recent years there has been a significant increase in the volume of CIRS transactions in the Polish domestic OTC derivatives market. In April 2010 the average daily turnover in this market amounted to 79 million US dollars, and was 16% higher than in April 2007. Thus the CIRS market was the only segment of the foreign currency market to register an increase in turnover compared to the previous survey. This was the result of a considerable rise in the number of transactions concluded by domestic banks in order to hedge the market risk which resulted from mismatches between the structure of loans granted and deposits accepted. In consequence of the global financial crisis, which resulted in a significant decrease of turnover in the fx swap market, many banks operating in Poland rethought their currency risk management strategy with respect to their housing loans portfolio denominated in foreign currencies, mainly in the Swiss franc and the euro.[6] In order to reduce the rollover risk of fx swap transactions, domestic banks used long-term CIRS transactions, even with relatively wide basis swap spreads and, therefore, higher costs of hedging (compared to 2007).

CIRS transactions were concluded in the interbank market only and transactions with non-residents were prevalent. The abovementioned mismatch of assets and liabilities explains the currency structure of turnover which was dominated by EUR/PLN (73%) and CHF/PLN (18%) currency pairs. EUR/CHF transactions were also concluded quite often (8%). The role

[6] As of the end of April 2007 the value of housing loans to households denominated in foreign currencies amounted to PLN 54 billion. The value of those loans increased and at the end of 2008 amounted to PLN 138 billion. At the end of April 2010 their value amounted to PLN 141 billion, but the relatively small change in value compared to the end of 2008 was partly due to exchange rate movements.

of the euro clearly increased, which was strictly connected with the change of housing loans' currency structure (in the aftermath of the financial turmoil of 2008-2009 some banks withdrew loans indexed to the Swiss franc from their offers, substituting them with euro-denominated loans), as well as with the financing of credit activity with euro-denominated subordinated debt from parent companies.

Currency options market

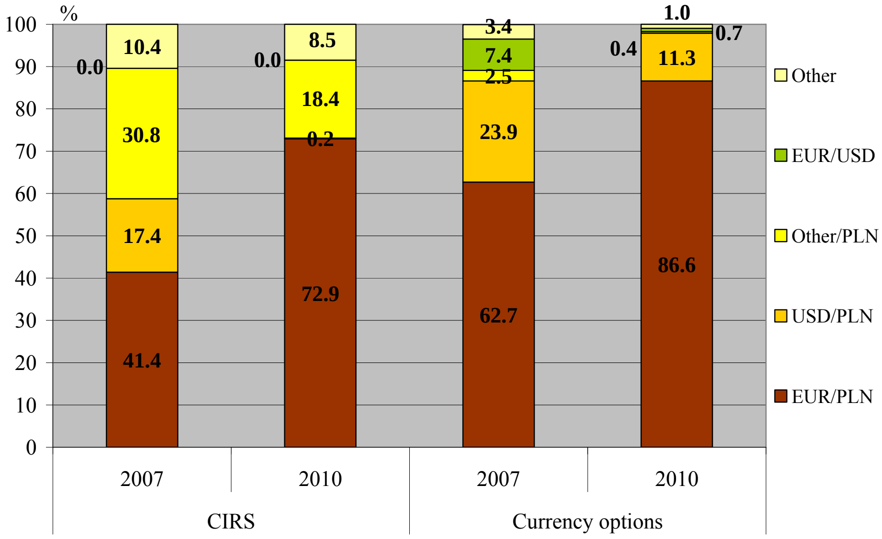
In April 2010 the average daily net turnover in the currency options market amounted to USD 128 million and was 63% lower compared to the value of transactions concluded in April 2007. Such a significant decrease of turnover was due to losses of some non-financial companies borne in 2008-2009 on option strategies. The losses resulting from the negative valuation of option strategies discouraged many companies from hedging currency risk with options, causing them to turn to less complex instruments (mainly outright-forwards). Moreover, some banks that bore losses as the credit risk involved in option strategies materialised withdrew currency options from their offers. Banks that continued to offer options began to fully comply with *the Markets in Financial Instruments Directive* (i.a. with respect to the segmentation of clients)[7] and they increased requirements regarding the creditworthiness and collaterals of their counterparties.

