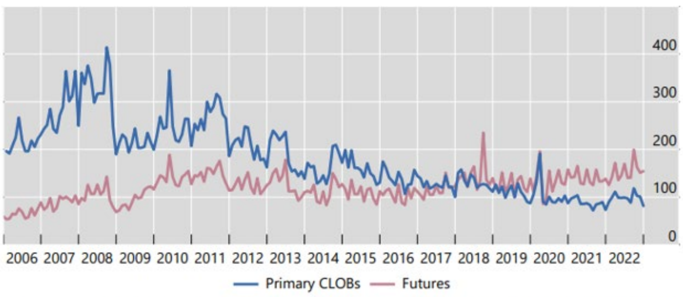
eFX 'Explainers' Alternative Venues

As part of our 'Explainers' series, we shed light on how the electronic FX market operates. This issue looks at the Alternative Venues – Futures Exchanges, Dark Pools and Pair Trading. These venues offer additional liquidity for FX Spot, besides the Primary and Secondary Venues discussed in previous articles.

Futures Exchanges

- Large Futures Exchanges include:
  - Chicago Mercantile Exchange (CME): mainly G7 and MXN
  - Singapore Exchange (SGX): Asia EM, JPY and AUD
  - Brazil Stock Exchange (B3): Latam and G10
- Futures Exchanges are growing in importance, with volumes traded on Futures Exchanges exceeding those traded on Primary Venues since 2018 (now averaging around $150bn average daily volume compared to less than $100bn on the Primary Venues)

Figure 4: Primary CLOBs and currency futures exchanges, daily volumes $ billions



Sources: EBS; Refinitiv; BIS Exchange Traded Derivatives Statistics. January 2006 to December 2022.

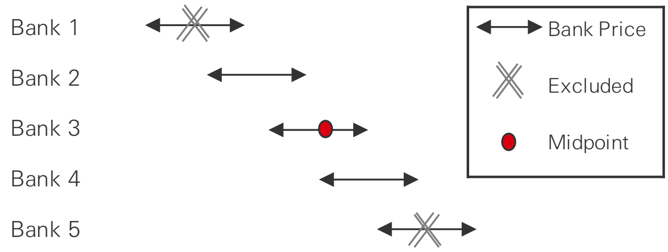
How do Futures work for FX Spot?

- Futures contracts traded on exchanges have standard maturity dates (International Money Market – IMM dates). These are the third Wednesday of March, June, September and December
- From the IMM futures price, a basis (swap points) is applied to obtain synthetic spot pricing. This basis depends on the interest rates of the two underlying currencies and time to maturity of each contract. As time to maturity decreases, the basis converges to zero. When accessing liquidity on CME, HSBC eFX desk typically:
  - Executes a Futures trade (IMM1 on CME)
  - Executes FX Cash Swap (spot to IMM1 date with FX Swap Desk)
  - Attains Synthetic Spot (Future – Swap)
- Spot traders can hedge their long/short spot position by selling/buying futures, leaving them with basis risk (a.k.a. EFP – Exchange of Futures for Physical) – the risk that the difference between spot and futures moves significantly
- EFP risk can either be hedged directly with Brokers (cheaper although not available for all markets), or using a **dual strategy** to passively trade out of the EFP risk e.g.:
  - A trader initially acquires long spot risk and hedges spot risk by selling futures (resulting in short EFP)
  - Over time, in order to clear the EFP risk, trader can passively work to buy futures while selling the spot resulting from the futures risk
  - This process repeats dynamically depending on whether the spot risk or EFP risk takes priority

Dark Pools

- Dark Pools have hidden order books. There are no published bids/offers and any interest to buy or sell is matched at a venue-derived mid
- The major FX Dark Pools are BGC MidFX and FX Spot Stream (FSS) MidMatch, created to allow bank participants to match offsetting interests, with reduced information leakage and market impact
- Even though there are no visible prices, the venues still collect bid/offer from participants, apply a **proprietary filtering** logic to remove outliers and generate a continuous mid that is applied to matching trades

