



BIS Triennial FX and OTC survey

7 December, 15:20-16:10 CET, ECB FXCG Meeting, WebEx

Sources:

- Bank for International Settlements (2022): "[Triennial Central Bank Survey of Foreign Exchange and Over-the-counter \(OTC\) Derivatives Markets in 2022](#)", October.
- Caballero, J, A Maurin, P Wooldridge and D Xia (2022): "[The internationalisation of EME currency trading](#)", *BIS Quarterly Review*, December, pp 49–65.
- Drehmann, M and V Sushko (2022): "[The global foreign exchange market in a higher volatility environment](#)", *BIS Quarterly Review*, December, pp 33–48.
- Glowka, M and T Nilsson (2022): "[FX settlement risk: an unsettled issue](#)", *BIS Quarterly Review*, December, pp 75–81.

BIS runs “Triennial” survey since April 1986

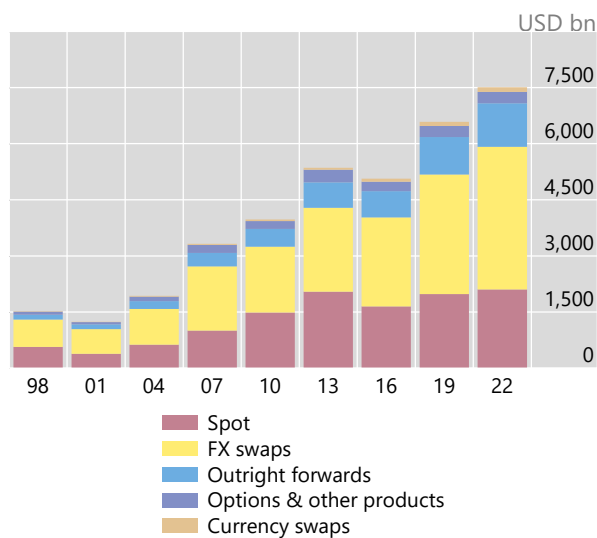
1. Sheds light on activity and structure in some of the worlds largest OTC markets
2. Most comprehensive & internationally consistent information on size & market structure
3. Latest edition: April 2022 (13th edition)
 1. More than 1200 reporting institutions across 52 countries and 38 currencies
 2. Key instruments: spot, outright forwards (including NDFs), FX swaps, currency swaps and options



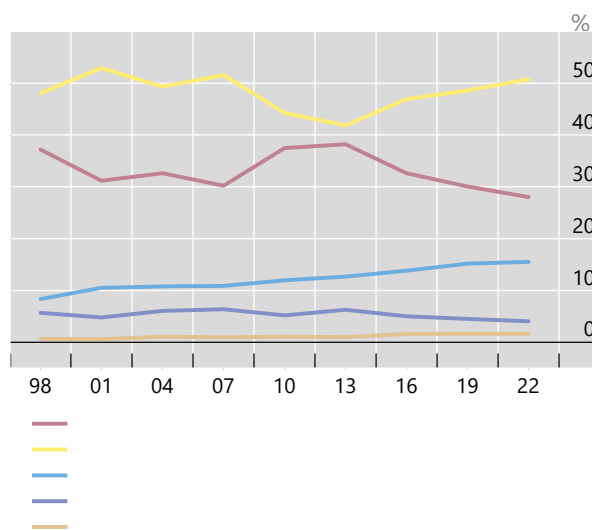
Long-term trends and headline volumes

Global FX trading volumes grow and some longer run trends reverse

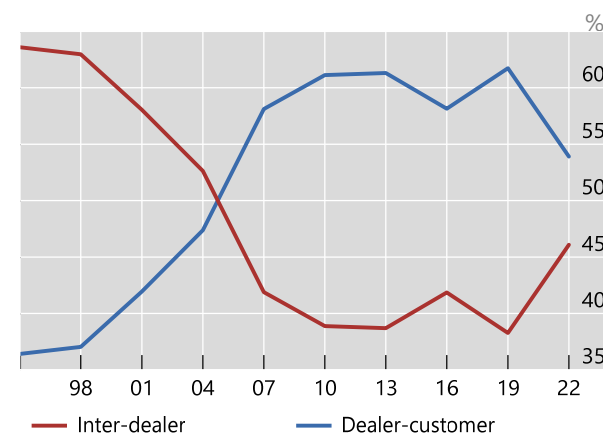
FX turnover by instrument



Instrument shares in total FX turnover



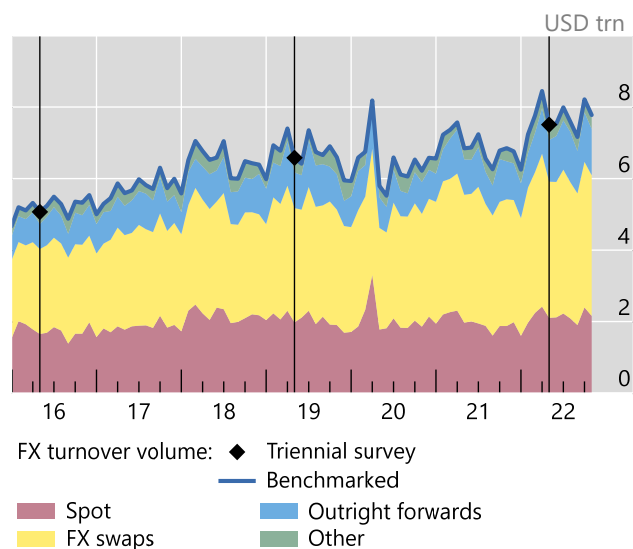
Relative size of inter-dealer vs dealer-customer market segments



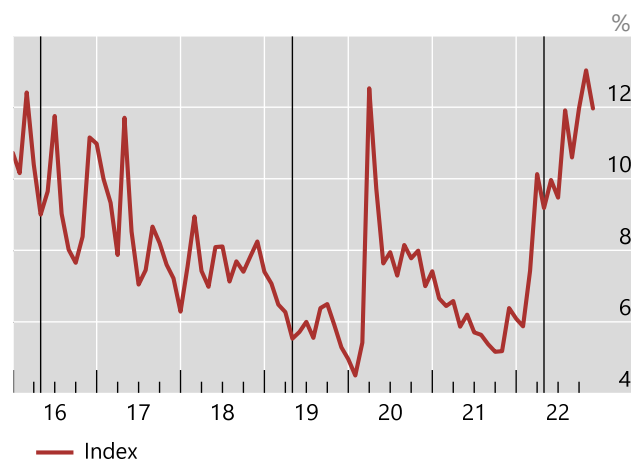
- Turnover in global foreign exchange markets reached \$7.5 trillion per day in April 2022
- FX swaps gained further market share, while that of spot declined
- Inter-dealer trading volumes expanded significantly relative to dealer-customer trading

