



**Periodic reviews of FX market
indicators (the official hryvnia
exchange rate against foreign
currencies, accounting prices for
investment metals, and the
reference exchange rate of the
hryvnia against the U.S. dollar)**

Open Market Operations Department

Kyiv, October 2025

Regular review of indicators: *summary*



PURPOSE OF REVIEW: establish whether the following is needed:

- ✓ replacement of current indicators
- ✓ adjustment of methodology
- ✓ adjustment of other important aspects (time for calculation, procedure for publication, etc.)



WHAT NEEDS TO BE REVIEWED

- **Market conditions:** does the market allow for regular calculation of a reliable indicator?
- **Structural changes in the market:** does the existing indicator reflect market reality and meet the needs of market participants?
- **Methodology of the indicator:** were any shortcomings, deficiencies or weaknesses of methodology found in its application?
- **Operational aspects:** were any shortcomings or deficiencies of operational aspects of indicator calculation/publication found (unreliable data source, technical failures, etc.)?



REGULARITY OF REVIEW

- **semiannual** : no later than February and August, respectively
- **ad-hoc** : in case of sudden major changes in market conditions

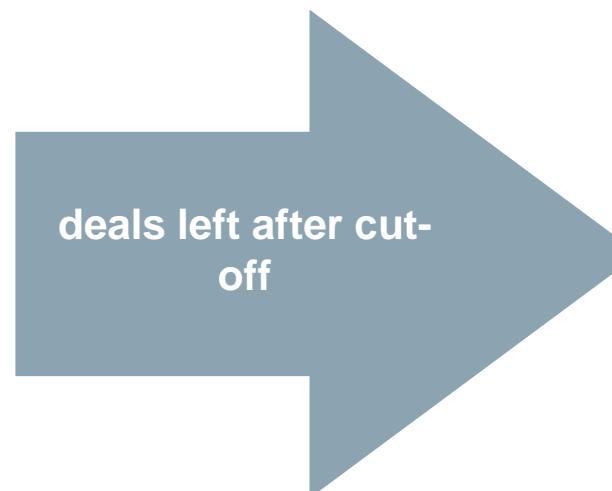
In 2025, periodic reviews of the FX market indicators were conducted at the meetings of the Oversight Council for Ukrainian Money Market and FX Market Indicators on 19 February 2025 and 27 August 2025.

Calculation of the hryvnia's official/reference exchange rate against the U.S. dollar: *current methodology (effective 4 January 2022)*

All deals to purchase/sell **USD 0.1–5 million in volume** on TOD, TOM, and spot terms that banks made with other banks and the NBU in the FX market on settlement day and that TIS reported to the NBU through information exchange channels:

- ✓ *before 12 p.m.* – to calculate the **reference value of the UAH/USD exchange rate**
- ✓ *before 3 p.m.* – to calculate the **official UAH/USD exchange rate**

Stage I
deals whose **rates** differ by more than 2% from the **median** rate of the original series of deals



Stage II:
deals whose **exchange rate** deviates by more than 2% from the **mean exchange rate** of the series of deals after the Stage I cut-off

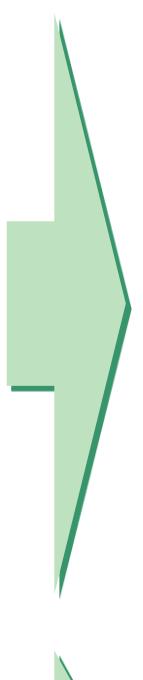
**Official/
reference
exchange rate =
weighted average
value of the basic
series (left after
cut-off)**

Compilation of a series of deals >

Cut-off >

Calculation

Calculation of the official exchange rate of the hryvnia against other currencies (except USD) and the accounting price of bank metals (new approaches to determining the currency list are effective from 31 March 2025¹)

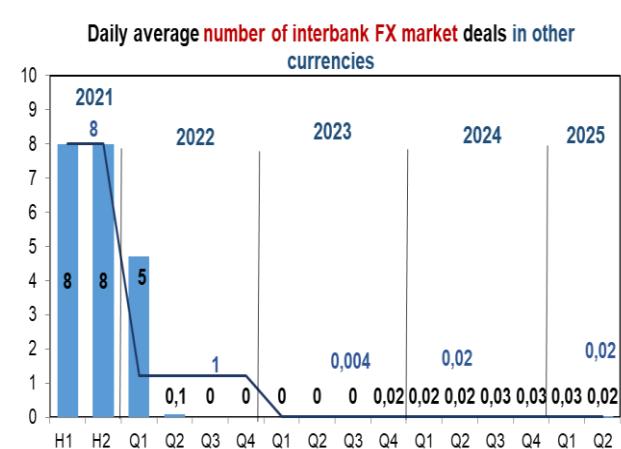
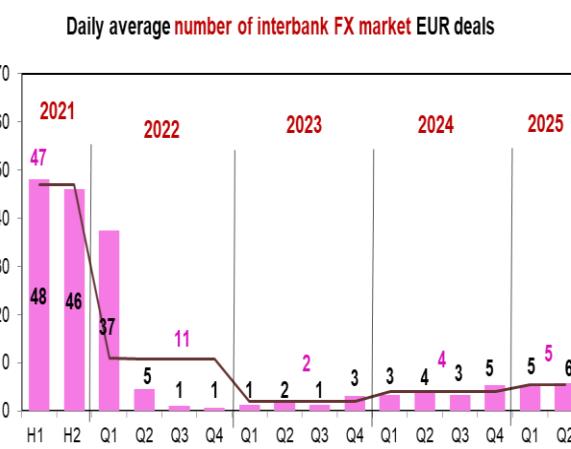
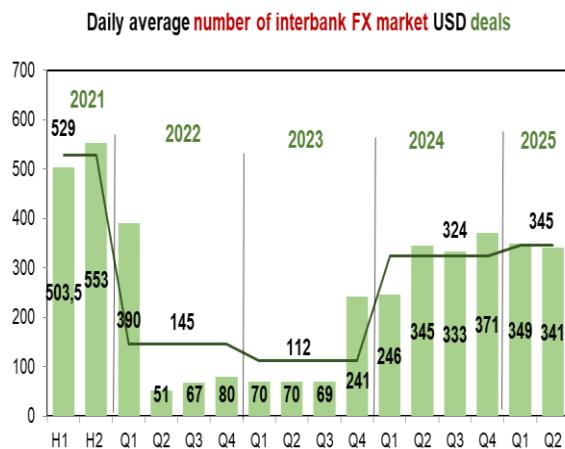
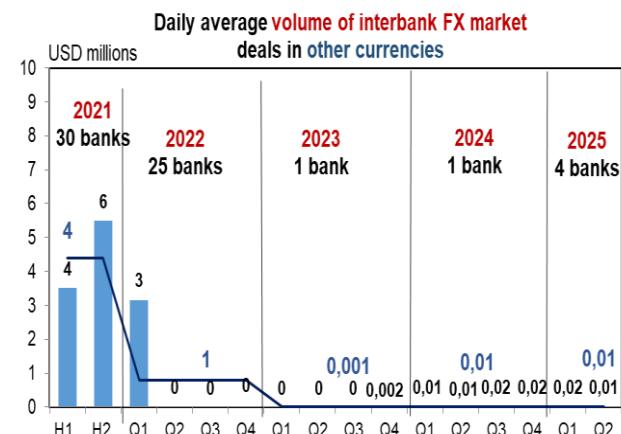
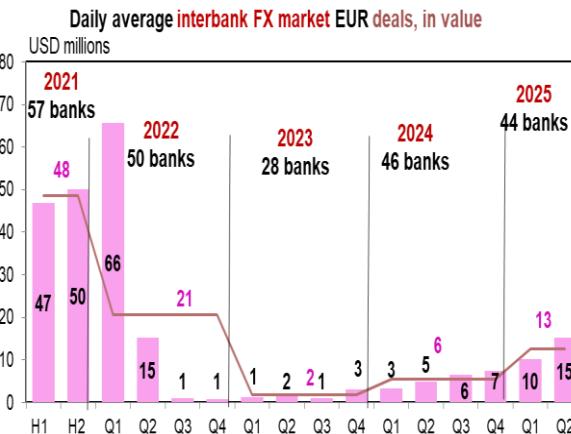
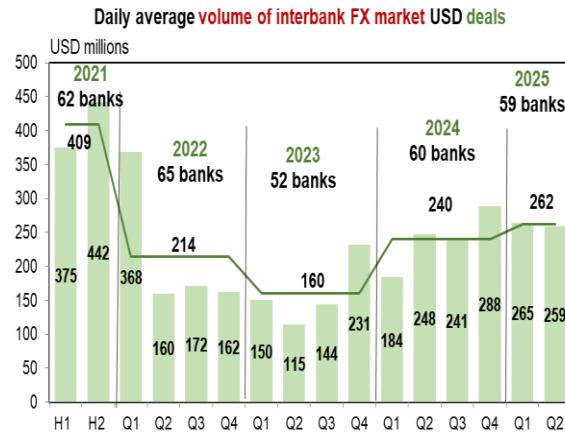
| Lists for Setting ER ² | Calculation Procedure | |
|---|--|--|
| <p>Currencies for setting daily official exchange rates</p> <ul style="list-style-type: none">✓ <i>Group 1 of the Classifier</i>✓ foreign currencies issued by countries with the largest share of trade in goods with Ukraine, and which together with countries issuing foreign currencies included in Group 1 of the Classifier account for no less than 95 percent of the total share of trade in goods with Ukraine, according to the data of Ukraine's Balance of Payments for the year preceding the year of approval of the List of Foreign Currencies. |  | <p>Against foreign currencies and SDRs (except USD) – based on information about the UAH/USD exchange rate and information about:</p> <ol style="list-style-type: none">i. BFIX quotes of foreign currencies – for currencies for which TIS BLOOMBERG publishes the BFIX quotation on the day the official hryvnia exchange rate is calculatedii. exchange rates of USD against foreign currencies according to data from the relevant central banks, oriii. current exchange rates of USD against foreign currencies on international FX markets, obtained through the TIS. |
| <p>Investment metals for daily calculation of the accounting price</p> <p><i>Investment metals included in Group 1 of the Classifier</i></p> |  | <p>Accounting price of investment metals is estimated based on the official hryvnia exchange rate against the U.S. dollar and BFIX price quotations in U.S. dollars against investment metals (or, if quotations are missing, information from the London Bullion Market Association or TIS).</p> |