The significant decrease of turnover was also due to the strategy employed by many banks operating in Poland which consisted in hedging currency risk resulting from option strategies by concluding opposite transactions in the interbank market (hedge back-to-back). Thus the reluctance of non-financial companies to conclude option transactions resulted in a sharp decrease of turnover in both segments of the currency options market in Poland. In 2010 only several banks operating in Poland actively managed an option portfolio (using delta-hedging), which is the reason behind a relatively high share of transactions with non-residents in the value of operations between financial institutions, which were mainly parent companies of banks operating in Poland (87% of net turnover).

EUR/PLN transactions clearly dominated the currency structure of turnover. In April 2010 the value of these transactions represented almost 87% of the net turnover in the Polish zloty options market. At the same time there was a decrease in the share of USD/PLN options to approx. 11% from almost 24% in April 2007. The standard value of an at-the-money straddle option strategy amounted to EUR 10 million and USD 10 million, but it was quoted only by several banks. Transactions executed by phone and electronic conversational systems prevailed (over 80% of gross turnover in April 2010). Approx. 15% of transactions were executed via voice brokers.

[7] The MiFID Directive (*Markets in Financial Instruments Directive*) consists of Directive 2004/39/EC of the European Parliament and of the Council of April 21, 2004 on markets in financial instruments and Commission Directive 2006/73/EC of August 10, 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive. The provisions of the MiFiD Directive were fully implemented into Polish law. On October 21, 2009 regulations of the Act of September 4, 2008 amending the act on trading with financial securities and some other acts (JL of 2009, No 165, Item 1316) came into force.

Figure 3. Turnover in the domestic CIRS and currency options market by currency pairs in April 2007 and 2010 (%)



Turnover in the OTC interest rate derivatives market

According to the BIS methodology, the OTC interest rate derivatives market comprises forward rate agreements (FRA), interest rate swaps (IRS) including overnight index swaps (OIS) and interest rate options. The average daily net turnover in these instruments in April 2010 amounted to USD 1,561 million and was over 40% lower than in April 2007. This was mainly due to the global financial crisis which resulted in increased risk aversion and the decreasing of mutual credit limits of banks. Along with the increased volatility of financial instruments' prices (due to which market risk and credit limits were exhausted at a greater pace), this resulted in a significant weakening of speculative activity. Compared to April 2007 interest rate swaps were more often used by banks to manage their structure of assets and liabilities, mainly to change the exposure to interest rate risk stemming from their balance sheet positions (treasury bonds portfolios), and – to a lesser extent – to speculate on the yield curve movements. Some banks were reluctant to speculate, even with their credit limits unexploited.

Domestic non-financial institutions rarely hedged interest rate risk, therefore over 99% of turnover were transactions concluded in the interbank market. In April 2010 approx. 11% of domestic banks' operations in the OTC interest rate derivatives market were transactions with affiliated firms.

Table 4. Average daily turnover in the domestic OTC interest rate derivatives market in April 2007 and April 2010 (in USD million)

	2007	2010	Percentage change (at current exchange rates)	Percentage change (at a constant exchange rate)
Interest rate derivatives	**2,681**	**1,561**	**-42**	**-41**
FRA	1,435	775	-46	-45
IRS	1,240	786	-37	-36
of which OIS	660	260	-61	-60
Interest rate options	6	0	-100	-100

Table 5. Average daily turnover in segments of the domestic OTC interest rate derivatives market in April 2010 (in USD million)

	PLN	Foreign currencies	TOTAL
Interest rate derivatives	**1,472**	**89**	**1,561**
FRA	774	1	775
IRS	698	88	786
of which OIS	215	45	260
Interest rate options	0	0	0

Forward Rate Agreement market

The average daily net turnover in the FRA market in April 2010 amounted to USD 775 million (a 46% decrease compared to April 2007), all of which were transactions between financial entities. The significant decrease of liquidity in this market was mainly the result of a weakening speculative activity. Apart from the already mentioned risk limits-related factors, stable expectations of the lack of interest rate changes by the central bank were the reason behind the observed decline. The limiting of the speculative activity of domestic banks (the value of such transactions decreased from USD 713 million in April 2007 to USD 307 million in April 2010) was also reflected in the higher share of transactions with foreign financial institutions (from 50% in April 2007 to 60% in April 2010).