FX trading volumes grow amid higher volatility

Benchmarked FX trading volumes



Currency volatility



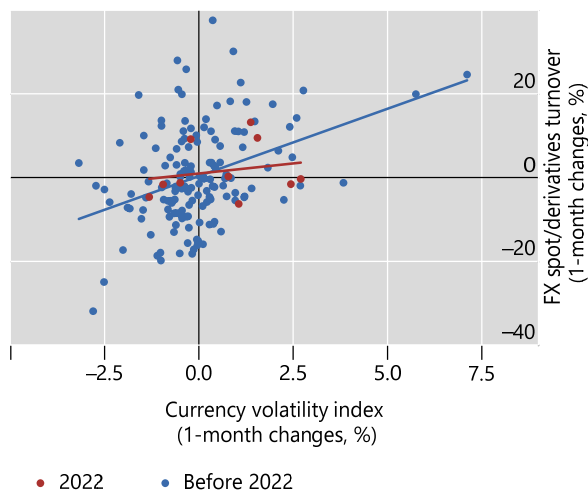
- Benchmarked series suggest absolute peak in ADV of close to \$8.5 trillion in March 2022
- Volumes had not increased further, even though various indicators of FX volatility kept rising



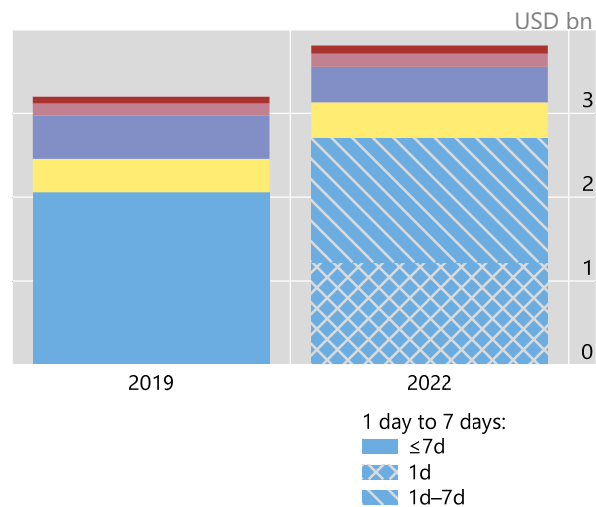
Key developments by instrument and counterparty

Short-maturity FX derivatives turnover grows strongly

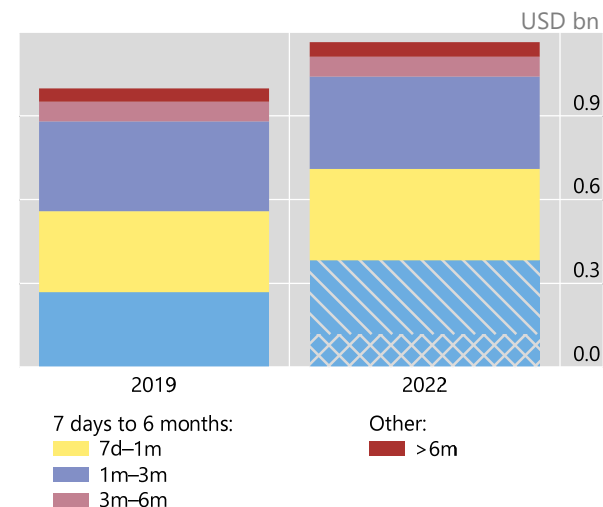
FX volatility and spot/derivatives ratio



Maturity profile of FX swaps



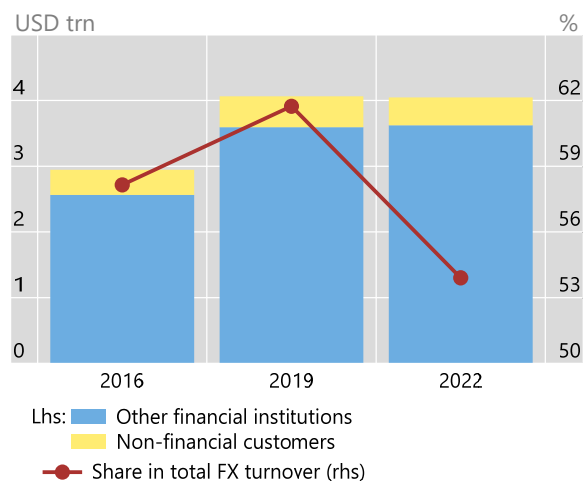
Maturity profile of outright forwards



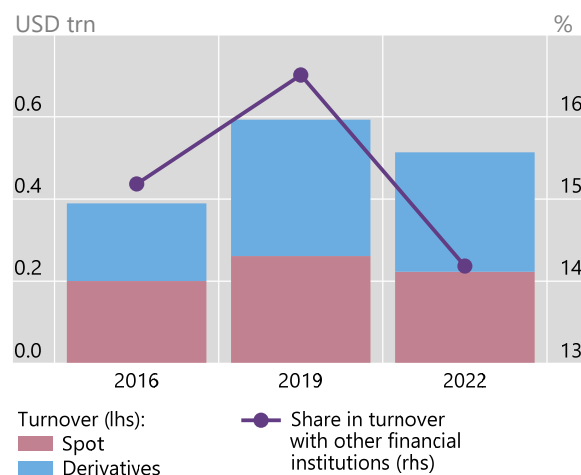
- Spot trading did not outpace that in derivatives in contrast to previous high-volatility episodes
- Growth of turnover in swaps and forwards entirely due to more trading with maturities < 1 week

