



NARODOWY BANK POLSKI

Turnover on the domestic foreign exchange and OTC derivatives markets in April 2022



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Introduction

Every three years the Bank for International Settlements (BIS), together with national central banks, conducts a survey on developments on the foreign exchange and over-the-counter (OTC) derivatives markets.¹ 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 mentioned markets. The BIS defines the scope of data reporting and the uniform methodology of data collection. At the national level, the survey is coordinated by individual central banks. In 2022, 52 central banks and monetary authorities, including Narodowy Bank Polski (NBP), participated in the survey. These institutions collected data from over 1,200 entities that are the most active participants of the foreign exchange and OTC derivatives markets.

Narodowy Bank Polski, in addition to this analysis of the results of the survey for Poland, posted on its website: <http://www.nbp.pl/homen.aspx?f=/en/systemfinansowy/obroty.html> data on the value of transactions concluded in April 2022 on the domestic foreign exchange and OTC derivatives markets, presented in detailed breakdowns. The results of the survey on the turnover on the global foreign exchange and OTC derivatives markets, including all transactions involving the Polish zloty, published by the BIS, are available on the following website: <http://www.bis.org/publ/rpfx22.htm>. Links to studies prepared by other central banks, where the results of the turnover survey for some national markets are presented, can be found at: <http://www.bis.org/statistics/triennialrep/national.htm>.

¹ In this document, the term “OTC derivatives market” is used with respect to derivatives which are not traded on regulated markets, i.e. other than exchange-traded derivatives.

Methodological remarks

In 2022, Poland participated in the Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Market Activity in its full scope for the seventh time, collecting data on all market segments according to the BIS methodology. The presented results are comparable with the results of studies conducted by NBP in previous years, which can be found at: <http://www.nbp.pl/homen.aspx?f=/en/systemfinansowy/obroty.html>. The data collected in the current as well as the previous edition of the survey served as the basis for an analysis of changes in the size and structure of the foreign exchange and OTC derivatives markets in Poland over the last three years.

Twelve most active banks and branches of credit institutions operating in Poland participated in the 2022 survey (the reporting dealers are listed in Appendix 1). They provided data on the value of transactions concluded in April 2022, in accordance with the reporting forms and guidelines specified by the BIS.² NBP verified that the reports provided by banks were prepared according to the methodology presented in Appendix 2. The aggregates for Poland, calculated by NBP, were submitted to the BIS and have been included in the global results.

Data for Poland for 2022 and 2019 are broken down into turnover on the foreign exchange market and on the OTC interest rate derivatives market. The **foreign exchange market** comprises: spot transactions, outright forwards (including non-deliverable forwards – NDF), fx swaps, CIRS and currency options. The **OTC interest rate derivatives market** includes: forward rate agreements (FRA), overnight index swaps (OIS), interest rate swaps (IRS) and interest rate options.

The data on turnover include only those transactions in which at least one of the counterparties was a bank or branch of a credit institution operating in Poland with the reporting dealer status, **the location of a dealer initiating a transaction being the decisive factor**. The presented **data do not cover transactions entered into between non-residents** (foreign exchange and OTC derivatives markets instruments denominated in the Polish zloty are traded on the offshore market, mainly in London). The data comprising all transactions involving the Polish zloty have been processed and published by the BIS (<http://www.bis.org/publ/rpfx22.htm>).

The presented data are not adjusted for gaps in reporting. NBP estimates that the value of transactions reported by 12 banks and branches of credit institutions account for around 96% of the total turnover on the domestic foreign exchange market and 98% on the domestic OTC interest rate derivatives market. Average daily turnover was calculated according to the number of business days – **in April 2022 there were 20 business days in Poland** (while in April 2019 there were 21).

² Reporting forms used in Poland have been slightly modified by NBP.

For the purpose of this note, the term **"turnover"** means that data represent the nominal value of transactions concluded by local reporting dealers, whereby **in case of transactions between local reporting dealers the effect of double reporting of transactions has been corrected for**. For those categories or breakdowns where the elimination of this effect was impossible, the text explicitly indicates that gross turnover (gross values) is presented. All data are presented in **USD million**, which is consistent with the standard adopted by the BIS for the purpose of the survey.

Turnover on the foreign exchange market

According to the BIS methodology, the foreign exchange market comprises: spot transactions, outright forwards (including non-deliverable forwards), fx swaps, CIRS and currency options. Average daily turnover on the domestic foreign exchange market in April 2022 amounted to USD 13,019 million, an increase by almost a half as compared to April 2019 (table 1).³ Transactions involving the Polish zloty prevailed on the domestic foreign exchange market – they constituted almost three quarters of the total turnover. As compared to April 2019, the average daily value of such operations increased by 52% and in April 2022 amounted to USD 9,618 million (table 2). Turnover in foreign currency/foreign currency transactions went up slightly less (by 34%) in April 2022 amounted to USD 3,402 million. Operations with financial institutions prevailed, accounting for approximately 82% of turnover on the domestic foreign exchange market (table 3).

Table 1. Average daily turnover on the domestic foreign exchange market in April 2019 and April 2022 (in USD million)

	2019	2022	Percentage change (at current exchange rates)	Percentage change (at constant exchange rates)
Foreign exchange market	8 864	13 019	47	55
Spot transactions	2 556	3 130	22	30
Outright forwards	959	1 125	17	23
<i>of which non-deliverable forwards</i>	473	445	-6	-4
Fx swaps	5 190	8 551	65	74
CIRS	41	87	112	128
Currency options	118	127	8	15

Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

Related party trades of the domestic banks accounted for around 23% of gross turnover on the domestic foreign exchange market and around 34% of the value of operations with non-residents (in 2019, it was around 24% and 36%, respectively). Such a high share of these transactions stems from the scale of activity in Poland of banks belonging to the same capital groups as foreign financial institutions, as well as from the popularity of the business model, in which market risk management is centralised at the capital group level. In April 2022, none of the reporting dealers from Poland provided prime brokerage services as defined in the survey methodology (Appendix 2).

³ The figures in this document refer to changes in the average daily turnover in USD at current exchange rates. For information purposes, the changes in turnover at constant exchange rates are shown in Tables 1 and 4, calculated according to the methodology described in Appendix 2. In April 2022, the US dollar was on average stronger vis-à-vis other currencies than in April 2019, which usually translated into a lower increase of turnover (expressed in USD) in individual segments of the domestic foreign exchange market, because a set amount of a given currency was on average the equivalent of a lower amount of USD than in 2019.

