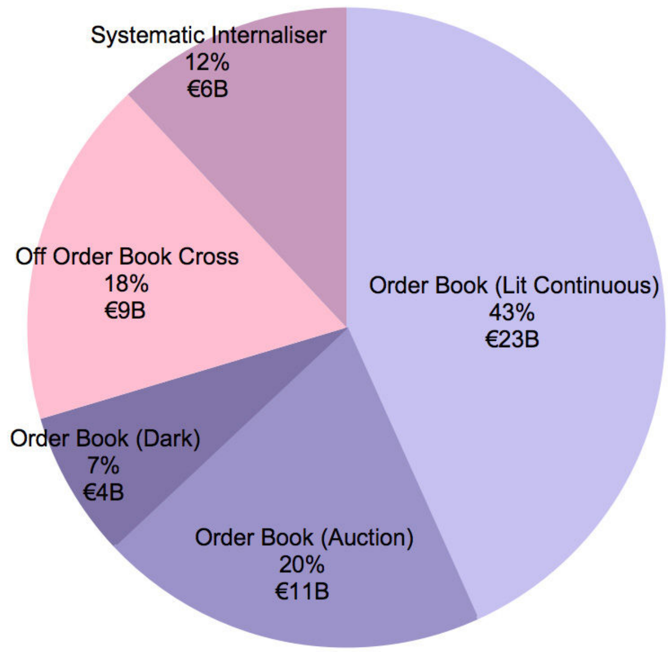
Microbites #3 - Dark Trading in Europe

The big xyt Microbites series is for those who are unfamiliar with the European market structure or need a refresher. In this third episode we look at dark trading in Europe and the unique rules that limit the activity.

We recommend that you read the **previous episodes** if you are unfamiliar with any of the terms used here.



Key Points

- Dark trading accounts for €4B per day in Europe out of a total of around €53B.
- Regulations forbid order matching systems that are neither exchanges or MTFs.
- Strict limits to dark trading are imposed under the 'dark caps' mechanism.
- Venue operators must match all trades at the MID of the lit market. Full spread capture is not permitted.
- New MiFID rules resulted in a decrease in dark trading from 12% to 8% of market share.
- There are eight main dark pool operators in Europe.

Market Fragmentation 2021

Liquidity Category
- Lit Continuous
- Lit Auction
- Dark
- Off-Book Cross
- SI

Most dark trading is conducted through Multilateral Trading Facilities (see Episode 2 for a description of these), although the Swiss Exchange and some of the Scandinavian exchanges also offer dark trading services. The London Stock Exchange offers dark trading through its subsidiary company Turquoise which is an MTF. All told, there are eight substantial dark trading venues in Europe and we will look at those in more detail later on.

The MiFID Rules

MiFID significantly reduced the amount of dark trading in Europe by as much as a third, in an attempt to improve price formation and market transparency. Before the regulation came into force brokers were running their own dark venues (known as 'Broker Crossing Networks') and reporting trades as OTC. MiFID required brokers to register their automated matching systems as MTFs and conform to much tighter rules.

Only a handful of brokers took this step, with most opting instead to provide electronic Systematic Internalisation (SI) platforms with no client order matching facilities. SIs must display their prices to the market and are therefore not dark venues. (Please see Episode 1 for a description of Systematic Internalisers).

'Double Volume Caps' for Dark Trading

The value of shares traded in European dark venues as a proportion of overall lit and dark trading is restricted by two upper limits referred to as the dark caps. The first imposes a ceiling of 4% on the value of shares traded in any single dark venue, and the second imposes a ceiling of 8% on the value of shares traded in all dark venues. If the 4% limit is breached on any individual venue, that venue must suspend dark trading for a period of six months. If the 8% limit is breached overall, all venues must suspend dark trading for the same period. The denominator used for the calculation is the value of all trade reports, regardless of how the trades were conducted (both electronic and manual).

The DVC mechanism works at the level of individual shares, so at no time does dark trading shut down altogether. Every month, the regulators publish a list of shares which have breached the thresholds (calculated over a period of the prior 12 months), and trading venues must stop offering dark trading services in these names a few days later. When the dark caps were first introduced three months after MiFID began, the level of dark trading in Europe plunged to around 4% of overall market share. Owing to the rolling nature of the calculations, the level of dark trading gradually regained the lost market share and is now at around 8% of all types of trading.

Brexit Impact

Interestingly we see that dark trading market share in the region has increased from around 7% to 8.2% ADV from 2020 to 2021, and in some of the mid cap names by much more. In our forthcoming Q1 2021 European Equities Microstructure Survey we will be looking at that in detail so please watch out for that."
"Since this announcement, dark market share in the region has increased from around 7% to 7.8% ADV, and to over 10% in UK shares. We review this change in our recent Q4 2021 European Market Microstructure Survey.