Customer trading volumes stagnate

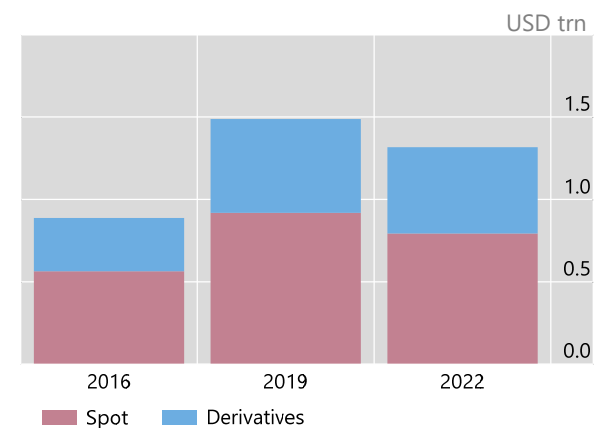
FX turnover with customers



Turnover with hedge funds and PTFs



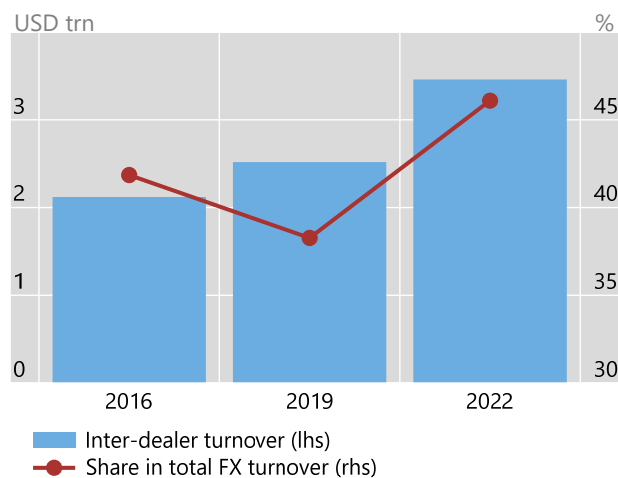
Prime-brokered turnover



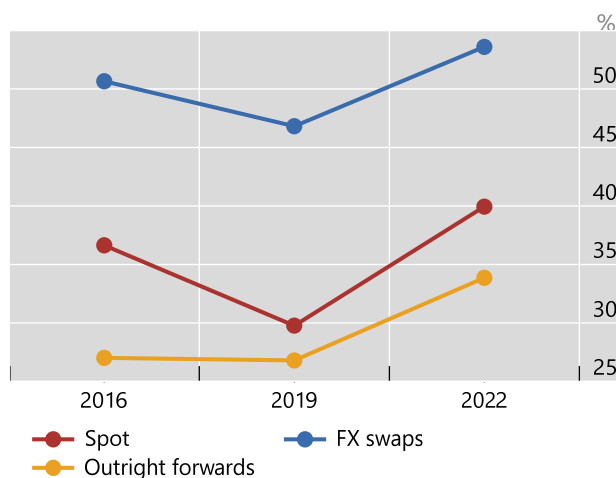
- Customer trading stagnated, partly reflecting a slowdown in international investment activity
- Small shift away from trading with hedge funds and PTFs, possibly reflecting shift by some PTFs to asset classes with greater arbitrage opportunities or dealers catching up technologically

A resurgent inter-dealer market

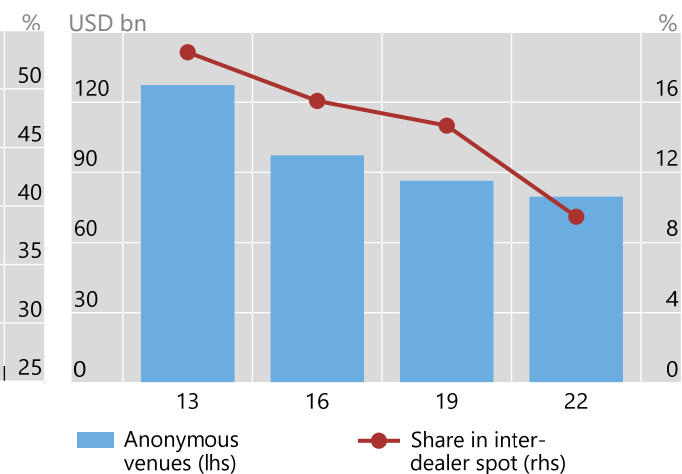
Inter-dealer turnover over time



Inter-dealer shares by instrument



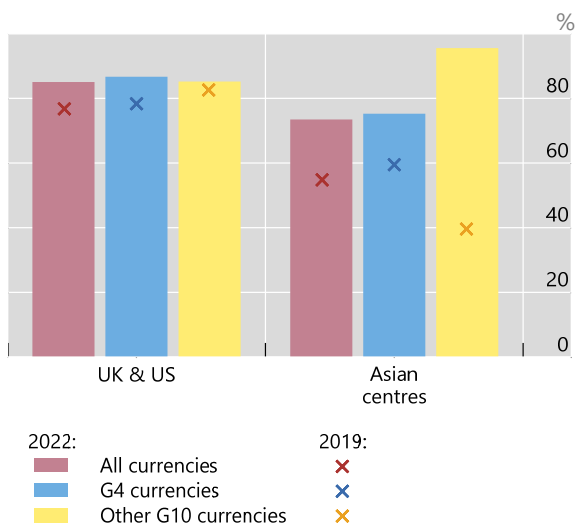
Inter-dealer spot trading on anonymous venues



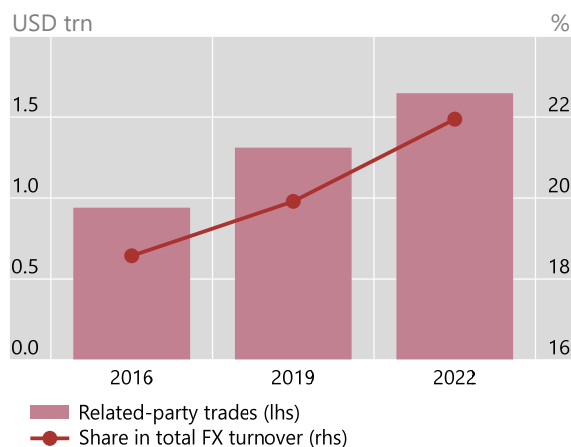
- Inter-dealer trading increased in market share, reversing a long-run trend
- Share of inter-dealer turnover increased across all three major instruments
- Inter-dealer spot trading on anonymous venues (eg CLOBs) continued to decline

Internalisation and related party trading increase further

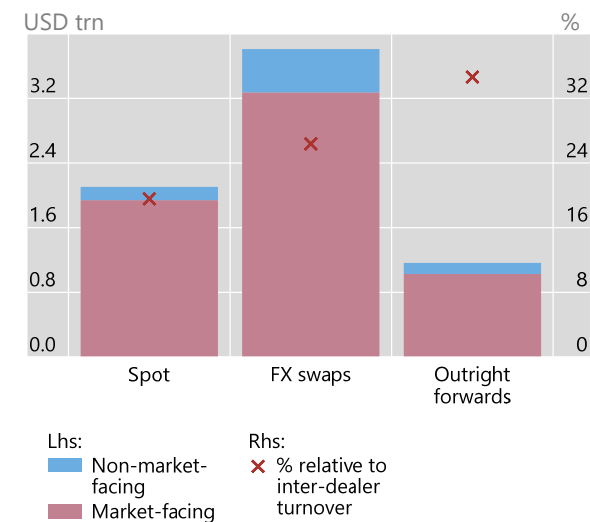
Internalisation ratios for spot in top trading centres