Table 2. Average daily turnover in individual segments of the domestic foreign exchange market in April 2019 and April 2022 (in USD million)

	2019		2022	
	Foreign currencies/ PLN	Foreign currencies/ Foreign currencies	Foreign currencies/ PLN	Foreign currencies/ Foreign currencies
Foreign exchange market	6 317	2 547	9 618	3 402
Spot transactions	1 749	807	2 455	674
Outright forwards	489	470	682	443
Fx swaps	3 935	1 255	6 269	2 282
CIRS	35	6	87	0
Currency options	110	8	125	3

Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

Table 3. Average daily turnover on the domestic foreign exchange market by counterparty in April 2019 and April 2022 (in USD million)

	2019			2022		
	Resident	Non-resident	TOTAL	Resident	Non-resident	TOTAL
Foreign exchange market	2 636	6 228	8 864	3 816	9 204	13 019
with financial institutions	1 221	6 208	7 429	1 607	9 133	10 739
with non-financial institutions	1 414	21	1 435	2 209	71	2 280
Spot transactions	1 262	1 294	2 556	1 748	1 381	3 130
with financial institutions	505	1 281	1 786	471	1 317	1 788
with non-financial institutions	757	13	770	1 277	64	1 341
Outright forwards	702	257	959	922	202	1 125
with financial institutions	213	252	465	223	197	420
with non-financial institutions	490	4	494	699	6	705
Fx swaps	616	4 575	5 190	1 099	7 452	8 551
with financial institutions	492	4 571	5 063	897	7 451	8 347
with non-financial institutions	124	3	127	202	1	204
CIRS	7	33	41	17	70	87
with financial institutions	7	33	41	14	70	84
with non-financial institutions	0	0	0	3	0	3
Currency options	48	70	118	29	98	127
with financial institutions	4	69	73	1	98	99
with non-financial institutions	44	0	44	28	0	28

Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

1. Spot market

The average daily turnover on the spot market increased by more 22% as compared to the previous edition of the survey and in April 2022 amounted to USD 3,130 million. The growth was largely due to increased activity of domestic non-financial customers. The average daily value of spot transactions concluded by the reporting dealers with domestic non-financial customers amounted

to USD 1,277 million and was almost by two thirds higher than in April 2019. This might have been due to an increase in the value of foreign trade payments (including, among others, imports of energy commodities).⁴

In addition to that, increased activity in this market segment may have been due to easier than in the previous years access of small and medium enterprises, as well as retail clients, to the foreign exchange market. More and more domestic banks offered trading platforms and online exchange offices which enabled retail clients and small corporations to exchange currencies at rates closed to wholesale market exchange rates. Growing popularity of these execution methods contributed to an over fivefold increase of the average daily value of retail-driven deals, initiated by individual clients for speculative or investment purposes. In April 2022, it amounted to almost USD 282 million, as compared to USD 51 million in April 2019.

In comparison with the previous edition of the survey, the value of transactions with non-residents, especially foreign banks, was 7% higher and amounted to USD 1,381 million. An increase in cross-border turnover was supported by greater volatility of the Polish zloty exchange rate which prompted some survey participants to expand their speculative activity. Non-financial institutions' activity had a smaller impact on the value of transactions concluded with non-residents. This may have been caused by a more frequent than three year ago use of internalisation by survey participants. This market practice consist in pairing of client orders with opposite client orders in order to minimise the bank's open currency position. This way, domestic banks limited the need to conclude hedging transactions on the wholesale market (mostly with foreign banks) and decreased costs of managing liquidity in foreign currencies.

As compared to April 2019, there was a 7-percent decrease in the value of transactions concluded between the reporting dealers and domestic financial institutions on the spot market – in April 2022, it amounted to USD 471 million. Domestic investment funds active on foreign financial markets had the largest share in turnover in this market segment.

As regards the currency structure of spot transactions, operations involving the Polish zloty dominated (figure 1). Their average daily value in April 2022 amounted to USD 2,455 million (over 78% of turnover). The share of the most important currency pair – EUR/PLN – in the turnover on the domestic spot market was close to the one observed three years before and amounted to 51%. At the same time, the importance of transactions involving the USD increased significantly – the share of such operation in the above mentioned turnover was 22% (as compared to 14% in April 2019). This could have been influenced by, inter alia, substantially higher than in April 2019 prices of some commodities (in particular crude oil and natural gas), trades in which are invoiced in this currency, as well as the increased activity of some investment funds, resulting from their different

⁴ In April 2022, the total value of imports and exports of goods and services (expressed in USD) was more than 35% higher than three years before. Detailed data on Poland's balance of payments are available at: http://www.nbp.pl/home.aspx?f=/statystyka/bilans_platniczy/bilans_platniczy.html.

methods of managing foreign currency liquidity.⁵ The third most popular currency pair on the spot market in Poland was EUR/USD (around 11% of turnover), which constituted over a half of all foreign currency / foreign currency operations.

The currency structure of spot transactions was materially different for different categories of counterparties. In April 2022, the share of EUR/PLN in spot transactions between financial entities amounted to 42%. EUR/PLN was still considered as the main currency pair on the interbank spot market for the Polish zloty, most informative of our currency's intrinsic value. The share of USD/PLN transactions in operations between financial entities increased from 13% in April 2019 to 22% in April 2022, which to a large extent may have been caused by the above mentioned elevated activity of investment funds on the zloty spot market.

The currency structure of turnover on the customer market (transactions of reporting dealers with non-financial customers) roughly reflected the structure of payments in Poland's foreign trade. Tight economic links with the European Union, and euro area countries in particular, were the reason behind the prevalence of the EUR/PLN transactions (around 64% of the total turnover on this market). The USD/PLN transactions had an approximately 23% share in turnover on the Polish zloty customer spot market – some of these operations were related to servicing of commodity trading payments.

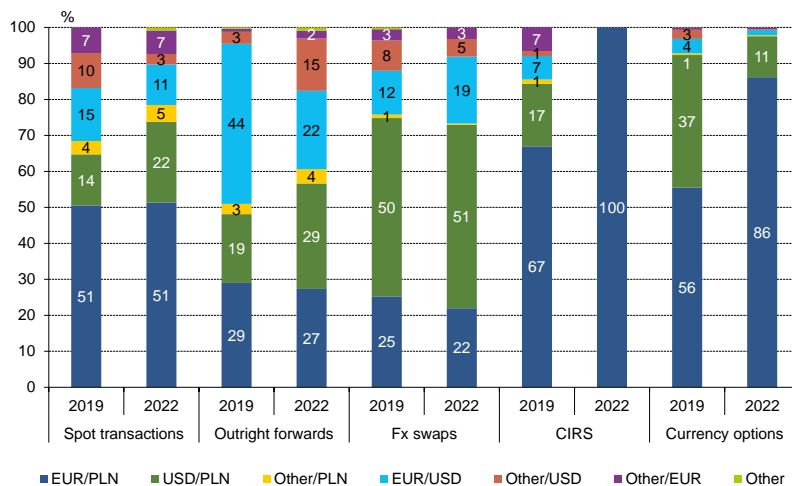
In April 2022, most spot transactions have been concluded on trading platforms operated by individual banks (approximately 33% of the domestic spot market turnover). These platforms were used by enterprises and affluent individuals to purchase foreign currencies, as well as by some banks operating in Poland to conclude transactions within capital groups. The share of other direct execution methods, namely the phone and electronic conversational systems, in the turnover on the domestic spot market in April 2022, amounted to around 28% and 9%, respectively. Few domestic banks equipped in sufficient resources occasionally used algorithms that automatically generate buy and sell orders to conclude transactions on the spot market (algorithmic trading). The standard size of a single transaction executed by domestic banks on the Polish zloty spot market amounted to EUR 1 million or USD 1 million for EUR/PLN or USD/PLN currency pairs, respectively. However, relatively high liquidity of the Polish zloty market allowed to conclude transactions of larger value without influencing significantly the Polish zloty exchange rate.