¹ The list of foreign currencies includes **41** foreign currencies, SDRs, and **4** investment metals.

² The NBU shall approve and publish a new List of Foreign Currencies if at least one of the following conditions is met:

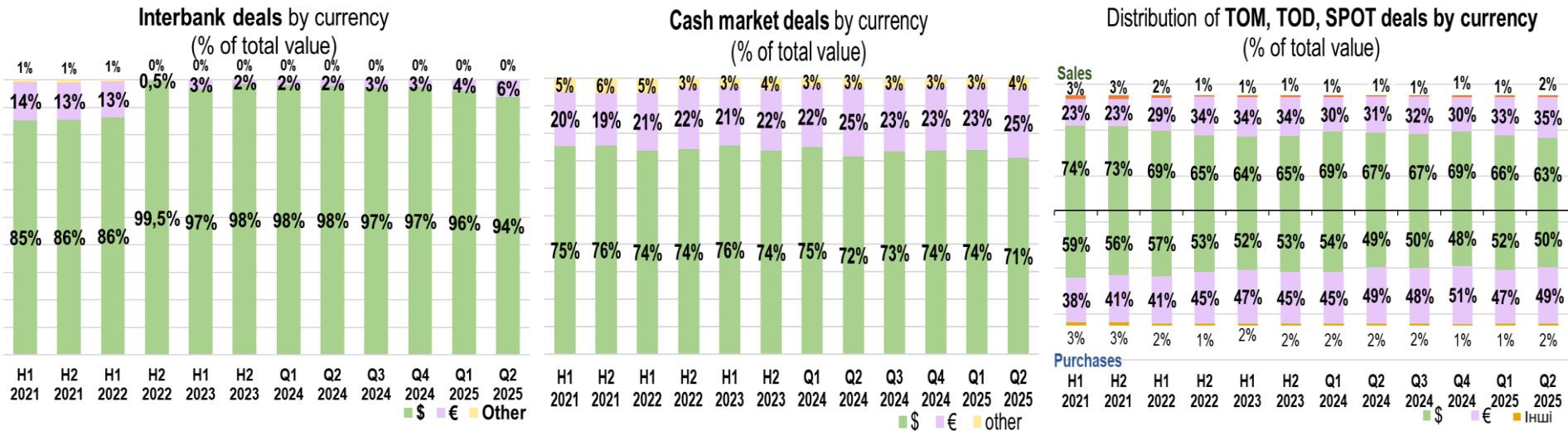
- 1) the countries that are issuers of foreign currencies from the current List account for less than 90 percent of the total share of trade in goods with Ukraine, according to Ukraine's Balance of Payments data for the previous year
- 2) changes are made to the List of Foreign Currencies included into Group 1 of the Classifier
- 3) three years have passed since the publication of the current List of Foreign Currencies.

The trading volume in the interbank FX market allows us to calculate hryvnia/U.S. dollar benchmarks



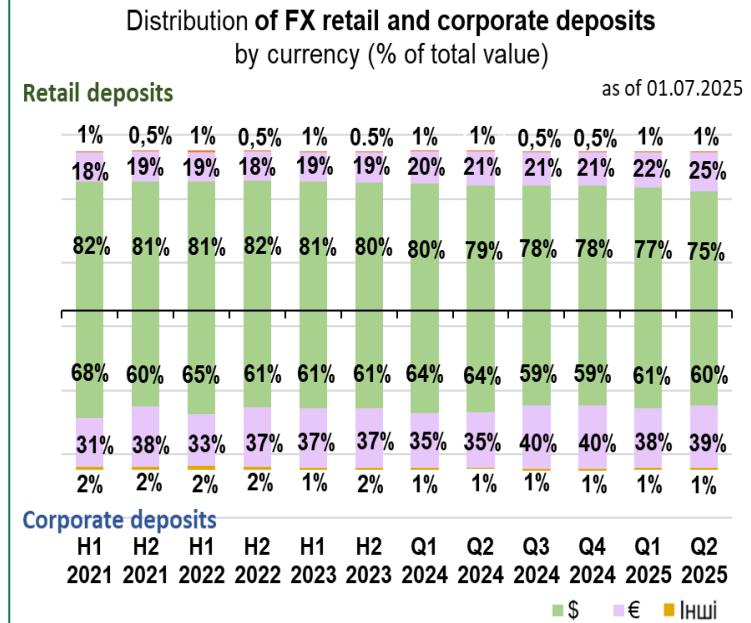
- H2 2024 and H1 2025 saw an uptrend in both the number and the value of the UAH/USD trade segment (in year-on year terms). Market is active enough to calculate FX benchmarks using the current methodology.
- In the hryvnia/euro segment, trading in the interbank FX market also increased during the said period. Interbank trading in other currencies is almost non-existent.