Related party trades



Non-market facing trades



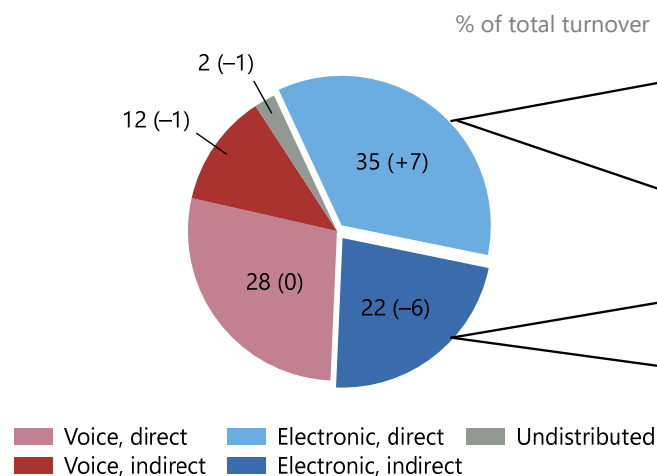
- Internalisation ratios have remained high, and increased further particularly in Asian centres
- Trading between different organisational units of a same dealer bank continues to rise
- Back-to-back and compression trades accounted for a significant share of turnover



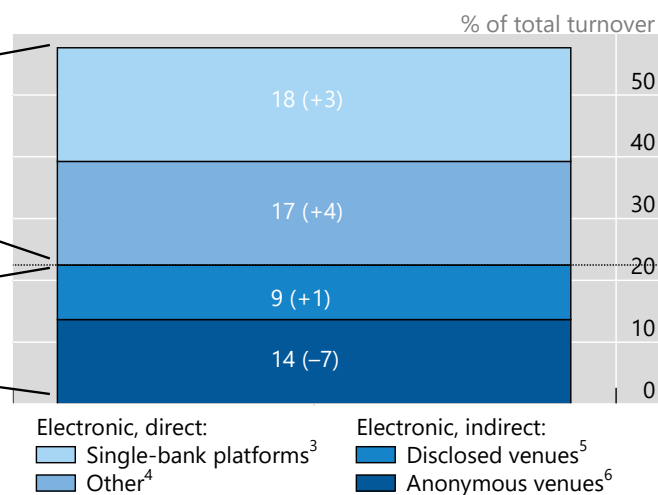
Trade execution

Execution methods in April 2022

Voice and electronic execution



Electronic execution methods

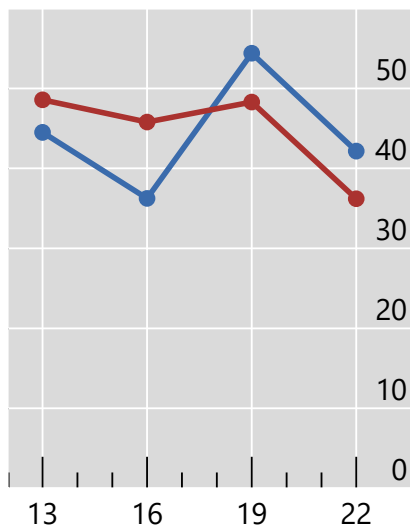


- Relative shares of voice vs electronic execution remained virtually unchanged
- A shift away from “indirect” to “direct” forms of trading in the electronic space
- Anonymous venues (ie CLOBs) lost about 7% in market share