The transactions concluded via electronic brokerage systems (automatically matching buy and sell offers) accounted for about 30% of turnover on the domestic spot market, and was lower than one observed three years ago. The trend to shift activity from anonymous venues (e.g. Reuters Spot Matching) to disclosed venues which allow to conclude transactions only with a specific group of counterparties that can be identified prior to the conclusion of a transaction, observed in the recent years, has been sustained. The use of such platforms increased the homogeneity of the group of

⁵ Some domestic investment funds used a combination of a spot transaction and an outright forward to obtain foreign currencies (chiefly USD), instead of using fx swaps.

potential counterparties, which facilitates the management of credit risk related to foreign exchange market activity (so-called settlement risk).

Figure 1. Currency breakdown of turnover in the domestic foreign exchange market in April 2019 and April 2022 (in %)



2. Outright forward market

As compared to the previous edition of the survey, the turnover on the domestic outright forward market increased by more than 17%, and in April 2022 amounted to USD 1,125 million. The above mentioned increase was mainly due to the greater activity of non-financial institutions – the average daily value of transactions concluded by this category of counterparties amounted to USD 705 million (almost 43% more than in April 2019). Increased demand for outright forwards by these entities resulted from both the above mentioned upswing in trade, and an abrupt change of Energy commodities' prices as well as elevated volatility of the zloty exchange rate. These factors pushed enterprises to fix the value of their future cash flows stemming from operational activity to a larger extent.

In April 2022, the average daily value of retail-driven forward transactions initiated for speculative or investment purposes amounted to approximately USD 180 million, around 19% less than three years before. This value, however, may not reflect the size of the whole domestic market, as it covers only those forward transactions in which the reporting dealer from Poland was formally a counterparty or which were concluded between such an institution and an entity offering its clients access to internet trading platforms (e.g. a brokerage house).⁶

⁶ The study does not include CFD transactions concluded by domestic retail clients directly with non-residents or on platforms operated by domestic entities not participating in the survey, including brokerage houses, which are particularly active on this market.

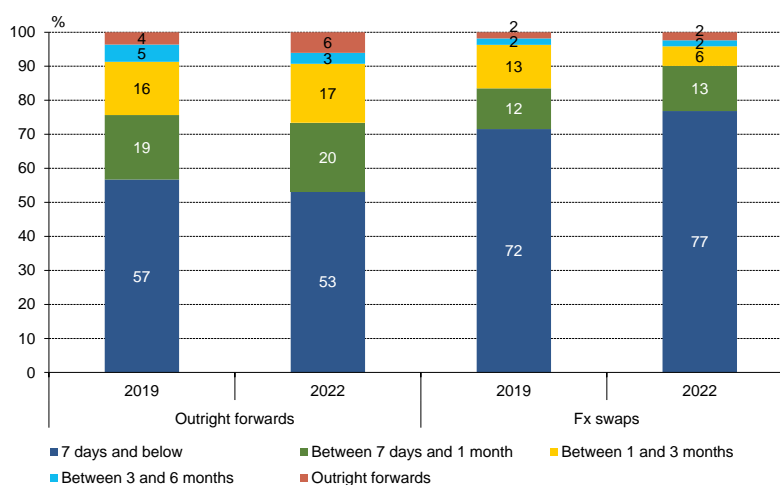
The value of outright forward transactions concluded with financial institutions amounted to USD 420 million and was around 9% lower than in April 2019. The key participants of this market segment were domestic investment funds active on foreign financial markets. Greater significance of this category of counterparties in the turnover on the outright forward market was partly due to increased activity of some of them related to the above mentioned change with respect to the management of liquidity in foreign currencies. Furthermore, some reporting dealers concluded back-to-back transactions with foreign banks (including with parent companies) to hedge against market risk resulting from the activity of retail clients on internet trading platforms. As a result, the above mentioned decrease of retail-driven deals also translated into lower turnover on the interbank outright forward market.

In April 2022, the term structure of turnover on the domestic outright forward market was similar to the one observed three years before. Operations with a maturity of up to 7 days prevailed (almost 53% of gross turnover – figure 2). These transactions were concluded predominantly by retail clients for short-term speculation using internet trading platforms. Operations with maturities from 1 week to 3 months, usually used by non-bank financial institutions and enterprises to hedge against currency risk, accounted for approximately 37% of gross turnover. Outright forward operations with maturities over three months were rarely concluded and constituted less than 9% of the gross value of the transactions.

The currency structure of outright forward transactions was under significant influence of the above mentioned speculative operations (mainly CFDs) and operations of investment funds which were active on foreign financial markets. For this reason, it was different from the currency structure of foreign trade-related payments made by Polish enterprises. In April 2022, the share of USD/PLN transactions in the turnover on the outright forward market amounted to 29%, while the share of EUR/PLN transactions was only 27%. Substantial share of EUR/USD and GBP/USD currency pairs in the turnover on this market (22% and 12%, respectively) resulted chiefly from their frequent use in the segment of cash-settled transactions (these pairs accounted for 46% and 31%, of all cash-settled operations, respectively).

Most outright forward transactions (57% of turnover) were executed by reporting dealers using direct electronic communication systems. Such systems include electronic trading platforms used predominantly by non-financial corporations to hedge against currency risk, internet trading platforms (so-called forex platforms), through which retail clients concluded non-deliverable forward transactions, as well as systems that enabled reporting dealers to automatically reduce their open currency positions stemming from the aforementioned client operations by entering into opposite transactions with foreign banks. A significant part of turnover (around 41%) were outright forward operations agreed over the phone – the terms of most physically-settled transactions (usually initiated by the customers of reporting dealers) were determined this way.