The currency composition of transactions in the Ukrainian FX market confirms the U.S. dollar's status as the main currency shaping the exchange rate



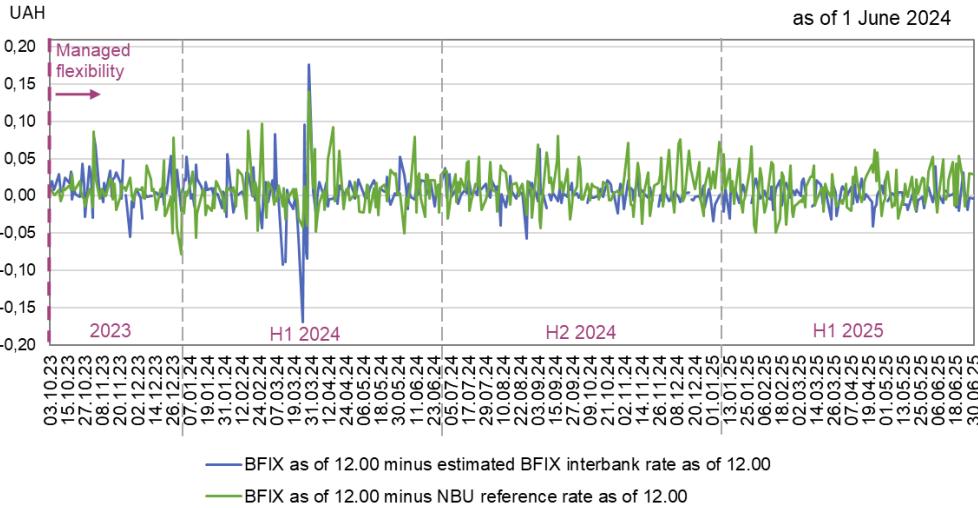
Source: banks' statistical reports

- Transactions in U.S. dollars prevail in all segments of the FX market. However, **the share of euro transactions has grown** significantly, partly due to the strengthening of the euro on global markets.
- In Q2 2025, the share of the euro transactions reached **a quarter in the cash segment**, confidently **exceeded a third** in **cashless customer sales**, and accounted for about **half** of the total volume for **cashless customer purchases**.
- The share of other currencies in all segments remains marginal.
- The *interbank market remains the only segment* where the share of euro transactions is at a fairly low level. The structure of interbank transactions is much more dependent on the currency in which the NBU conducts FX interventions.

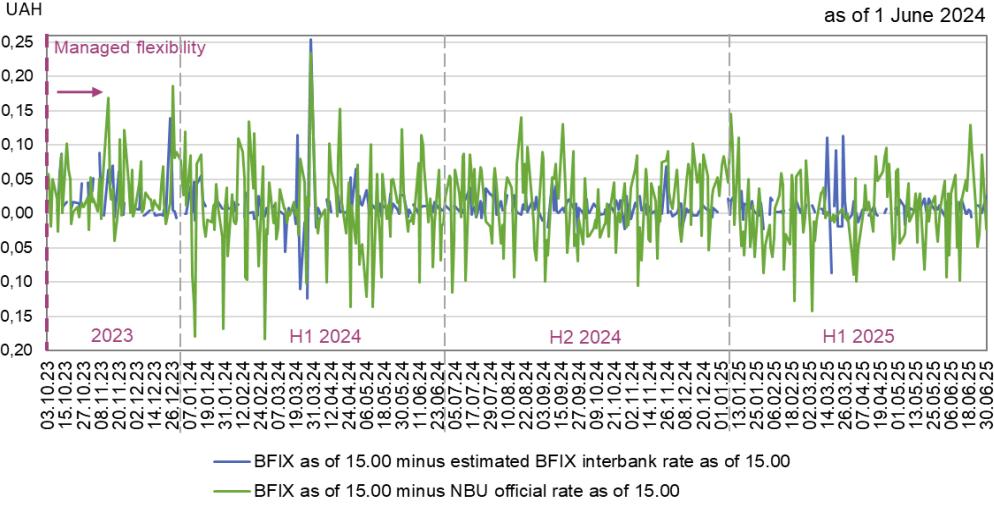


The market lacks the conditions for switching the currency benchmark calculation from weighted average to fixing

BFIX deviations as of 12.00 from FX market rates estimated using different methodologies



BFIX deviations as of 15.00 from FX market rates estimated using different methodologies



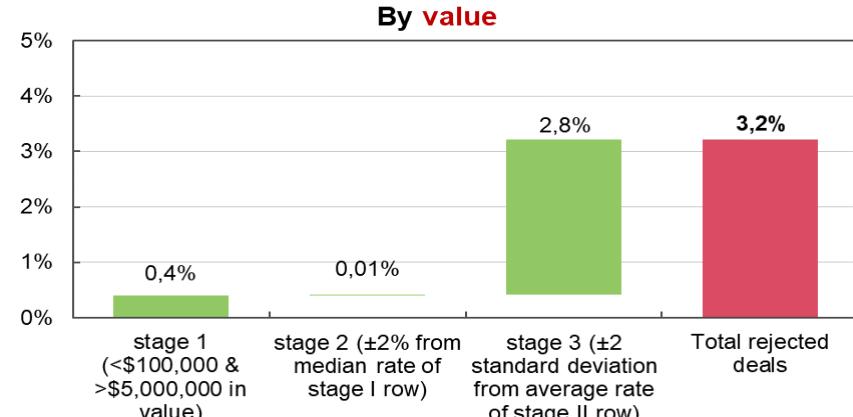
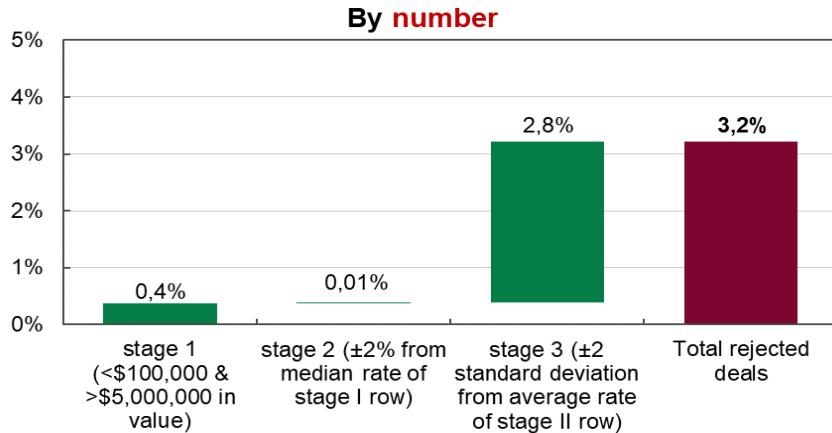
The BFIX Bloomberg indicator is calculated using the Bloomberg FX Fixings BFIX methodology dated 15 May 2024.