Trade execution shifted towards "direct" forms everywhere

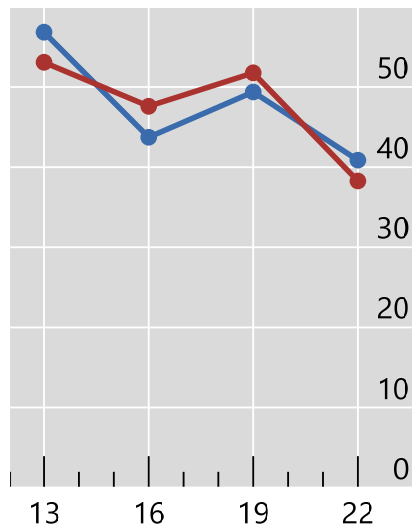
Total

% of "indirect" in electronic turnover



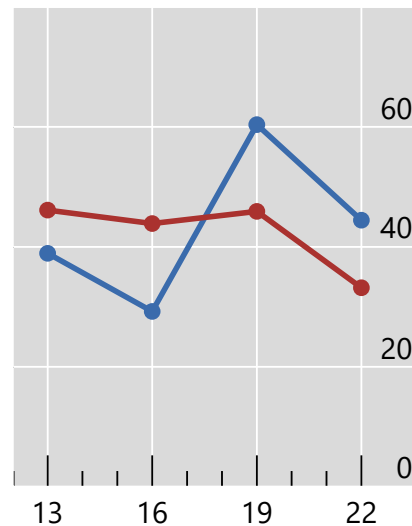
Spot

% of "indirect" in electronic turnover



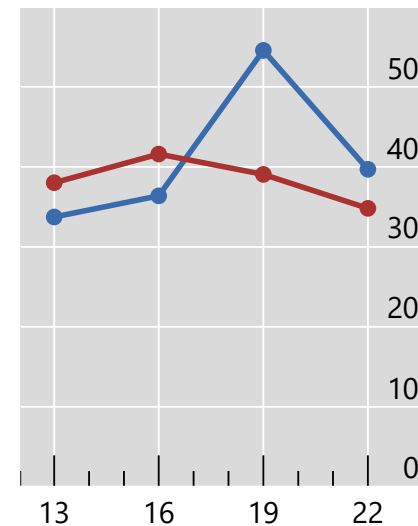
FX swaps

% of "indirect" in electronic turnover



Outright forwards

% of "indirect" in electronic turnover



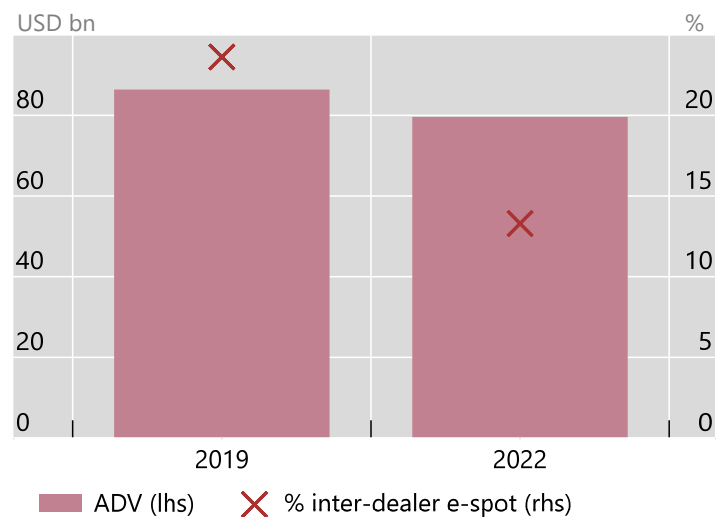
—●— Reporting dealers

—●— Other financial institutions

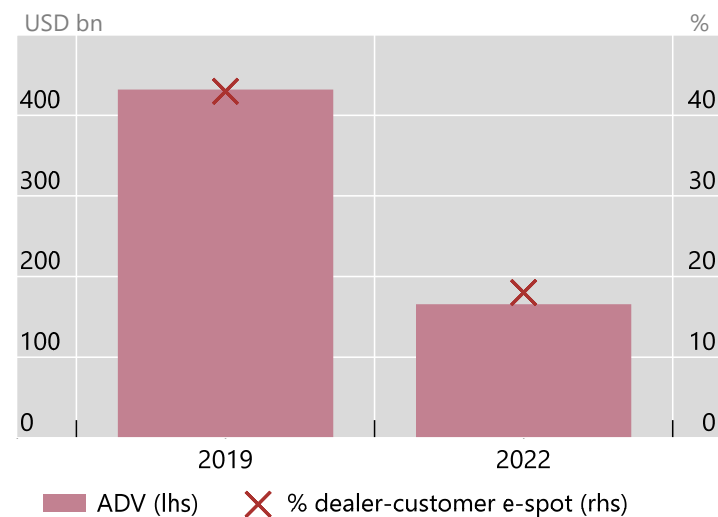
- "Indirect" execution methods lost market shares in all major instrument categories
- Innovations in direct e-trading space and bespoke liquidity provision
- Direct execution also possibly favored when volatility higher and liquidity more scarce?

Spot trading on CLOBs exhibited a broad-based decline

Inter-dealer



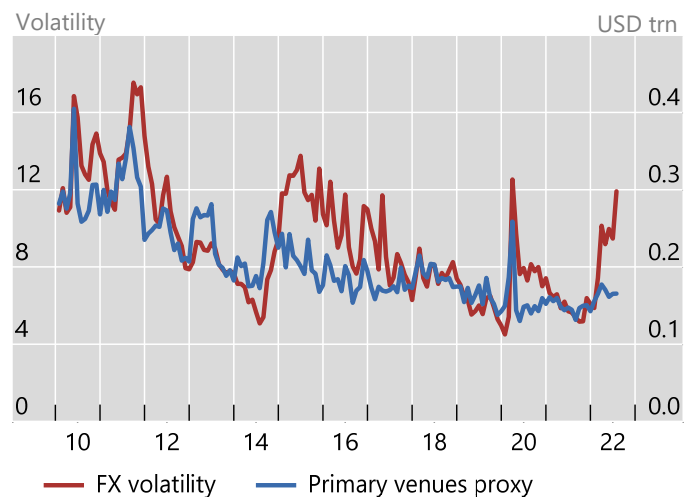
Dealer-customer (incl PTFs)



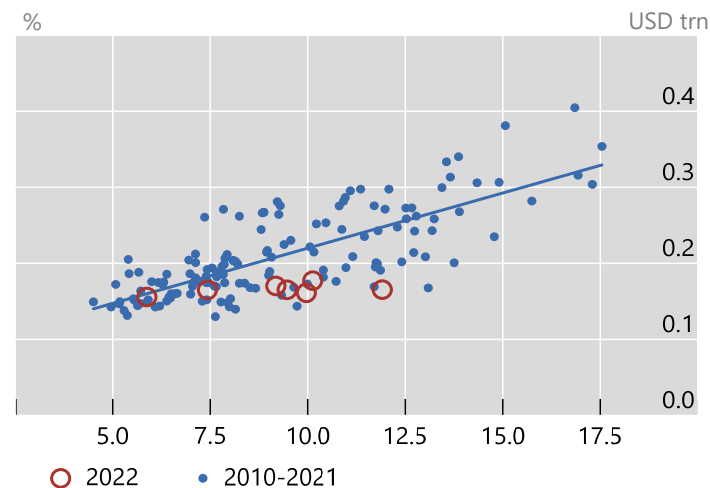
- Volume declined on anonymous venues in both inter-dealer and dealer-customer markets
 - Inter-dealer: mainly EBS and Refinitiv Matching (primary CLOBs)
 - Dealer-customer: includes PTFs trading on primary CLOBs
 - Dealer-customer: includes secondary CLOBs, eg LMAX, Currenex, 360T, Euronext FX/Fastmatch, etc