Figure 2. Term structure of turnover in the domestic outright forward and fx swap markets in April 2019 and April 2022 (in %)



3. Fx swap market

Fx swaps remained the most liquid instrument on the domestic foreign exchange market, mainly because they could be used for various purposes. In April 2022, the average daily turnover on the domestic fx swap market amounted to USD 8,551 million, and was around 65% higher than in April 2019. This increase was significantly influenced by uncertainty of financial market participants with respect to Russia's military aggression against Ukraine and their diverse expectations regarding monetary policy of individual central banks. These factors induced some banks to increase the scale of speculative transactions, and non-bank institutions to fix the value of future cash flows using term operations, including synthetic forwards, i.e. combinations of fx swaps and spot transactions. Furthermore, the tightening of monetary policy by NBP which had commenced in October 2021 translated into the widening of an interest rate disparity between Poland and highly developed economies (e.g. the US and the euro area) and the resulting increased attractiveness of carry trade.

Transactions involving the Polish zloty prevailed on the domestic fx swap market – their value in April 2022 amounted to USD 6,269 million (60% more than in April 2019). The main currency pair in the domestic fx swap market was still USD/PLN, which – as in 2019 – constituted approximately half of the turnover on this market (and almost 70% of transactions involving the Polish zloty). The still significant role of the US dollar resulted from the standard of concluding fx swap transactions which has been used in the global foreign exchange market for years. According to this standard, foreign entities exchange low interest currencies for US dollars, and only then use them to buy local currencies. In April 2022, EUR/PLN trades accounted for 22% of the turnover (and 30% of transactions involving the Polish zloty). Potential attractiveness of this currency pair was due to low cost of acquiring euro on the money market for this currency, which was associated with record low interest rates maintained by the ECB. The third most important currency pair on the

domestic fx swap market was EUR/USD (19% of turnover), which – coupled with an USD/PLN exchange – was used in cross transactions to acquire the euro in exchange for the Polish zloty.

Transactions with shortest maturities (up to 7 days) dominated on the domestic fx swap market. In April 2022, they accounted for around 77% of the gross turnover, half of which were one-day operations. Such term structure of the transactions stemmed from liquidity management strategies used by market participants. Foreign entities that used fx swaps, among others, to finance their positions in PLN-denominated securities, preferred to roll over short-term fx swaps (mainly T/N and S/W transactions) on a regular basis. There was a slight decrease in the share of transactions with maturities over 7 days (from 28% in April 2019 to 23% in April 2022). Fx swaps with longer maturities were of interest to both domestic banks that used those transactions in strategies aimed at mitigating currency risk (arising from, among others, outright forward operations on the customer market and granted loans in foreign currencies), and foreign entities that applied the above mentioned carry trades. Furthermore, long-term fx swaps transactions were used for speculation on changes in interest rates or – in combination with spot transactions – exchange rates.

The standard size of a transaction executed on the domestic interbank market for fx swaps involving the Polish zloty amounted to around USD or EUR 50–100 million for operations with maturities of up to one week, and half as much for operations with longer maturities.

Most fx swaps were concluded directly, i.e. using electronic communication systems (34% of turnover) or over the phone (25%). The share of transactions on the domestic market fx swap whose terms were agreed by voice brokers was also significant (21% of the value of operations). The share of transactions concluded with the use of multilateral trading platforms amounted to over 11%, whereas, as in the spot market, the activity of reporting dealers in systems which allow to identify the counterparty before the execution of a transaction (disclosed venues) prevailed.

4. Currency swap market

CIRS transactions were used by domestic banks mainly in strategies aimed at hedging against market risk arising from the mismatch of assets and liabilities currency structure. Those entities were exposed to this risk because of, among others, their loan portfolios denominated in foreign currencies or bonds issued on foreign markets.

In April 2022, the average daily turnover on the CIRS market amounted to USD 87 million and was more than twice the value observed in April 2019. The value of domestic banks' loans in foreign currencies (mostly euro) to non-financial sector entities which was greater than three years before contributed to this increase. Moreover, available data sources other than the results of this survey indicate that the average maturity of CIRS transactions on the domestic market declined, which may have translated into increased turnover.

In April 2022, domestic banks concluded exclusively EUR/PLN CIRS transactions (in 2019, such operation accounted for 67% of turnover). A substantial change of the currency structure of

turnover in comparison with the previous edition of the survey (in particular lack of transactions involving CHF) may have resulted from these entities' limited propensity to roll over the maturing currency swaps which had been concluded in the past. Choosing their hedging strategies, domestic banks took into account the gradual materialisation of legal risk related to housing loans denominated in CHF, namely the need to convert part of the portfolio of these receivables as a result of court verdicts or settlements with clients.

In April 2022, around 96% of turnover on the domestic CIRS market were transactions concluded between reporting dealers and other banks, mostly foreign. Operations with entities other than banks were very rare. Terms of the vast majority of transactions were agreed using voice means of communication – over the phone (51% of turnover) and through a voice broker (38% of turnover). Transactions on this market were also concluded with the use of electronic conversational systems.

5. Currency option market

In April 2022, the average daily turnover in the domestic currency options market amounted to USD 127 million, 8% more than three years before. Unlike in the previous editions of the survey, liquidity on this market was primarily determined by activity of few domestic banks which actively managed their option portfolios using delta-hedging. Elevated activity of these banks translated into a substantial increase of the value of transactions with financial institutions in comparison with the previous edition of the survey. Average daily turnover in this market segment went up by 35% as compared to April 2019 and in April 2022 amounted to USD 99 million. These transactions were concluded almost exclusively with non-residents – close to 95% of operations with financial institutions on the domestic currency option market were transactions with foreign banks, including parent companies.

Reporting dealers offered option strategies to non-financial customers which used them to mitigate currency risk. Despite an increase of implied volatility of the Polish zloty exchange rate in comparison with April 2019, the value of transactions with non-financial entities dropped by over 36% and amounted to USD 28 million (22% of turnover on the domestic currency option market). The offer addressed at non-bank entities influenced the value of turnover on the Interbank market, as most banks hedged against market risk resulting from customer-driven trades using opposite transactions (hedge back-to-back). Some banks embedded options in securities, deposits and credit products, but those derivatives, according to the survey methodology, were not included in the turnover on the domestic currency market.

In the currency structure of turnover on the domestic currency option market, the share of EUR/PLN transactions substantially increased. As in April 2022, they accounted for 86% of the turnover in this market (57% in April 2019). At the same time, the share of USD/PLN transactions decreased from 37% to 11%. The standard size of an at-the-money straddle option strategy on the domestic interbank market amounted to between 5 and 20 million of USD or EUR. In April 2022, most transactions in currency options were executed using voice means of communication – voice

broker (38% of the value of turnover) or over the phone (14% of the value of turnover). Electronic communication systems were also popular on this market as a method of agreeing on the terms of transactions (36% of the value of turnover).