Almost all (over 99%) transactions were on Polish interest rates, which is a significant change compared to the results of the previous survey and which indirectly confirms the argument of the decrease in speculative activity. Similarly to April 2007, the standard value of FRA transactions in the interbank market amounted to PLN 500 million for transactions based on WIBOR 1M and PLN 250 million for transactions based on WIBOR 3M.

Table 6. Turnover in the domestic OTC interest rate derivatives market by counterparty (average daily net turnover in April 2010, in USD million)

	Resident	Non-resident	TOTAL
Interest rate derivatives	**648**	**913**	**1,561**
with financial institutions	**636**	**913**	**1,549**
with non-financial institutions	**12**	**0**	**12**
FRA	**307**	**468**	**775**
with financial institutions	307	468	775
with non-financial institutions	0	0	0
IRS	**341**	**445**	**786**
with financial institutions	329	445	774
with non-financial institutions	12	0	12
in which OIS	168	92	260
with financial institutions	168	92	260
with non-financial institutions	0	0	0
Interest rate options	**0**	**0**	**0**
with financial institutions	0	0	0
with non-financial institutions	0	0	0

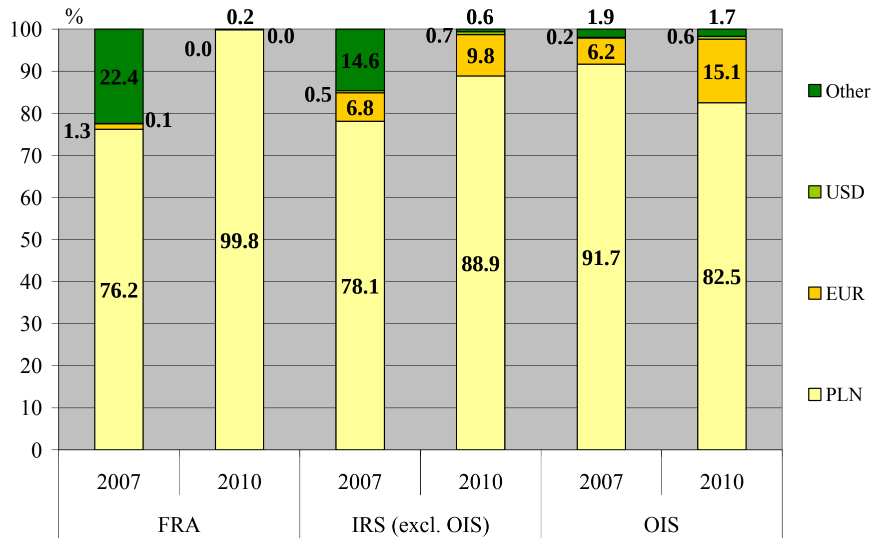
Interest Rate Swap market

The average daily net turnover in the IRS market (including OIS) in April 2010 amounted to USD 786 million. Compared to April 2007 there was a decrease of turnover by 37%. The size of the decline was significantly lower than in the case of the FRA market, mainly due to a less speculative nature of interest rate swap transactions. IRS were often used for the purpose of hedging against the domestic interest rate risk. In consequence the IRS market became the most liquid OTC interest rate derivatives market segment in Poland (previously the FRA market was more liquid).

The average net daily turnover in the IRS market for instruments other than OIS in April 2010 amounted to USD 526 million (in April 2007 it was USD 580 million). Transactions with foreign financial entities prevailed. Their share in turnover in the IRS (without OIS) market amounted to approx. 56%. The currency composition of IRS (without OIS) transactions experienced a significant increase of operations denominated in the Polish zloty. In April 2010 they constituted approx. 92% of the turnover in this market segment, compared to 78% in April 2007. Non-financial entities expressed little interest in IRS transactions, as well as in other types of interest rate derivatives. The share of transactions with corporations operating in Poland amounted to approx. 1.5% of turnover in the IRS (without OIS) market.