Mid Price Filtering



- Dark Pools usually monitor the life-cycle of every trade executed on the platform and make **adjustments** to future prices among counterparties. For example, if Bank A buys from Bank B and the market moves down, Bank A is considered worse off. This is then recorded as a loss to A (owed by B). Thus, an adjustment is applied on future trade prices between A and B, in favour of A so that A is **rebated** to net-flat over time
- The adjustments are based on historical volume-weighted average price moves at various post-trade time points (15s, 30s, 45s and 60s etc.). For example, if HSBC traded against Bank A and the USD price move to HSBC after each trade are as below, HSBC will be rebated $1.25/million on each trade facing Bank A in the future

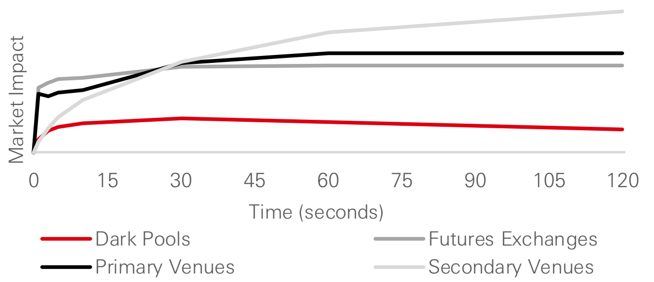
Bank	Trade Size ($)	15s	30s	45s	60s	Average Impact
HSBC	1,000,000	1	2	3	4	2.5
HSBC	3,000,000	-1	-2	-3	-4	-2.5

$$\text{Adjustment} = \frac{1{,}000{,}000 * 2.5 + 3{,}000{,}000 * (-2.5)}{1{,}000{,}000 + 3{,}000{,}000} = -1.25$$

- Given the unique benefits of Dark Pools and their increasing (yet niche) popularity, many Secondary Venues have started to offer similar functionality. However, Secondary Venues have wider participation (not just banks) and do not enforce rebate adjustments.

- With genuine offsetting flows attracted to Dark Pools and the mechanism of rebate (impact equalisation), they generally offer lower relative **market impact** (higher market impact → greater execution slippage). For example, on average, the post 30 second market impact of trades executed by HSBC eFX desk on Primary Venues is roughly 3 times that of Dark Pools

HSBC eFX Desk – Venue Market Impact



- Despite the benefits of lower market impact, using Dark Pools has some limitations:
  - High likelihood of similar interests among participants in trending markets, leading to lower chance of matching.
  - Venue generated Mid can diverge from lit markets for illiquid EM currency pairs
  - Potential misuse of the venue, e.g. a participant sends orders just to gauge interest and then deals on lit markets based on their findings

Pair Trading

- Direct peer-to-peer trading where two counterparties establish a bilateral relationship to leverage each other's strengths. The counterparties may already have access to liquidity on major interbank venues but will still benefit from trading directly with each other because of specialised expertise or local franchise e.g.:
  - A Tier 1 bank takes liquidity in Scandinavian currency pairs from a local regional bank because of the local bank's unique liquidity and available interest from local clients
  - A buy-side market maker, who usually makes anonymously on Primary or Secondary Venues but does not have a
  - broad client franchise, can provide liquidity to a major bank that has a relationship with disclosed clients (e.g. Corporates, Asset Managers, etc). The buy-side entity can obtain more flow via the bank while the bank benefits from showing tighter pricing to its clients by accessing this 'support liquidity'
  - A futures market maker can leverage its expertise to provide spot liquidity to a bank. The market maker benefits from the bank's franchise flows while the bank attains additional spot liquidity without having to manage EFP risk as well as the cost of entry onboarding a futures venue

Venue Summary

	Primary Venues	Secondary Venues	Future Exchanges	Dark Pools	Pair Trading
Visibility	High	Medium	High	None	Low
Entry Requirement	High	Low	Medium	None	Low
Last Look Liquidity	X	Mostly Last Look	X	X	√
Curated Liquidity	X	√	X	√	√
Pricing Stability	High	Low	High	N/A	High
Market Impact	High	Medium	High	Low	Low

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