Turnover on the OTC interest rate derivatives market

According to the BIS methodology, the OTC interest rate derivatives comprise FRA, OIS, IRS and interest rate options. In April 2022, the average daily turnover on the market for these instruments totalled USD 2,332 million and was 10% higher than in April 2019 (table 4). This was accompanied by substantial changes in the currency structure of the transactions (table 5). Instruments linked to the domestic money market reference rates prevailed (the value of transactions in such instruments amounted to USD 2,293 million, an increase by over 87% as compared to the previous survey)⁷, while the role of foreign-currency denominated derivatives significantly diminished (turnover in this market segment went down from USD 883 million in April 2019 to merely USD 40 million in April 2022). This was predominantly because one of the European banking groups moved the management of its positions in interest rates of Central and Eastern European currencies to a location outside Poland.

The average daily value of transactions on the domestic OTC interest rate derivatives market concluded between reporting dealers and financial institutions in April 2022 amounted to USD 2,294 million, which was almost all of the turnover on this market (table 6). Transactions with non-residents were most significant, as they accounted for almost 86% of turnover on the market for the above mentioned instruments. Related party trades of domestic banks constituted less than 7% of gross turnover and approximately 9% of transactions with non-residents.

Table 4. Average daily turnover on the domestic OTC interest rate derivatives market in April 2019 and April 2022 (in USD million)

	2019	2022	Percentage change (at current exchange rates)	Percentage change (at constant exchange rates)
Interest rate derivatives	2 112	2 332	10	21
FRA	1 206	1 383	15	24
OIS	12	0	-100	-100
IRS	878	941	7	19
Interest rate options	16	9	-43	-38

Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

⁷ This increase concerns PLN-denominated OTC interest rate derivatives but for the purpose of the survey notional values of transactions were converted to USD. In April 2022 the USD/PLN exchange rate was on average 12,5% higher than in April 2019, which means that the rate of growth expressed in PLN was even higher.

Central clearing of FRA and IRS transactions was a common practice among domestic reporting dealers. It resulted from an obligation to clear transactions in certain classes of OTC derivatives through central counterparties (CCPs), imposed by EMIR.⁸ The average daily gross value of transactions in OTC interest rate derivatives which were concluded in April 2022 and cleared by local and foreign-based CCPs amounted to USD 2,449 million, i.e. around 94% of gross turnover in those instruments.

Table 5. Average daily turnover in individual segments of the domestic OTC interest rate derivatives market in April 2019 and April 2022 (in USD million)

	2019		2022	
	PLN	Foreign currencies	PLN	Foreign currencies
Interest rate derivatives	1 229	883	2 293	40
FRA	476	730	1 382	1
OIS	0	12	0	0
IRS	744	134	905	36
Interest rate options	9	7	6	3

Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

Table 6. Average daily turnover in the domestic OTC interest rate derivatives market by counterparty in April 2019 and April 2022 (in USD million)

	2019			2022		
	Resident	Non-resident	TOTAL	Resident	Non-resident	TOTAL
Interest rate derivatives	350	1 763	2 112	327	2 005	2 332
with financial institutions	323	1 763	2 086	289	2 005	2 294
with non-financial institutions	26	0	26	39	0	39
FRA	45	1 161	1 206	118	1 264	1 383
with financial institutions	45	1 161	1 206	118	1 264	1 383
with non-financial institutions	0	0	0	0	0	0
OIS	0	12	12	0	0	0
with financial institutions	0	12	12	0	0	0
with non-financial institutions	0	0	0	0	0	0
IRS	296	582	878	203	737	941
with financial institutions	278	582	860	170	737	907
with non-financial institutions	19	0	19	33	0	33
Interest rate options	8	8	16	5	4	9
with financial institutions	0	8	8	0	4	4
with non-financial institutions	8	0	8	5	0	5

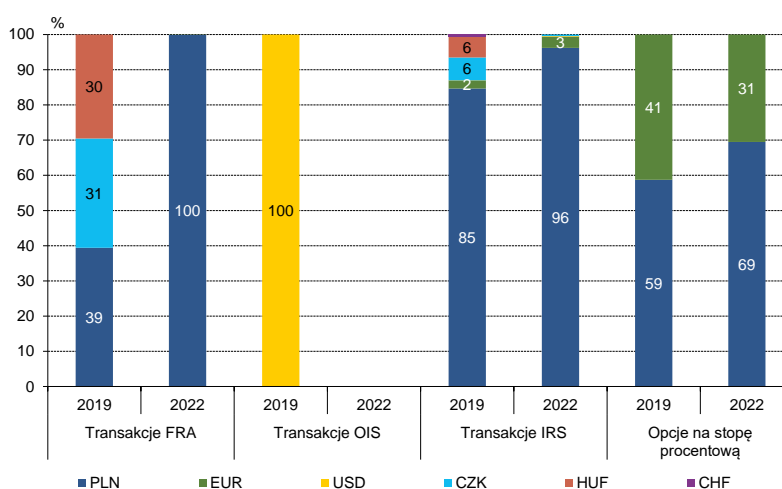
Note: In some rows or columns, the values of categories may be slightly different from the sums of values in sub-categories due to rounding.

⁸ In line with EMIR delegated acts (RTS 2015/2205 and RTS 2016/1178), mandatory central clearing in the EU was binding for standardised IRS and FRA transactions denominated in EUR, GBP, JPY, NOK, PLN, SEK and USD, as well as OIS denominated in EUR, GBP and USD, concluded between financial institutions which were sufficiently active on the OTC derivatives market, as indicated in the above mentioned legal acts.

1. Forward rate agreement market

In April 2022, the average daily turnover on the FRA market was 15% higher than three years earlier and amounted to USD 1,383 million. These transactions were concluded exclusively between financial institutions. Liquidity of this segment of the domestic derivatives market remained largely dependent on the activity of foreign banks whose share in turnover stood at above 90%. For almost all transactions, the underlying instruments were the Polish money market reference rates, i.e. WIBOR reference rates (chart 3).

Figure 3. Currency breakdown of turnover on the domestic FRA, OIS and IRS markets in April 2019 and April 2022 (in %)



The main reasons for a significant upswing in the activity on the PLN-denominated FRA market, in comparison with the previous survey, were strong and diverse market participants' expectations concerning interest rates changes by the NBP during the monetary policy tightening cycle which started in October 2021, as well as the elevated volatility of asset prices in various segments of the financial market which was triggered by Russia's military aggression against Ukraine. These factors resulted not only in a marked increase in demand for PLN-denominated derivatives that could be used to hedge interest rate risk, but they also spurred interest in speculative activity. A substantial decline of the significance of instruments denominated in foreign currencies, especially the Czech koruna and the Hungarian forint, which constituted 61% of turnover on the domestic FRA market back in April 2019, was predominantly caused by one of the European banking groups' decision to relocate interest rate position management with respect to the aforementioned currencies outside Poland.

The standard sizes of PLN-denominated FRA were PLN 500 million for transactions based on WIBOR 3M, and PLN 250 million for transactions based on WIBOR 6M.

