



Understanding market liquidity

Financial markets operate through various mechanisms accommodating several types of execution methods. Some markets prioritize full transparency, while others emphasize anonymity. Some are driven by high liquidity while others bribe with market coverage.

The Markets in Financial Instruments Directive II (MiFID II) in the European Union, and, the Dodd-Frank Act in the US, are targeting an enhanced market transparency after the threatening collapse of the financial market in 2010. By mandating detailed reporting and stricter trade execution requirements, MiFID II aims to improve data quality and to provide better visibility into market structures - enabling participants to better evaluate price discovery and make informed trading decisions. However, measures about market liquidity are little considered by the regulation. This article

names key liquidity categories for equity markets, identifies their participants, and evaluates whether transactions within these categories contribute to an improved price discovery.

Liquidity categories, their participants and their impact on price discovery

Let's consider the European equity markets. The following chart illustrates the reported share of equity transactions by liquidity category, based on the average daily traded volume of approximately 105 billion euros in February 2025. However, these reported figures may be inflated due to double counting or other data quality issues. The company big xyt, known for high quality data analytics, offers an adjusted figure of 93 billion euros average daily traded volume

evaluating the OTC/SI data differently – explained in the next section.

We see that lit auctions are gaining market share in the past. Lit limit order book trading has been declining while Dark pools have remained relatively stable during the last

couple of years. However, OTC and Off-Book volumes appear to be growing, suggesting that traditional trading venues may not be fully meeting the liquidity demands of market participants.

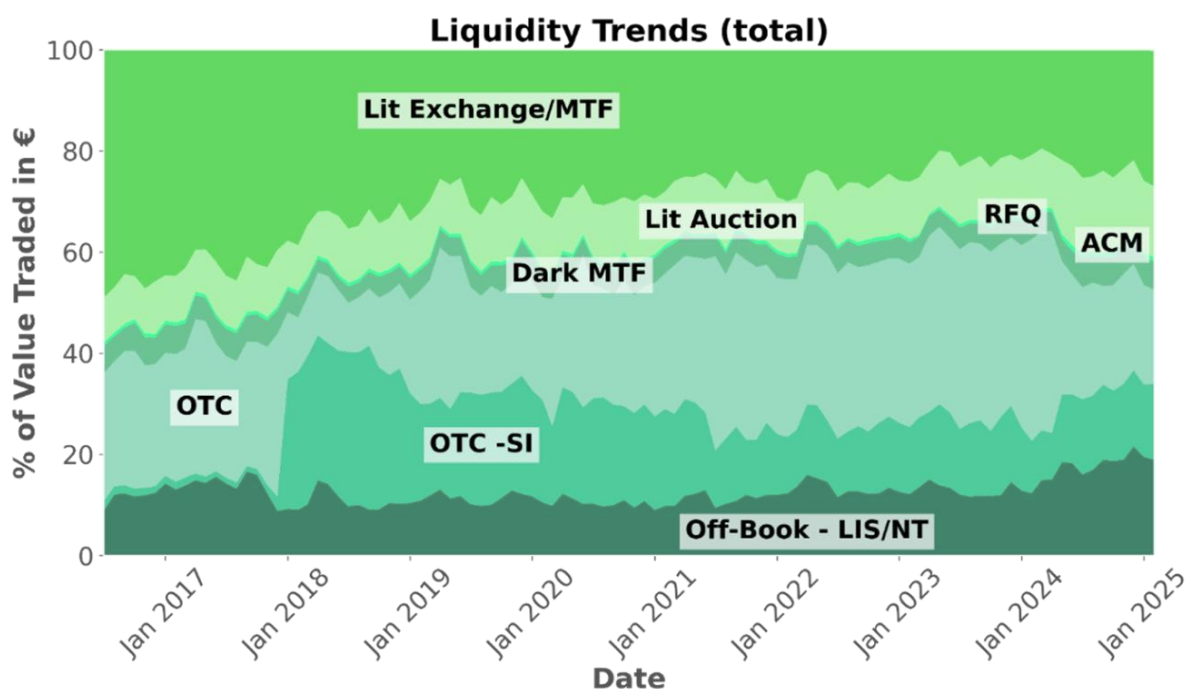


Figure 1: Liquidity Trends (total). The data presented in this figure is proprietary to big xyt. Any further use, reproduction, or distribution of this data requires explicit permission from the data provider.

Lit exchanges

A lit exchange/MTF (Multilateral Trading Facility) is a fully transparent trading platform where buy and sell orders are visible in a public order book. These markets offer the highest level of price discovery – buyers and sellers agreeing on the current value of a financial asset – as participants can see bids and offers in real-time. Key participants include retail brokers, institutional investors, high-frequency traders (HFTs), and market makers. However, executing large transactions in this market can be costly, as the liquidity premium is comparatively high for this type of deals. Especially institutional

investors often seek alternative venues to minimize total transaction costs for large transactions

Lit auctions

Lit auctions are scheduled trading events, such as opening and closing auctions, where asset prices are determined based on accumulated buy and sell offers collected over the time horizon since the last auction. The main effect compared to Lit exchanges is to reduce volatility, as deals are not executed immediately, and thereby establishing a fair market price at key moments in the trading session. The primary participants include institutional investors, retail brokers, and

arbitrageurs. Since auctions aggregate demand and supply, they play a critical role in price formation as most market participants consider closing auction prices to be reliable indicators of a fair market value.

The rising popularity of ETFs has increased liquidity needs for institutional investors, since there are particular rebalancing days of each ETF. Also, some institutional investors prefer participating in end-of-day auctions, as these prices are typically used for calculating the net asset value (NAV) in their performance reporting. As a result, a significant portion of institutional trading volume is executed during closing Lit auctions.