| Period (in kopecks, average absolute deviations) | deviation of the BFIX indicator calculated by Bloomberg at 12:00 | | deviation of the BFIX indicator calculated by Bloomberg at 15:00 | |
|--|--|---|--|---|
| | from the reference exchange rate | from the rate calculated using the BFIX method at 12:00 | from the official exchange rate | from the rate calculated using the BFIX method at 15:00 |
| 01.07.2024- 31.12.2024 | 2,13 | 0,87 | 4,60 | 1,11 |
| 01.01.2025- 30.06.2025 | 2,10 | 0,98 | 4,20 | 1,11 |

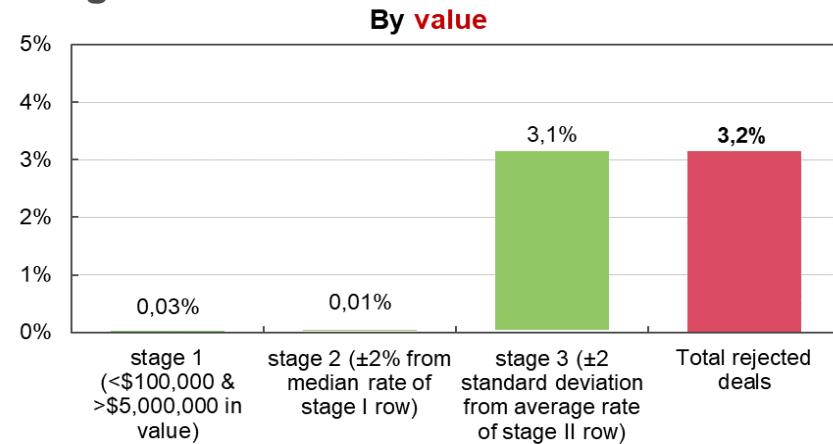
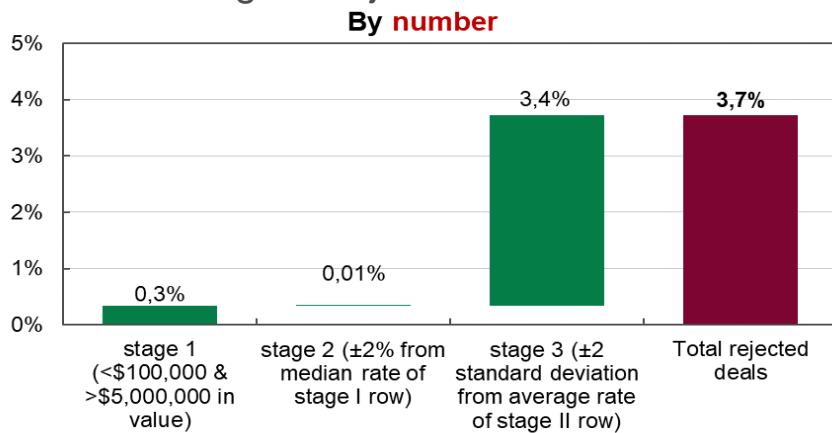
- The difference between the official/reference rate and the benchmark calculated as a fixing (BFIX) with a transition to flexibility remains significant.
- In H2 2024 and H1 of 2025, the difference between BFIX and the conditional indicator calculated at 12 p.m. and 3 p.m. under transactions on Ukraine's FX market according to the BFIX methodology was still observed.
- The volume and number of transactions in any given time period that could be used to calculate the fixing are currently not significant enough for such a fixing to be representative.

Decomposition of reasons for outlier cut-offs when calculating the reference exchange rate UAH/USD

Percentage of rejected transactions for calculating the reference rate in H1 2025



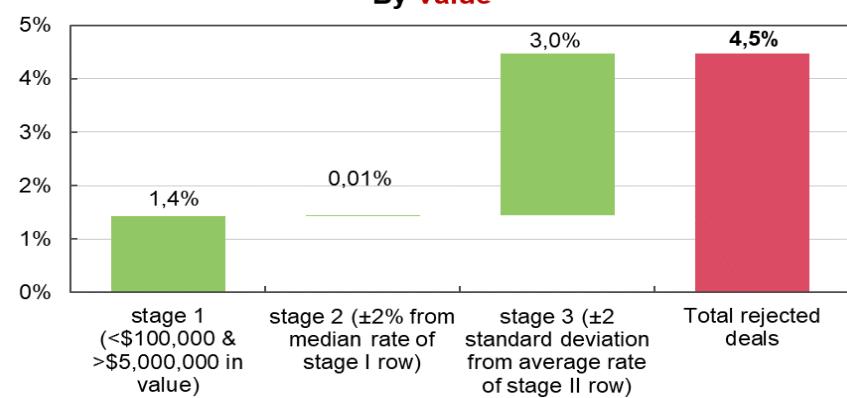
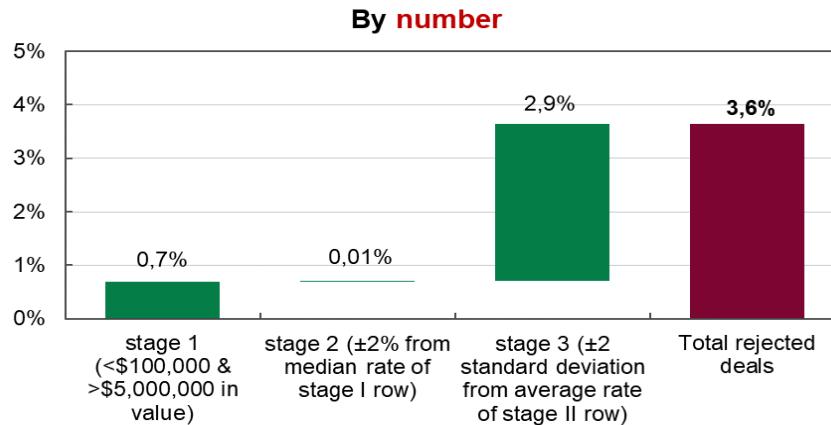
Percentage of rejected transactions for calculating the reference rate in H2 2024



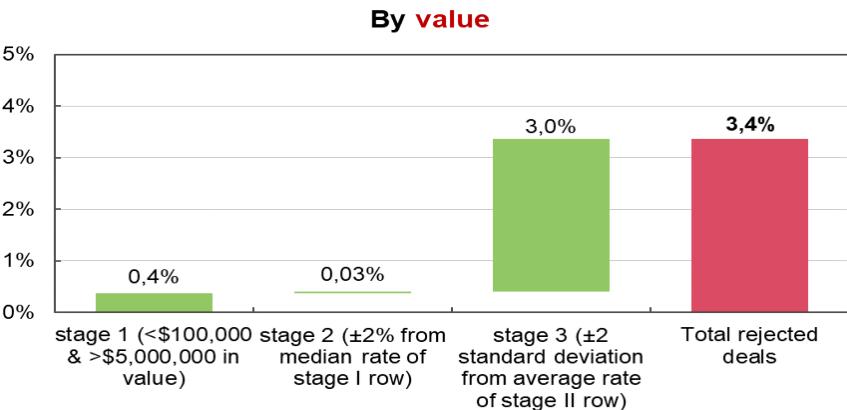
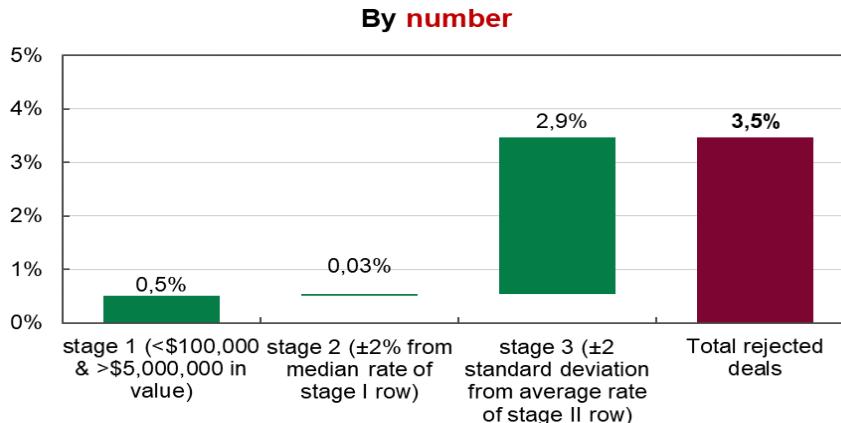
- In H2 2024 and H1 2025, the total share of FX market transactions that were dismissed as outliers by the algorithm for estimating the official exchange rate **was quite low**.
- At the same time, in H1 2025, the share of the number of transactions ↓, while their value remained at the level of H2 2024.