2. Interest rate swap market

In April 2022, the average daily turnover on the domestic IRS market amounted to USD 941 million, i.e. 7% more than in April 2019. Over 96% of all operations on this market were derivatives for which the underlying instruments were the Polish money market reference rates, predominantly WIBOR 3M and WIBOR 6M. The value of such operations increased by 22% as compared with the previous edition of the survey. This growth resulted from the use of these instruments by domestic banks to manage interest rate risk stemming from on-balance-sheet positions, among others their portfolios of fixed-rate Treasury bonds (according to the Ministry of Finance data, the nominal value of these securities owned by domestic banks went up from PLN 169.0 billion at the end of April 2019 to PLN 206.3 billion at the end of April 2022).⁹ Increased demand for IRS stemmed from strong and diverse market participants' expectations concerning changes in interest rates by the NBP, in both the short run and the long run. These expectations were influenced by accelerating inflation and uncertainty concerning indirect impact of Russia's military aggression against Ukraine on the European economy.

EUR-denominated transactions were also conducted on the domestic IRS market (they constituted approximately 3% of turnover) and, on a smaller scale, transactions in CZK and USD. Significant decline in the value of foreign currency denominated transactions (average daily turnover in April 2022 amounted to USD 36 million, as compared to USD 134 million three years before) was the result of the aforementioned decision of one of the European banking groups to relocate their CZK and HUF interest rate position management.

Transactions with foreign financial institutions (chiefly banks) prevailed on the domestic IRS market – such operations accounted for 78% of the turnover. Aside from banks, some interest in IRS transactions, although on a much smaller scale, was expressed by investment funds and leasing companies. Operations with domestic non-financial institutions accounted for less than 4% of turnover on the aforementioned market.

The standard size of PLN-denominated 1Y IRS was PLN 200 million. For transactions with longer maturities, this was PLN 100 million (2Y), PLN 50 million (5Y) or PLN 25 million (10Y).

3. Overnight index swap market

Domestic market for PLN-denominated OIS transactions was not functioning (in April 2022 reporting dealers did not conclude any such transactions). Given low volatility of POLONIA, which is the reference rate in these instruments, domestic banks were reluctant to use OIS transactions for speculation or hedging against fluctuations of the costs of short-term financing on

⁹ At the end of April 2022, in addition to the Treasury bonds, domestic banks also held in their portfolios fixed-rate securities guaranteed by the Polish government – bonds issued by the Bank Gospodarstwa Krajowego (with the nominal value of PLN 48.5 billion) and bonds issued by the Polish Development Fund (with the nominal value of PLN 39.8 billion).

the interbank money market. Moreover, there were some additional factors which contributed to the structural decline of activity on the PLN-denominated OIS transactions: low number of domestic market participants, marginal non-residents' interest in those transactions, and a significant decrease of turnover on the interbank unsecured deposit market with maturities longer than O/N (which constrained arbitrage opportunities).

4. Interest rate option market

The interest rate option market in Poland remained underdeveloped. In April 2022, the average daily turnover in those instruments amounted to merely USD 9 million (USD 7 million less than in April 2019), of which 69% were options denominated in PLN, and 31% – in EUR. Almost 42% of the turnover in this segment of the domestic OTC interest rate derivatives market were transactions between the domestic reporting dealers and foreign banks. The former used these operations to limit the exposure to market risk (hedge back-to-back) arising from transactions in options with domestic non-financial customers, and also from options embedded in structured products offered to retail clients (not included in the survey in line with the BIS methodology).

Appendix 1

REPORTING DEALERS IN POLAND ¹⁰

	Name of the reporting dealer	SWIFT code	LEI code
1.	Alior Bank SA	ALBPPLPW	259400QHDOZWMJ103294
2.	Bank Gospodarstwa Krajowego	GOSKPLPW	259400BCOV9JJIGLYF05
3.	Bank Handlowy w Warszawie SA	CITIPLPX	XLEZHWWOI4HFQDGL4793
4.	Bank Millennium SA	BIGBPLPW	259400OFDZ9KPZEO8K78
5.	Bank Polska Kasa Opieki SA	PKOPPLPW	5493000LKS7B3UTF7H35
6.	BNP Paribas Bank Polska SA	PPABPLPK	NMH2KF074RKAGTH4CM63
7.	BNP Paribas SA Oddział w Polsce	BNPAPLPX	R0MUWSFPU8MPRO8K5P83
8.	ING Bank Śląski SA	INGBPLPW	259400YLRTOBISHBVX41
9.	mBank SA	BREXPLPW	259400DZXF7UJJK2AY35
10.	Powszechna Kasa Oszczędności Bank Polski SA	BPKOPLPW	P4GTT6GF1W40CVIMFR43
11.	Santander Bank Polska SA	WBKPPLPP	259400LGXW3K0GDAG361
12.	Société Générale SA Oddział w Polsce	SOGEPLPW	O2RNE8IBXP4R0TD8PU41

¹⁰ Institutions operating in Poland which participated in the turnover part of the survey in 2022 (referred to as reporting dealers). The listed banks and branches of credit institutions reported the data on their transactions to Narodowy Bank Polski, which has verified the consistency of the data with the BIS reporting guidelines. Based on the data received from these banks, NBP has calculated the aggregate values of the turnover in the foreign exchange and OTC derivatives markets in Poland. The aggregates for Poland have been submitted to the BIS 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 markets in April 2022, consistent with the Bank for International Settlements methodology

1. The scope of the survey

The survey covers all transactions concluded in the foreign exchange and OTC derivatives markets in Poland. The data reflect transactions in both the interbank, and the customer market (operations with non-bank institutions). Customer transactions executed in exchanges offices on banks' premises have been excluded from the reporting. The statistics only include operations negotiated by dealers with non-bank entities and transactions on internet trading platforms for retail clients (forex platforms) or in online exchange offices to which access is granted by the reporting dealers, provided that the exchange rates at which clients conclude transactions are directly linked to fluctuations of exchange rates in the wholesale market (and that the exchange rates at which clients conclude transactions are updated with high frequency). Derivatives embedded in securities and banking products fall outside the scope of the survey. The value of bought and sold securities, granted loans and accepted deposits with embedded derivatives has been excluded from the presented data.

According to the Bank for International Settlements definition, the **foreign exchange market** covers the following types of transactions:

- spot,
- outright forwards, including non-deliverable forwards,
- fx swaps,
- currency swaps (cross-currency interest rate swaps – CIRS),
- currency options.

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

The **OTC interest rate derivatives market** comprises:

- forward rate agreements (FRA),
- overnight index swaps (OIS),
- interest rate swaps (IRS),
- interest rate options.

The survey also covered execution methods applied to conclude transactions in the foreign exchange market, focusing in particular on electronic trading platforms. Furthermore, the survey included additional information on:

- prime brokerage transactions¹¹,
- deals executed by individual clients for speculative or investment purposes (retail-driven deals)¹², including on internet trading platforms for retail clients (so called forex platforms) and in online exchange offices,
- the scale of related party trades and transactions executed with institutions using automated systems of placing orders (algorithmic and high-frequency trading),
- the value of transactions which were concluded in April 2022 and cleared by central counterparties (CCPs).