The standard nominal value of a 1Y IRS transaction based on the Polish money market rate amounted to PLN 100 million. For transactions with longer maturities it was PLN 50 million (2Y IRS) or PLN 25 million (5Y-10Y IRS). Compared to the values registered in April 2007 the standard notional amount was lower, mainly due to constrained mutual credit limits of banks.

Figure 4. Turnover in the domestic OTC interest rate derivatives market by currencies in April 2007 and 2010 (%)



OIS transactions, which were used by banks mainly for speculating on the POLONIA rate and hedging against changes in the cost of financing in the interbank deposits market, in April 2010 constituted 33% of all IRS transactions, whereas in April 2007 it was over 53%. The average daily net turnover in the OIS transaction for which POLONIA was the reference rate in April 2010 amounted to USD 215 million, and was almost 65% lower than in April 2007. The liquidity of this market was still limited by the relatively small number of participants. No transactions with non-financial institutions were registered in April 2010.

POLONIA (the equivalent of the EONIA rate in the euro area) was the reference rate in OIS transactions. The standard value of the operations with maturities of less than one week was PLN 500 million. The liquidity of the market was mainly fuelled by domestic banks, transactions concluded between domestic financial institutions amounted to over 60% of turnover. Transactions denominated in the Polish zloty prevailed in the currency structure of the OIS market (83% of all OIS transactions registered in April 2010), some banks also concluded transactions denominated in the euro, the Swiss franc and the dollar.

Interest rate options market

The interest rate options market remained the least developed segment of the domestic OTC interest rate derivatives market. None of the surveyed banks concluded such transactions in April 2010.

Warsaw, 1 September 2010
Financial System Department

Appendix 1

Reporting dealers in Poland*:

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

* Institutions operating in Poland which participated in the turnover Survey in 2010 (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 2010 to the National Bank of Poland. On the basis of the data received from these banks, the NBP has calculated the 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 the global results of the Survey.

Appendix 2

REPORTING GUIDELINES

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

according to the Bank for International Settlements methodology

Survey Coverage

The turnover survey covers all transactions concluded in the foreign exchange and the OTC derivatives markets in Poland in April 2010. The data reflect transactions in both the interbank (including prime brokerage operations), and the customer market (transactions with non-bank institutions). Retail transactions with non-financial customers have been excluded from the reporting – only operations with a negotiated exchange rate have been included in the statistics.

According to the Bank for International Settlements standard the **foreign exchange market covers**:

- spot transactions,
- foreign exchange derivatives:
  - outright-forwards,
  - fx swaps,
  - cross currency interest rate swaps – CIRS,
  - currency options (sold and bought, separately).

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, separately).

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

The survey also covered execution methods applied to conduct the trades in the foreign exchange 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 2010, regardless of their settlement date.** The term "gross" means that each transaction was reported separately. Gross turnover is defined as the absolute total value of all deals contracted. No netting was made between sales and purchases (i.e. the purchase of USD 5 million against the PLN and the sale of USD 3 million against the PLN by the same institution amount to the turnover of USD 8 million). The data on turnover were broken down by currency pairs (e.g. the sale of USD 1 million against PLN 4 million was classified as a transaction in the USD/PLN market with the value of USD 1 million). Cross-currency transactions involving a vehicle currency were reported as two separate deals (e.g. the sale of the US dollars and the purchase of the Danish krones via the euro market – first, the sale of USD 6 million against the euro, and then the purchase of the Danish krones against the euro amount in total to the turnover of USD 12 million). Transactions with variable nominal or notional amounts were reported according to the value of the amount as of the trade date.

According to the methodology of this survey, the basis for the reporting was the location of the dealer. 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 by a bank operating in Poland or by its head office abroad. The data include transactions of the reporting dealers concluded with affiliated firms (parent enitities, subsidiaries, branches) and between desks and offices of reporting institutions, unless such transactions were concluded as hedge back-to-back deals or in order to facilitate internal book-keeping and internal risk management within a given institution.

The turnover values are expressed **in USD million.** The value of transactions which involved currencies other than the US dollar was converted into US dollars at the trade date exchange rate, e.g. the average NBP rate on the day of transaction or another rate close to the market rate.