Decomposition of reasons for outlier cut-offs when calculating the official exchange rate UAH/USD

Percentage of rejected transactions for calculating the official rate in H1 2025

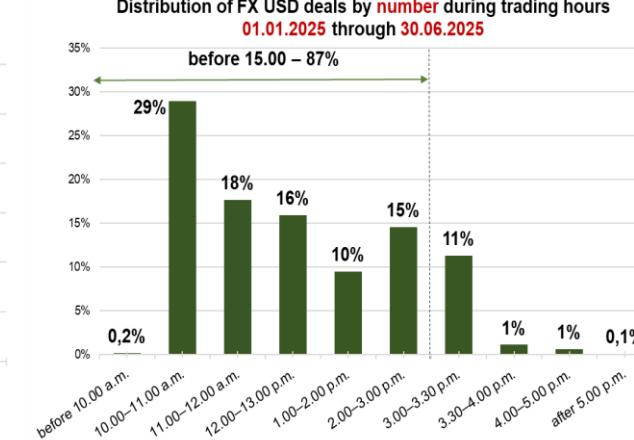
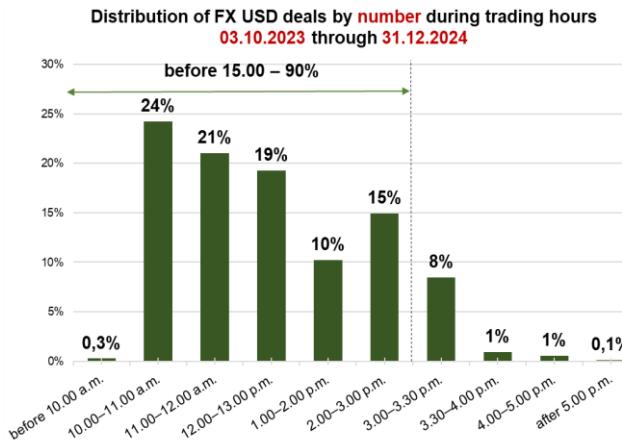
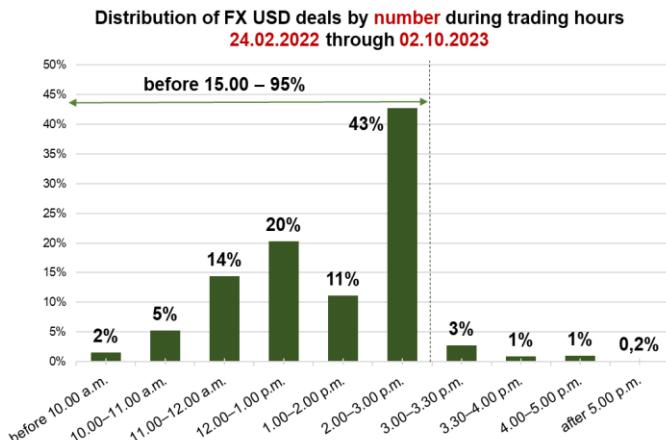
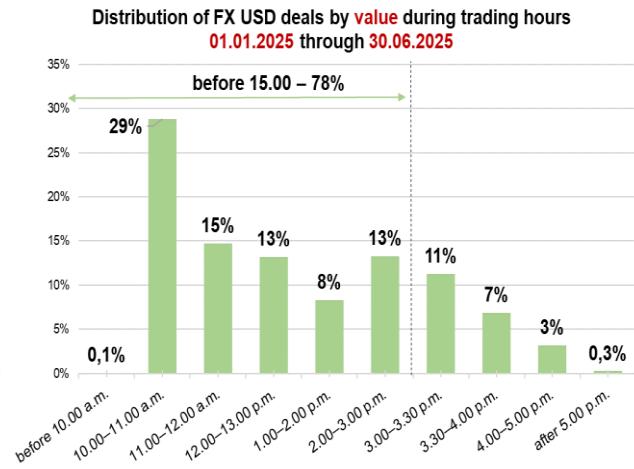
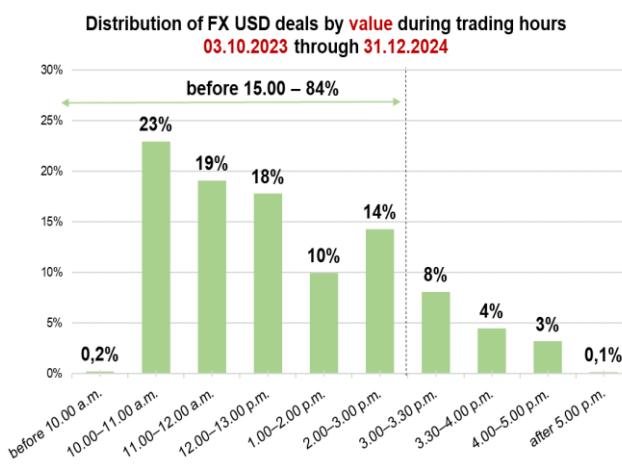
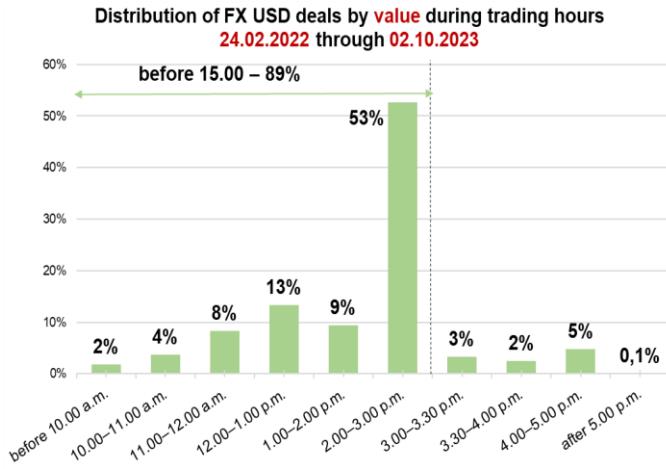