2. Reporting rules

Turnover is defined as the **nominal or notional amount of all transactions concluded in April 2022, regardless of their clearing or settlement dates**. The turnover values are expressed in **USD million**. The value of transactions which involved currencies other than the US dollar is converted into US dollars at the trade date exchange rate, e.g. the average NBP rate on the day of transaction or another rate not significantly deviating from the market rate.

Each transaction is reported separately, buy and sell transactions are not netted – the difference between values of sales and purchases is not reported (i.e. the purchase of USD 5 million against the PLN and the sale of USD 3 million against the PLN by the same reporting dealer amount to the turnover of USD 8 million). The data on turnover is 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 are reported as two separate deals (e.g. the sale of the US dollars and the purchase of the Danish kroner via the euro market – first, the sale of USD 6 million against the euro, and then the purchase of the Danish kroner against the euro – amount in total to the turnover of USD 12 million). Transactions with variable nominal or notional amounts are reported according to the value of the amount as of the trade date.

¹¹ Prime brokerage services enable bank's client to conduct trades in the foreign exchange market using credit lines of the bank that acts as a prime broker. To this end, the bank facilitates trades for their clients in the bank's name with a group of predetermined counterparties. Under this service, the operation consists in a simultaneous execution of a transaction between a counterparty and the prime broker and a transaction between the prime broker and the client. The prime broker acts as an intermediary, becoming a counterparty to both transactions mentioned above.

¹² Such transactions may be executed directly with the client (via the reporting dealer's internet trading platforms or by phone) or through entities specialising in providing services to such clients (in Poland e.g. reporting dealer's operations with brokerage houses that offer their clients access to internet transaction platforms organised by them). Data on retail-driven deals do not include operations executed by retail clients directly with non-residents or with local financial institutions, other than the reporting dealers, hedging back-to-back with non-residents the market risk resulting from such transactions.

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 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 foreign parent bank (with respect to branches of foreign credit institutions – by its head office abroad).

The data include transactions of reporting dealers concluded with both directly and indirectly affiliated firms (parent entities, subsidiaries, branches), regardless of the jurisdiction where the entity is registered and regardless of the purpose of the transaction (inter alia, they include transactions executed by reporting dealers aimed at mitigating exposure to market risk originating from transactions concluded with their clients). The survey also covers transactions between dealers within the given reporting dealer, unless they were conducted solely to facilitate internal book-keeping or internal risk management. Transactions executed in order to mitigate exposure to market risk originating from other transactions which have the same characteristics as original transaction (the same nominal value, maturity, reference benchmark etc.) but opposite direction are reported in the lines „o/w back-to-back trades“. Moreover in the lines „o/w retail driven“ reporting dealers submit value of transaction initiated by retail customers while in the lines „o/w prime brokered to non-bank electronic market-makers“ and „o/w prime brokered to other customers“ value of transactions executed with the use of prime brokerage services is recorded.

3. Counterparties

Turnover values provided by reporting dealers are broken down for each instrument by counterparty as follows:

- reporting dealers
 - residents (local)
 - non-residents (cross-border)
- other financial institutions
 - residents (local)
 - non-residents (cross-border)
- non-financial customers
 - residents (local)
 - non-residents (cross-border).

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 deals with the reporting dealer).

Reporting dealers were financial institutions that actively participate in both local and global foreign exchange and OTC derivatives markets. In the assessment of activity, transactions between financial institutions and with non-financial customers were included. The distinction of the “reporting dealers” category was aimed at the elimination of double counting which arises because

transactions between two reporting dealers are recorded and reported by each of them. Almost 1,200 reporting dealers from 52 countries, including 12 banks and branches of credit institutions operating in Poland, participated in the survey. The list of the reporting dealers in Poland (banks that provided data on their transactions to NBP and via NBP to the BIS) is presented in Appendix 1.

The “other financial institutions” category covers all financial institutions that were not classified as reporting dealers. According to the BIS methodology, transactions concluded in the foreign exchange market with other financial institutions are additionally broken down into:

- Non-reporting banks: commercial, cooperative, investment and state banks and branches of credit institutions not participating in the survey.
- Institutional investors: entities such as investment and pension funds, insurance companies and reinsurance companies.
- Hedge funds and proprietary trading firms: asset management entities following a broad range of investment strategies that are not subject to borrowing and leverage restrictions, which often have a different legal status or are subject to different regulations than “institutional investors”, typically cater to institutions and high net worth individual clients; they simultaneously hold long and short positions in multiple markets and asset classes, frequently use derivatives for speculative purposes; also, proprietary trading firms that invest and speculate for their own account (inter alia, specialised firms that employ high-speed algorithmic trading strategies, with very short periods of exposure to risk, including high-frequency trading).
- Official sector financial institutions: central banks, sovereign wealth funds, international financial institutions of the public sector (BIS, IMF etc.), development banks (for example, EBRD, EIB) and agencies.
- Other: all financial institutions that cannot be classified as any of the sub-categories above (e.g. leasing companies, factoring companies etc.).

Transactions cleared by CCPs are classified according to original counterparties’ categories (before novation or open offer). A CCP is not treated as a counterparty for the purpose of the survey.

The “non-financial customers” category covers all other counterparties. These are mainly manufacturing corporations or service providers and retail clients.

4. Term structure

For the data on selected foreign exchange transaction (separately for outright forwards and fx swaps), the following maturities are distinguished (tables A1 – A4):

- one (business) day,
- other than one-day transactions up to seven calendar days (up to one week),
- over one week and up to one month,
- over one month and up to three months,
- over three months and up to six months,
- over six months.

In case of outright forward transactions the criterion which decides to which of the abovementioned categories it should be qualified is the **original maturity**, i.e. the difference between the spot date (usually second business day following the trade date) and its final settlement date. In case of fx swaps the criterion which decides to which category they should be qualified is **the difference between the settlement dates of the first leg and the second leg**.

In principle maturities of transactions are measured in calendar days. The only exception to this rule are one-day transactions, for which the maturities are expressed in business days. This category includes, inter alia, fx swaps, in case of which the settlement of their second leg is executed on the next business day following the settlement of their first leg.

5. Currency breakdown

Data on transactions in the foreign exchange market were reported by major currency pairs. This included USD/PLN and EUR/PLN deals, which were reported by all institutions participating in the survey worldwide. According to the BIS methodology, foreign exchange transactions involving the Polish zloty, the US dollar, the euro and the Japanese yen were reported separately in Poland. For single-currency interest rate derivatives, such currencies as, inter alia, the Polish zloty, the euro, the US dollar, the Japanese yen, the Swiss franc, Pound sterling, the Czech koruna, the Hungarian forint, were distinguished.