Counterparties

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

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

The distinction between transactions with residents and non-residents is made on the basis of the location of the counterparty (i.e. the location from which the counterparty concludes deals with the reporting dealer), and not its nationality.

The reporting dealers are 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 the elimination of double counting which arises because transactions concluded between two reporting dealers are recorded and reported by each of them. 1,309 reporting dealers from over 50 countries, including 17 banks and branches of credit institutions operating in Poland, participated in the 2010 triennial survey coordinated by the Bank for International Settlements. The list of the reporting dealers in Poland (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 financial institutions that were not classified as the reporting dealers. This group comprises i.a. commercial banks, investment and mortgage banks, brokerage houses, investment funds, pension funds, hedge funds, leasing companies, insurance companies and central banks. The "non-financial institutions" category covers all other counterparties (mainly from the corporate and government sector).

Maturities

The following maturity intervals are specified for fx swaps and outright-forwards:

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

The maturity for outright-forwards was calculated as the difference between the settlement date and the trade date. The initial maturity of fx swaps is calculated 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 were reported by currency pairs. The transactions which involved the Polish zloty, the US dollar, the euro and the yen were reported separately. For single-currency interest rate derivatives the distinguished currencies were i.a. the Polish zloty, the euro and the US dollar.

Execution method

The transactions were divided into the following categories of execution methods:

- bilaterally negotiated (via telephone or electronic conversational systems) deals, comprising deals concluded between the reporting institutions (*Interdealer Direct*) and deals with other institutions (*Customer Direct*),
- deals concluded via electronic broking systems which automatically match buy and sell offers (*Electronic Broking System*), eg. EBS and Reuters Matching,
- deals concluded via electronic trading systems for banks’ clients (*Electronic Trading System*) owned by a single bank (*single-bank proprietary platform*) or by multiple banks (*multi-bank dealing systems*),
- deals concluded via a voice broker (*Voice Broker*).

Data at constant exchange rates

In order to ensure intertemporal comparability of data, the impact of exchange rate movements needs to be eliminated. Therefore the data for the previous reporting periods should be presented at average April 2010 exchange rates. For transactions concluded in the foreign exchange market the impact of exchange rate movements of both currencies is corrected for. For both currencies involved in each transaction the value of turnover reported in the US dollars is converted into the original currency at the average April 2007 exchange rate and then re-calculated into the US dollars using the average April 2010 exchange rate. The value of turnover at average April 2010 exchange rates is obtained by adding the amounts calculated separately for both currencies of the transaction together and dividing the sum by two.

Instruments

In the turnover survey data were collected for 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 transactions (spot, outright-forwards, fx swaps, CIRS and currency options) 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 obliges its parties to the exchange of two currencies on a specific date at an agreed rate (the short leg) and to a reverse exchange of the same two currencies on a date further in the future (other than the settlement of the short leg) at a rate agreed at the time of the 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. neither 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).

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

Currency option
Option contract that gives the buyer the right to buy or sell a currency at a previously agreed rate during a specified period of time, obliging the seller (writer) to sell or buy, respectively, the currency from the buyer. This category includes European and American options, as well as all exotic options. Each option being part of an option strategy (e.g. straddle, strangle, butterfly, risk reversal) was reported separately.

Single-currency interest rate derivatives are defined as follows:

Forward rate agreement (FRA)
Contract that obliges both parties 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. In practice the counterparties settle only the difference between the FRA rate (forward rate on the trade day) and the reference rate fixed two business days before the settlement date, proportional to the principal amount of the contract.

Single-currency interest rate swap (IRS)
Contract that obliges both parties to swap periodic streams of interest payments (calculated on a specified nominal amount) for an agreed period of time. 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), as well as swaps whose principal changes over time, i.e. amortising and drawdown swaps.

Overnight Index Swap (OIS)
A transaction in which the parties agree to swap the difference between the interest payments accrued at a fixed and floating rate. The interest are 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 buyer the right to pay or receive a specific interest on an agreed principal for a set period of time, obliging the seller to receive or pay, respectively, this specific interest. Caps, floors and collars are included in this category.