Dark pools / Dark MTFs

Dark pools/Dark MTFs are non-displayed order books where large trades, often executed at the mid-price, occur without pre-trade transparency. These markets allow institutions to execute large trades without causing price movements in lit markets. The primary participants include institutional investors, hedge funds, and liquidity providers. Since dark pools reference prices from lit markets rather than establishing new ones, their contribution to price discovery is limited. Their market share has remained relatively stable, emphasizing their role as a reliable source of liquidity for (large) trades. The double volume cap mechanism under MiFID II limits the maximum trading volume in dark pools and other non-transparent trading venues in the EU.

OTC markets

OTC trading involves the direct exchange of financial instruments between counterparties without using a centralized exchange. Common participants include corporations, hedge funds, and banks. Since OTC markets lack a centralized order book, price discovery

in these markets is generally weaker than in lit exchanges.

OTC systematic internalisers

OTC-SIs are investment firms or banks that execute client orders on their own account rather than routing them through an exchange. Participants include banks, broker-dealers, high-net-worth clients, and institutional investors. These firms often provide liquidity based on internal pricing models that reference exchange prices. As a result, their contribution to price discovery is minimal.

Off-book transactions

Off-book transactions occur outside exchanges and qualify as large-in-scale (LIS) or negotiated trades (NT), and thereby reduce market impact. Institutional investors, investment banks, and pension funds frequently engage in Off-Book trades to execute large transactions efficiently. Since these trades are privately negotiated, they do not always reflect real-time supply and demand, limiting their influence on price discovery. The high market share in Off-Book and OTC transactions suggests that broker-dealers and banks can offer highly competitive prices for large transactions. This suggests that exchanges and MTFs are struggling to satisfy the extraordinary liquidity demands of market participants.

Alternative closing mechanism and requests for quote mechanism

The market share of Alternative Closing Mechanism (ACM) and Request for Quote (RFQ) mechanism remain negligible and do not contribute to market liquidity.

Adjustments to OTC/SI volume data

To refine the analysis of OTC/SI trading volumes, big xyt has excluded transactions that do not contribute to price formation. This approach ensures that the reported volume data accurately reflects trades relevant to

price discovery. The excluded transactions consist of various categories that do not provide meaningful price signals.

This adjustment significantly alters the overall market picture: lit markets remain the primary driver of price discovery, with auctions playing an increasingly important role.

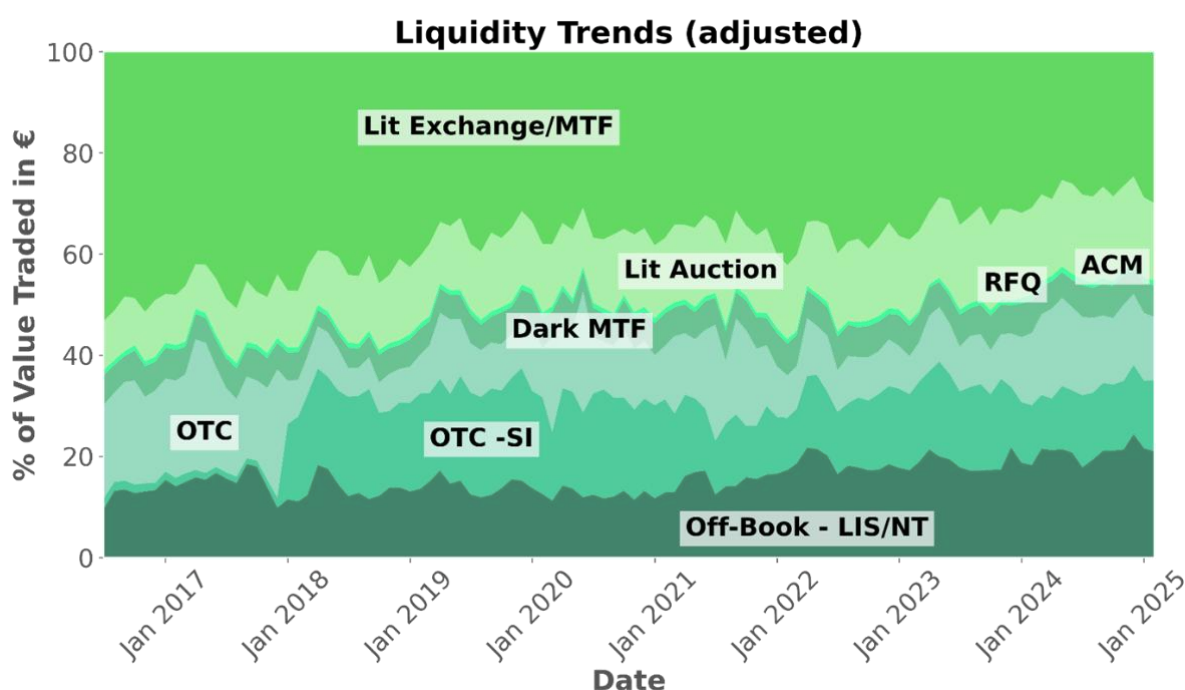


Figure 2: Liquidity Trends (adjusted). The data presented in this figure is proprietary to big xyt. Any further use, reproduction, or distribution of this data requires explicit permission from the data provider.

Conclusion

Financial markets operate with varying levels of transparency and execution methodologies, which directly influence their role in price discovery. Lit markets - including exchanges and auctions - serve as the primary contributors to price discovery, as they provide visible order flow and real-time pricing data. In contrast, dark pool, OTC trading, and systematic internalisers offer liquidity but contribute less to price

formation. By filtering out non-price-forming transactions, big xyt provides a more accurate representation of meaningful market activity, enhancing both price discovery and transaction cost analysis.

In the next article of this series, we will explore the dynamics of price discovery and the cost of liquidity in lit exchanges.

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