6. Execution methods

For the purpose of the survey, the transactions in the foreign exchange market were divided into the following categories of execution methods:

- *Voice Direct* – transactions negotiated over the phone directly between counterparties, regardless of the subsequent execution method, not intermediated by a third party,
- *Voice Indirect* – transactions negotiated via a voice broker (e.g. over the phone), intermediated by a third party, regardless of the subsequent execution method,
- *Electronic Direct* – transactions not intermediated by a third party, executed via an electronic communication system or electronic trading platform (with messaging systems and single-bank proprietary trading systems singled out),
- *Electronic Indirect* – transactions executed via electronic broking systems, automatically matching anonymous buy and sell offers (anonymous venues – e.g. Refinitiv Matching) or trading platforms where transactions can be concluded with a defined set of counterparties and individual entities' quotes are known *a priori* (disclosed venues).

7. Turnover at constant exchange rates

In order to ensure intertemporal comparability of data, the impact of exchange rate fluctuations needs to be removed (e.g. in April 2022 the Polish zloty was on average approximately 12.5%

weaker vis-à-vis the US dollar than in April 2019). To this end, the data for the previous reporting period have been re-calculated for the estimation of the rate of change of average daily turnover in relation to the value presented in the previous edition of the survey.

For transactions concluded in the foreign exchange market, for both currencies involved in each transaction the value of turnover reported in US dollars was converted into the original currency at the average exchange rate of April 2019. Next, the two amounts were re-calculated into US dollars at the average exchange rate of April 2022. The value of turnover at the constant exchange rate of 2022 was obtained by adding the amounts calculated separately for both currencies of the transaction and dividing the sum by two. A similar procedure was applied for transactions involving single-currency OTC interest rate derivatives.

As regards most exchange rates that are important for the evaluation of changes in the domestic foreign exchange market, the differences between their average levels in April 2019 and April 2022 were rather major. As a result, the dynamics of those changes presented using current exchange rates diverged from the one measured using constant exchange rates.

8. Definitions of instruments

The data were collected for the following types of derivatives:

- Forwards,
- swaps,
- options.

In a forward contract, one party is obliged to sell and the other party to buy an underlying instrument at a specified date in the future, at a price agreed on the trade date; forwards are not traded in organised exchanges and their contractual terms do not have to be standardised. The survey includes also cash-settled forward transactions – information on the value of such operations is specified in tables A1–A4 in the “o/w non-deliverable forwards” line.

In a swap, both parties undertake to periodically exchange financial flows whose value is calculated on the basis of a specified principal amount in accordance with the rules set on the trade date. The survey includes also forward-starting swap transactions conducted in April.

Option gives the right or obliges (depending on whether the reporting dealer is a buyer or seller of the option, respectively) to buy or sell the baseline instrument at a specified date at a price agreed on the trade date. The survey includes only the options which are not traded in regulated markets (i.e. security exchanges). Information on options sold and bought are reported separately. All options included in an option strategy should be reported separately (e.g. for the collar type transaction both cap and floor options should be reported independently).

Derivatives embedded in securities or other banking products were excluded from the survey. The value of sold and bought securities, granted credits and accepted deposits with embedded derivatives is not included in the reporting tables.

If a transaction consists of several components – basic derivatives, each component is reported separately (e.g. for collar option, the cap and floor components are both reported separately). If it was not feasible to separate basic derivatives, then a derivative was classified into an appropriate category according to the prevailing type of risk the reporting dealer was exposed to. All derivatives with exposure to more than one currency were classified as foreign exchange transactions. If a complex derivative had an embedded option, then such a transaction was classified as an option. If given derivative cannot be classified to neither of abovementioned categories, it is reported as other product (line “Other products” in tables A3 and B).

Foreign exchange transactions that are the subject of the survey 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, whose settlement is **within two business days**. Therefore, this category includes also transactions which are settled on the day of their execution as well as transactions settled on next business day following their execution. **Neither the short, nor the long leg of an fx swap is included in this category, even if their settlement falls within two business days (e.g. T/N fx swap).**

Outright forward

Transaction involving the exchange of two currencies at a forward rate agreed on the trade date and settled at some point in time in the future, later than within two business days. The category also includes cash-settled transactions (non-deliverable forwards – NDF, contracts for differences – CFD), even if they are closed before the second business day. **The long leg of an fx swap, regardless of the booking method, is excluded from this category.**

Foreign exchange swap

Contract which obliges its parties to the exchange of two currencies at 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 on the trade date (typically different from the rate applied to the short leg). The amount payable by one party to the other in the long leg is denominated in the same currency as the amount received in the first leg. This category includes both spot/forward and forward/forward fx swaps. All fx swaps (including T/N fx swaps), regardless of the booking method, are reported in this category. The turnover in the fx swap market represents its nominal value, and not the value of cash flows related to that transaction. This means that only the long leg is presented in the turnover statistics: the short leg is neither reported as a spot transaction, nor as an fx swap.

Currency swap (cross-currency interest rate swap – CIRS)

Contract which obliges both parties to periodically swap streams of interest payments calculated on a specified principal amount for an agreed period of time, which may be accompanied by an exchange of the principal amount (at a previously agreed rate) on the trade date and/or at maturity. Interest payments are expressed in different currencies and are calculated at interest rates specified separately for each of the currencies.

Currency option

A contract that gives the buyer the right to buy or sell a specified amount of one currency in exchange for another currency at a previously agreed exchange rate during a specified period of time. This category includes European and American options, as well as all exotic options.

Single-currency OTC interest rate derivatives that are the subject of the survey 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 interest is calculated at a rate agreed on the day of the initiation of the contract. In practice, counterparties only settle the difference between the FRA rate (forward rate set on the trade day) and the reference rate fixed two business days before the settlement date, proportional to the principal amount of the contract.

Overnight index swap (OIS)

A transaction in which counterparties agree to exchange the difference between interest payments accrued at a fixed and a 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 exchange of the OIS notional amount) is effected on the working day following the maturity date (for classic OIS) or several predetermined dates (for resettable OIS). **All interest swaps for which the floating rate is based on the O/N benchmark rates (including so called compound rates) are qualified in the table B as overnight index swaps.**

Interest rate swap (IRS)

Contract that obliges counterparties to periodically swap streams of interest payments (calculated on a specified nominal amount) for an agreed period of time. The interest payments, effected at pre-agreed points in time, are expressed in a single currency and calculated according to interest rates specified for each of the counterparties (e.g. one rate may be fixed and the other floating, or both may be floating, but based on different reference rates). This category also includes swaps whose principal changes over time (amortising and drawdown swaps). This category excludes OIS transactions which are reported in Table B in separate lines.

Interest rate option

A contract giving the option buyer the right to pay (to the option seller) or receive (from the option seller) interest on an agreed principal for a set period of time, at an agreed interest rate.

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