Percentage of rejected transactions for calculating the official rate in H2 2024



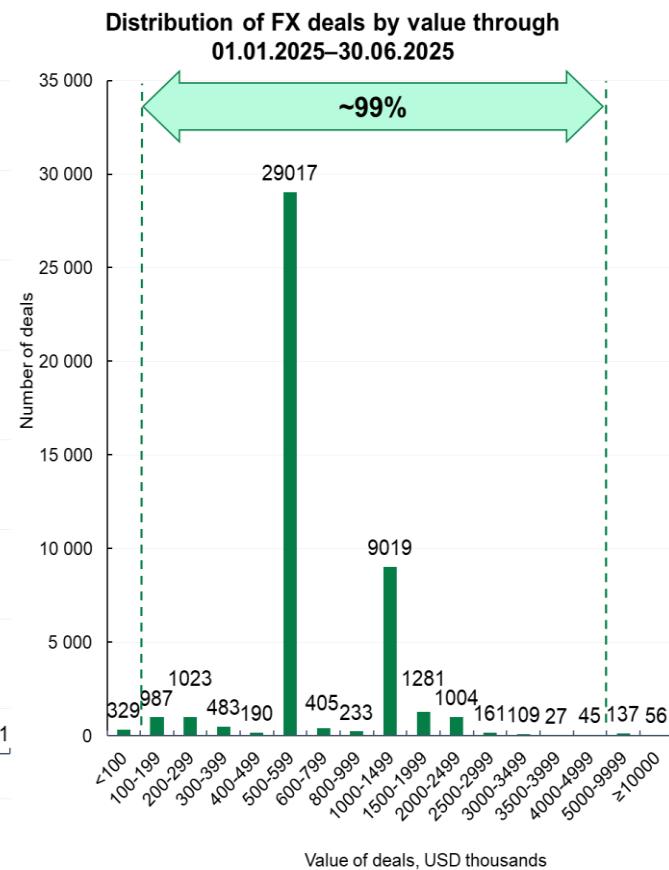
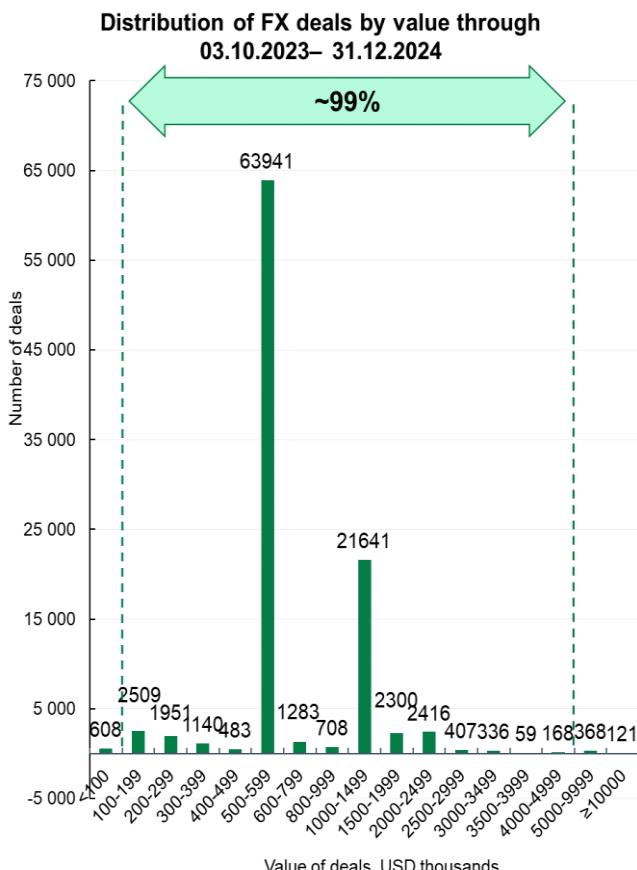
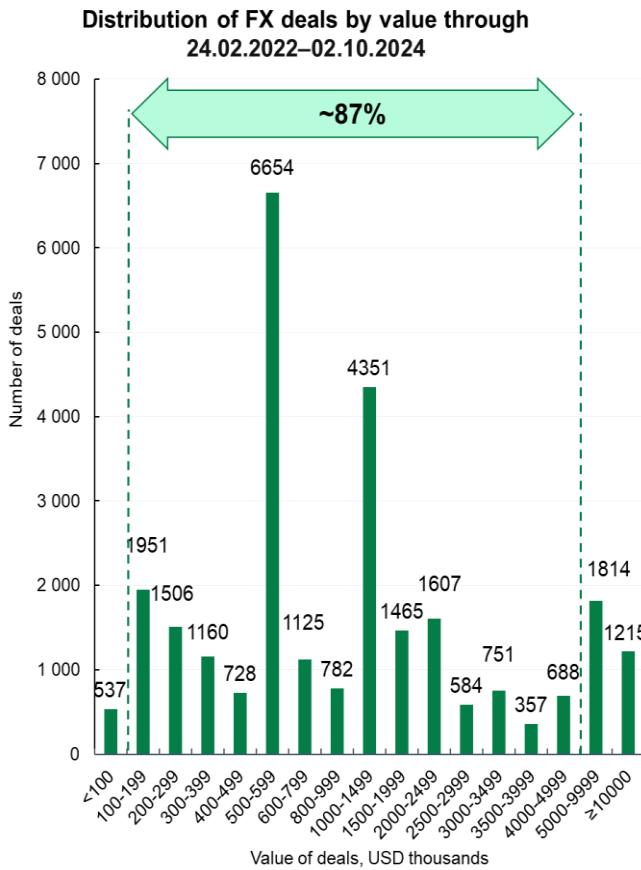
- In H2 2024 and H1 2025, the total share of FX market transactions that were dismissed as outliers by the algorithm for estimating the official exchange rate remained within fairly moderate limits both by number and by value.
- At the same time, in H1 2025, there was a slight ↑ in the share of transactions in terms of both number and, to a slightly greater extent, value.

The time of calculation of the official exchange rate is relevant to market needs in order to maintain the representativeness of the indicator



- The time limits for calculating the official and reference rates meet the needs of market participants to have a benchmark calculated for a specific time of the trading day.
- A certain decrease in the share of transactions (primarily by value) during the period that is used to calculate the official exchange rate is associated with an increase in TOM transactions. However, it should be noted that TOM session transactions are conducted at the just-calculated official NBU exchange rate, so their exclusion from the sample does not distort the benchmark value.

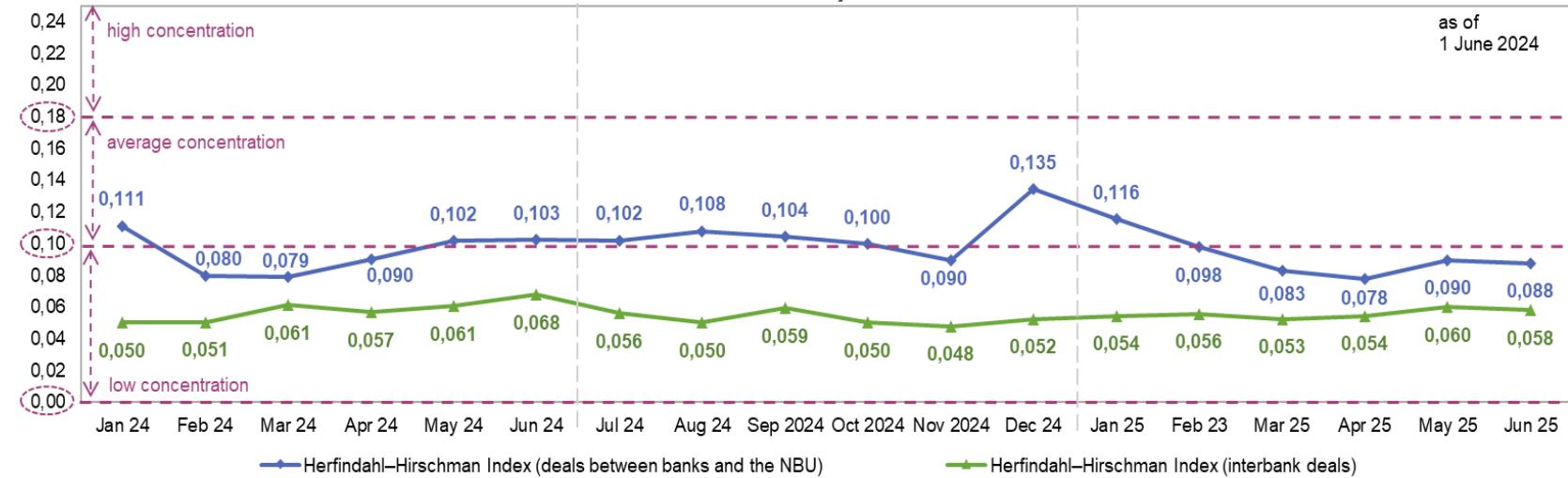
Parameters limiting the volume of transactions for calculating the official/reference exchange rate appear appropriate