Volumes on primary venues did not rise with volatility

Trading on primary venues vs FX volatility



Relationship in 2022 compared to the long-run

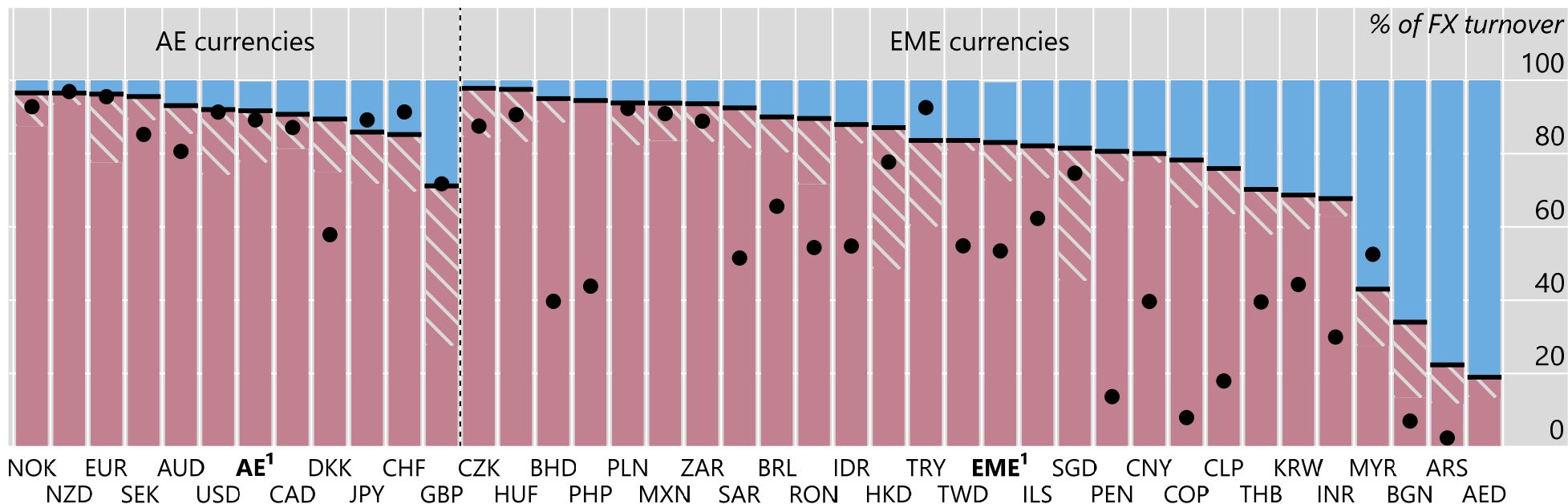


- Possible reasons why EBS & Refinitiv spot volumes did not rise with higher volatility
 - FX turnover in April 2022 concentrated in derivatives
 - More direct e-trading, even among dealers
 - Lower turnover with PTFs