- The current methodology for calculating the official/reference exchange rate of the hryvnia against the U.S. dollar involves transactions ranging from **USD 100,000** to **USD 5,000,000**.
- In H1 2025, the share of transactions that fall within the specified range is **99%**, corresponding to the level after the introduction of managed exchange rate flexibility.

The concentration of Ukraine's interbank FX market, as measured using the HHI is low

Dynamics of the estimates of the interbank FX market's concentration in 2024–2025 (with and without the NBU)

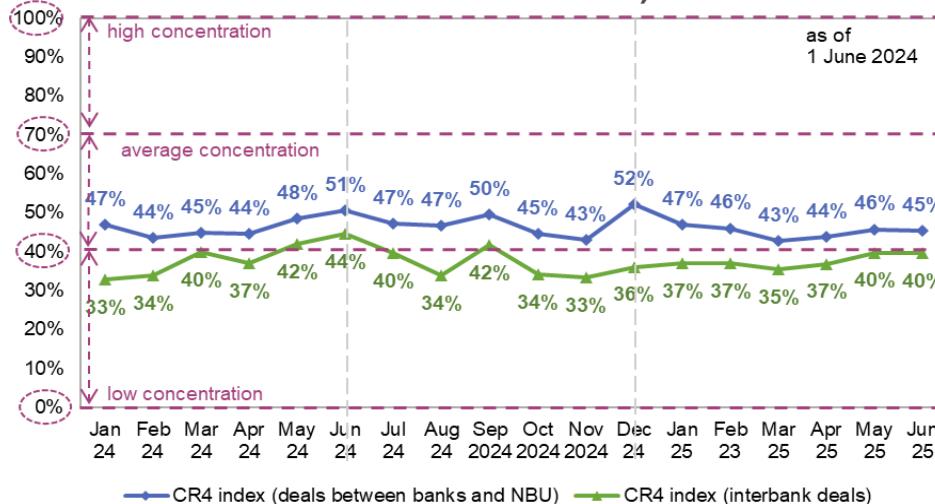


Source: calculations based on data reported by banks.

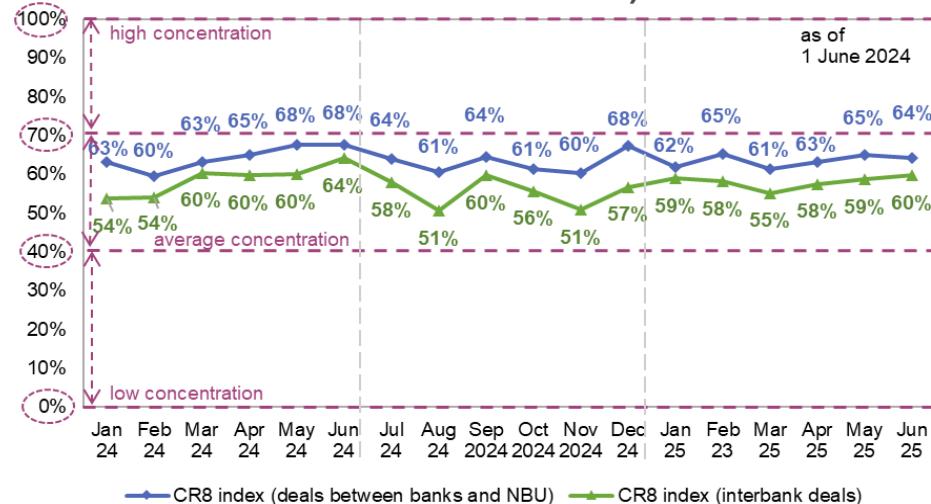
- **HHI (Herfindahl–Hirschman Index)** indicates the level of concentration and contribution of each market participant (the more participants in the market, the lower the HHI; the more uneven the market, the higher the HHI).
- Standard HHI scale to assess concentration:
 - $HHI < 0.1$ – low concentration (competitive marketplace)
 - $0.1 \leq HHI < 0.18$ – medium concentration (oligopoly)
 - $HHI \geq 0.18$ – high concentration (a few players dominate).
- Without the NBU, concentration in the interbank FX market remained low in H1 2025 and H2 2024, never breaching the $HHI < 0.1$ range.
- If transactions between banks and the NBU are included, HHI remained mostly near the upper limit of the low concentration range in H1 2025 and H2 2024, except for December 2024 and January 2025, when the NBU's role in the market increased seasonally and HHI was in the medium concentration range.
- The FX market analysis shows that the greatest impact on the HHI level in the composition of transactions
 - *between banks*, is made by banks actively engaged in arbitrage transactions
 - *between banks and the NBU* is exerted by the NBU itself, which actively balances the market in conditions of a structural currency deficit.

Estimating the concentration of Ukraine's interbank FX market using the CR4 index indicates a low level, and using the CR8 index, an average level

Dynamics of the estimates of the interbank FX market's concentration in 2024–2025 using CR4 (with and without the NBU)



Dynamics of the estimates of the interbank FX market's concentration in 2024–2025 using CR8 (with and without the NBU)

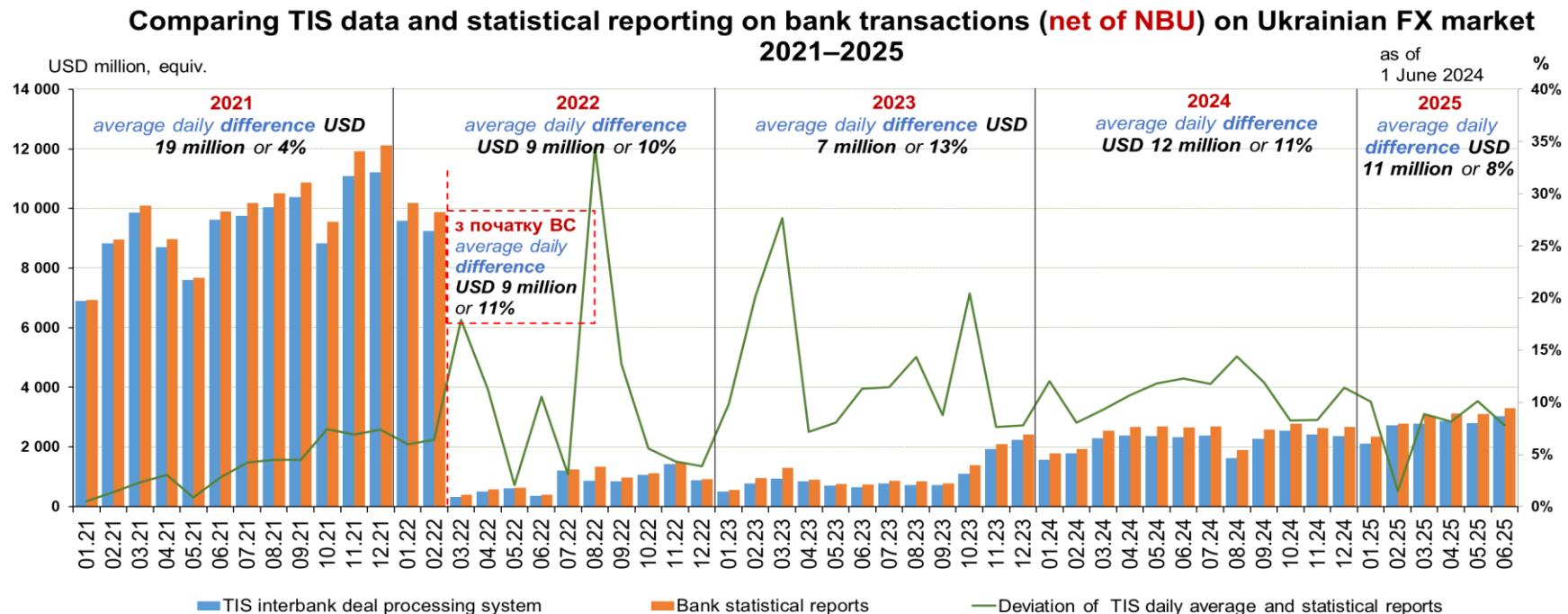


Source: calculations based on data reported by banks.

- In line with a SECO technical expert's recommendations, a CRn-based evaluation of market concentration was launched alongside the HHI-based one.
- CRn (Concentration Ratio)** is the sum of the shares of the market's largest participants (usually, **CR4**, with four participants, or **CR8**, with eight, is used). It shows whether the market is "owned" by the largest players.
- Standard CRn scale to assess concentration:
 - up to 40% – low concentration
 - 40–70% – medium concentration
 - over 70% – high concentration.

- In H1 2025 and H2 2024, **CR4** under agreements
 - between banks was mainly in the upper part of the low concentration range and fluctuated between 33-40%;
 - between banks and with the NBU was in the lower part of the medium concentration range and fluctuated between 43-52%;
- In H1 2025 and H2 2024, **CR8** under agreements
 - between banks was mainly in the upper part of the medium concentration range of 51-60%
 - between banks and with the NBU was a bit higher, though still within the medium concentration range and fluctuated between 61-68%; reflecting a broader distribution of market shares and a relatively significant impact of the group of eight leading banks on the overall market situation.

Comparing the volumes of unsecured transactions between banks in Ukraine's FX market, according to TIS data and reporting files



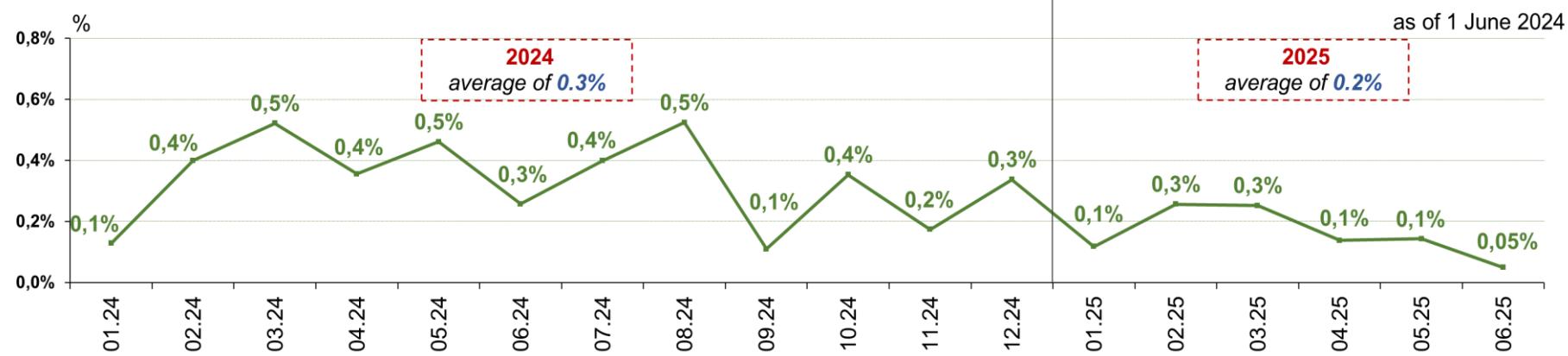
Source: TIS data and statistical reports.

- During 2022-2025, the difference between TIS data and statistical reporting files averages about USD 7-12 million per day, or 8-13%, due to the following factors:
 - not all banks operate in the Bloomberg/Refinitiv TIS systems; some transactions are concluded through other functionalities
 - in Refinitiv TIS, transactions must be registered by both banks with the same key indicators in the ticket, but in practice this is not always done, since filling in the details is only informative and is not official statistical reporting
 - possible errors and inaccuracies when banks fill in statistical reports.
- Overall, the data shows that the vast majority of transactions in the FX market in 2025 are included in the primary sample used to calculate FX market indicators at the UAH/USD exchange rate.

The share of transactions between banks within the same group in the total volume of interbank transactions on the Ukrainian FX market is low

Ukraine currently has only one banking group, made up of three banks.

Dynamics of share of interbank transactions **in a peer group in total interbank transactions on the Ukrainian FX market (net of the NBU) in 2024–2025**



An analysis of data for January 2024–June 2025 showed that the share of transactions between banks within the same group in the total volume of transactions on the Ukrainian FX market (excluding the NBU) was low and did not exceed 0.5%, and therefore their impact on the calculation of FX indicators is negligible.

- In view of this, there is currently no need to exclude transactions between banks within the same banking group from the methodology for calculating currency market indicators (the proposal was supported at the meeting of the Oversight Council of Money and FX Market Indicators held on August 27, 2025).
- Information on the impact of transactions between banks within the same group on the calculation of currency indicators will be monitored during the semi-annual review of the Indicators at meetings of the Oversight Council of Money and FX Market Indicators.

Conclusions and issues to discuss

Conclusions

- ❑ The official and reference UAH/USD exchange rates and the methodology for their calculation meet the market's conditions and needs at the current stage in its development.
- ❑ Currently, the methodology or other procedures for estimating and releasing the UAH/USD FX market indicators do not require any changes.
- ❑ The implementation continues of previously approved proposals to introduce the calculation of a new UAH/EUR benchmark and make changes to the methodology for calculating the official exchange rate against currencies other than the dollar.

Issues to Be Discussed

- ✓ Do you agree with the main conclusions drawn from periodic reviews of the FX market indicators?
- ✓ Do you consider it feasible to expand, in one way or another, the scope of issues to be monitored as part of FX market's periodic reviews?
- ✓ Please tell us about any other considerations regarding how to improve anything in the definition, calculation, and publication of FX market indicators.