EME currency trading

FX trading in EME currencies is increasingly internationalised



April 2022: — International

Of which: offshore

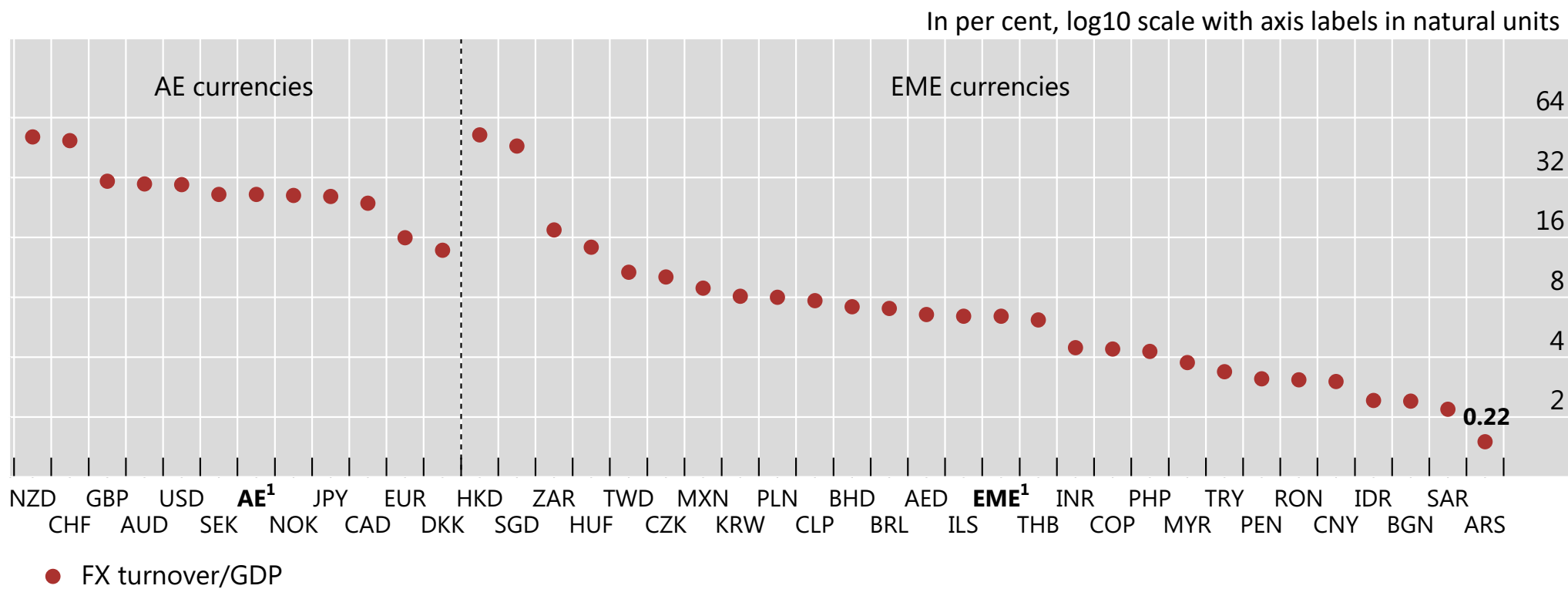
Of which: cross-border with residents

Onshore between residents

April 2007: ● International

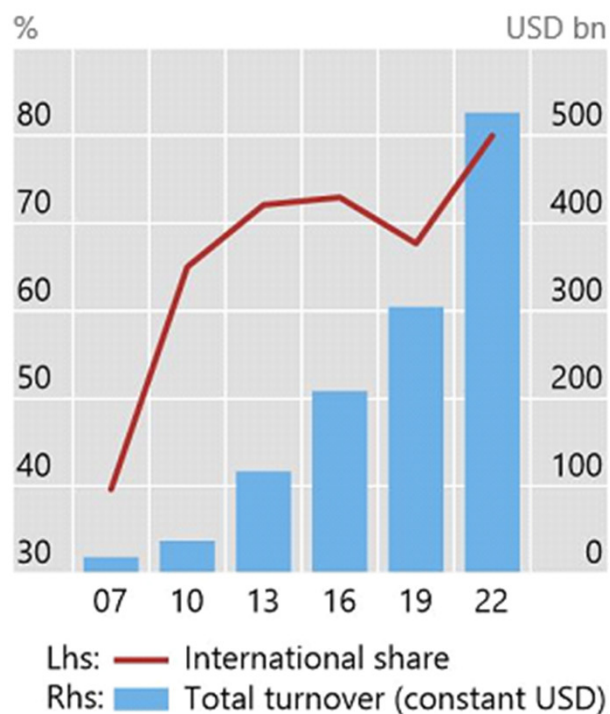
¹ Median of AE/EME currencies

For most EME currencies FX trading is low compared to GDP

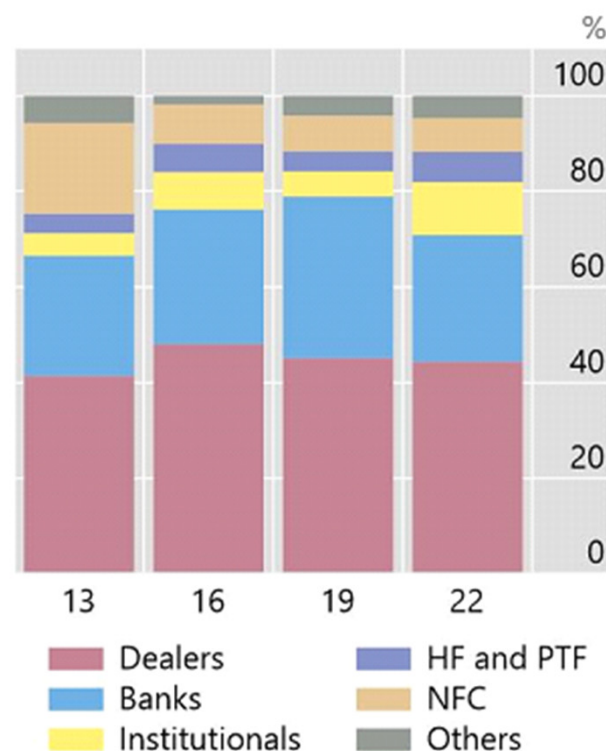


Rising volume and diversity of trading in Chinese renminbi

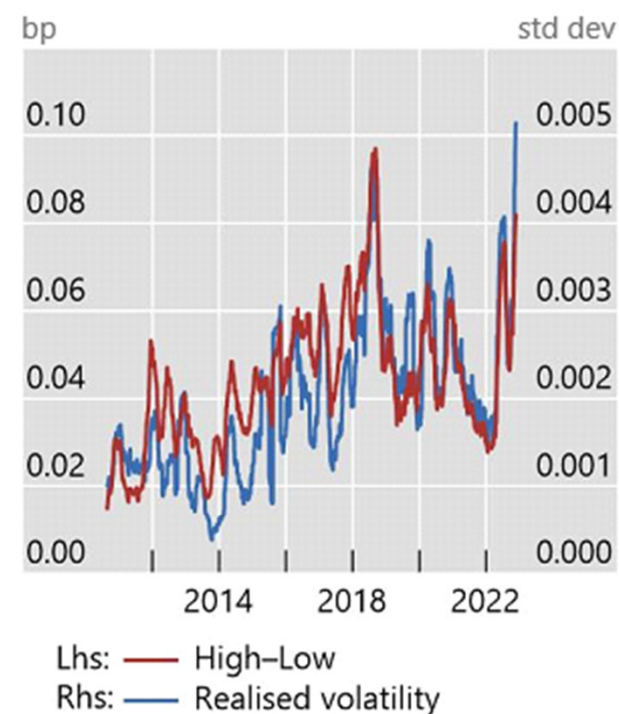
A. International trading surged in 2022¹



B. More trading with institutional investors



C. Intraday fluctuations in CNYUSD rose in early 2022²



HF = hedge funds; NFC = non-financial corporations; PTF = proprietary trading firms.

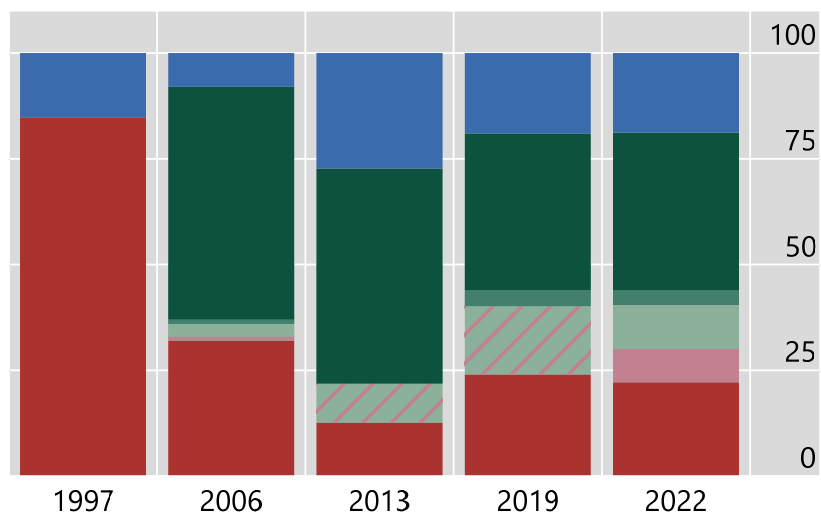


FX settlement risk

Settlement of foreign exchange turnover

As a percentage of deliverable turnover

By settlement method over time



Settlement:

Without risk mitigation:

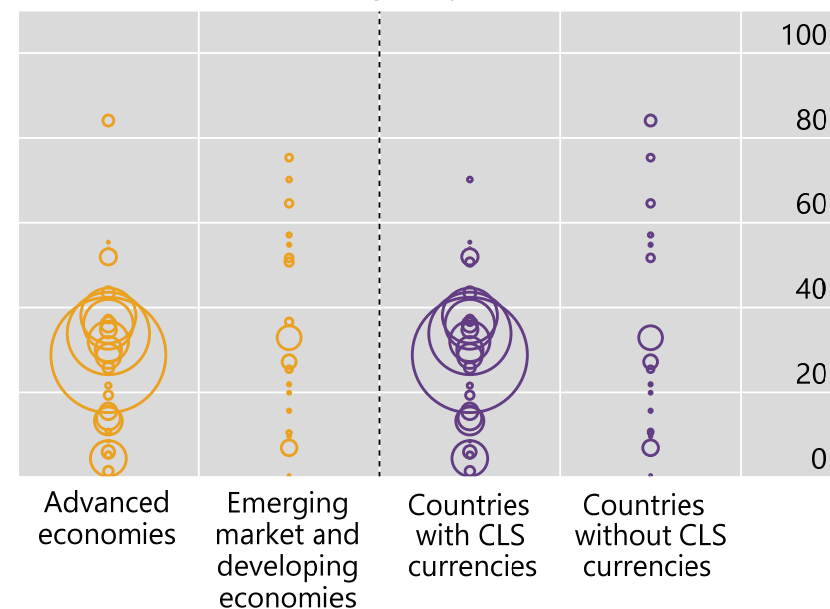
- via on-us without loss protection
- via other non-PvP arrangements
- via on-us lacking information on loss protection

With risk mitigation:

- via CLS (PvP)
- via other PvP arrangements
- via on-us with loss protection

Pre-settlement netting

Settlement without risk mitigation by country classification and CLS eligibility in 2022



Settlement of foreign exchange turnover

In billions of US dollars

	All counterparties		Reporting Dealers		Other financial institutions		Non-financial customers	
Deliverable turnover	6,960	100%	3,248	100%	3,320	100%	391	100%
Pre-settlement netting	1,334	19%	590	18%	662	20%	82	21%
Turnover settled	5,626	81%	2,658	82%	2,658	80%	309	79%
with risk mitigation	3,473	50%	1,783	55%	1,541	46%	149	38%
via CLS (PvP)	2,500	36%	1,333	41%	1,107	33%	59	15%
via other PvP arrangements	257	4%	101	3%	127	4%	30	8%
via on-us with loss protection	716	10%	349	11%	307	9%	60	15%
without risk mitigation	2,153	31%	876	27%	1,117	34%	161	41%
via on-us without loss protection	547	8%	259	8%	228	7%	59	15%
via other non-PvP arrangements	1,606	23%	616	19%	889	27%	101	26%



Summary and discussion

Summary

- New benchmark of \$7.5 trillion per day in April 2022
- Increase in turnover driven by inter-dealer trading and trading in short maturity swaps
- Dealer-customer trading stagnated
- Trading moved further away from multilateral platforms towards disclosed and direct means
- Less “visible” trading due to more direct e-trading (even among dealers), trade internalisation, and related party trades

Issues for discussion

- How do conjunctural and structural observations square with your observations? What was the most surprising result of the Triennial for you? Are there any important structural changes not captured in the survey?
- Which factors underpin the different evolution of bank and non-bank liquidity providers? How will they likely evolve?
- What are the causes and implications of the declining volumes on CLOBs? Is the trend likely to persist?
- Why does FX settlement risk remain high? What are possible ways to further mitigate it?



Annex

The international role of the US dollar

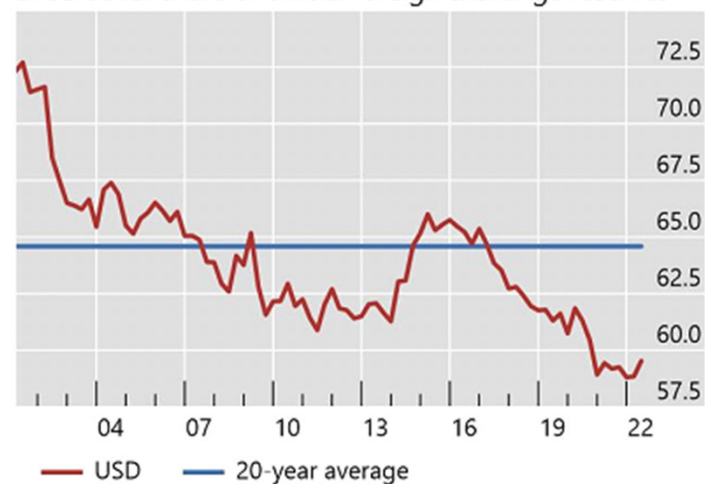
In per cent

Graph A2

A. International role of the US dollar



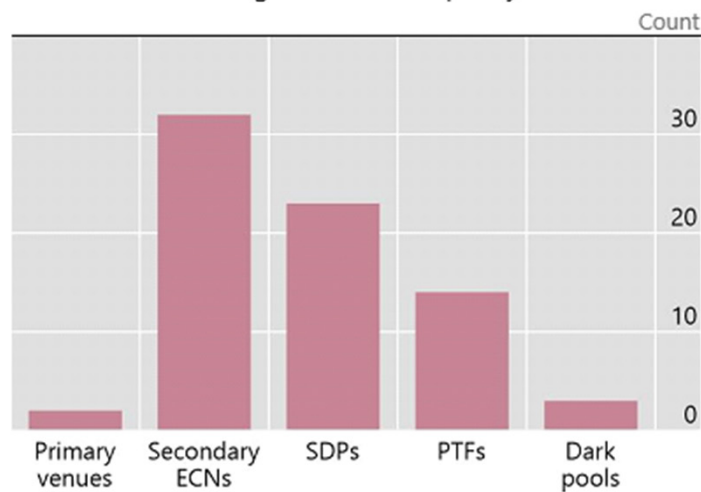
B. US dollar share of official foreign exchange reserves



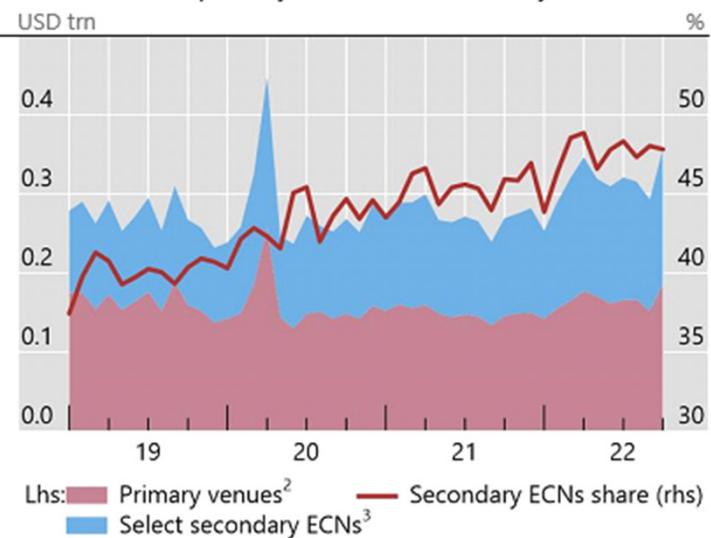
With further FX market fragmentation, volumes across platforms diverge

Graph B1

A. Number of trading venues and liquidity sources



B. Volumes on primary and select secondary venues



Global FX market turnover in April 2022, by counterparty and instruments

Net-net basis, daily averaged in April

Table 1

	Turnover in 2022 (\$bn)	2019–22 change (\$bn)	2019–22 change (%)	Contribution to overall growth
Global FX market (OTC)	7,506	925	14%	100%
By counterparty				
Reporting dealers	3,460	941	37%	102%
Other financial institutions	3,622	30	1%	3%
Of which:				
Non-reporting banks	1,618	8	1%	1%
Institutional investors	846	70	9%	8%
Hedge funds and PTFs	514	–79	–13%	–9%
Non-financial customers	425	–46	–10%	–5%
Of which: prime-brokered	1,317	–172	–12%	–19%
By instrument				
Spot	2,104	125	6%	14%
FX swaps	3,810	612	19%	66%
Outright forwards	1,163	166	17%	18%
Options	304	6	2%	1%
Currency swaps	124	15	14%	2%
<i>Memo: exchange-traded instruments</i>				
<i>Futures</i>	<i>136</i>	<i>23</i>	<i>21%</i>	
<i>Options</i>	<i>18</i>	<i>4</i>	<i>27%</i>	