Large in Scale Orders

There is an exception made to dark trading caps for so-called 'Large in Scale' orders. If an order is above a certain size threshold it may be processed in a dark venue even if dark trading in the shares has been suspended. The threshold varies according to the average daily value of trading in each share, but as an illustration for most large cap names, that threshold is €1 million. Large in Scale orders account for around one third of all dark trading in Europe.

Execution Price Restricted to MID

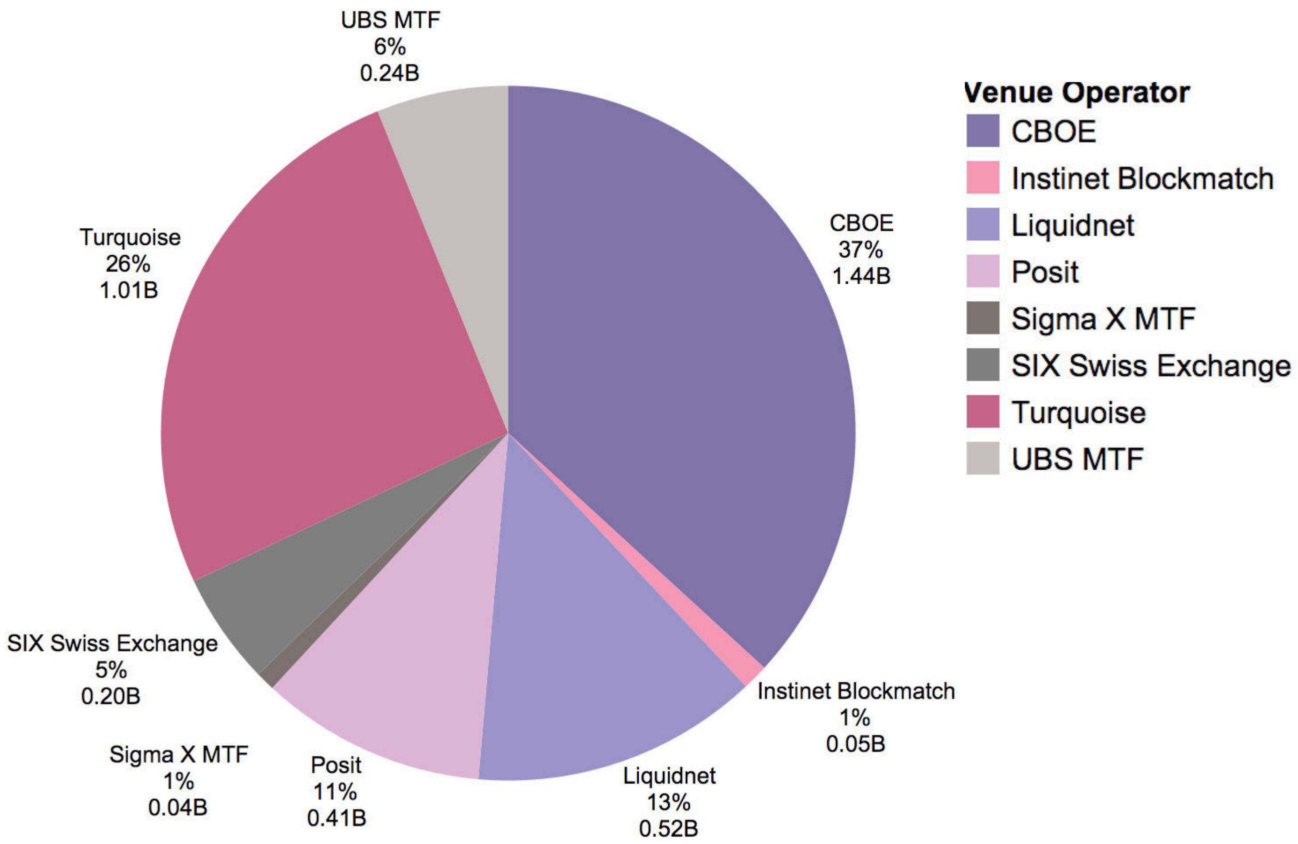
A second major piece of regulation is that all trades in a dark pool must be executed at the MID price of the corresponding lit market with the greatest liquidity and this also applies to Large In Scale trades. Prior to the rule, dark pools could offer a variety of execution prices anywhere at or within the spread and could choose the make-up of their so-called 'reference price' from a combination of various lit order books.

The more restrictive reference price also had an impact on the reduction of dark trading by removing the possibility of full spread capture, an important incentive in dark pool liquidity provision.

Dark Pool Operators and Market Share

The chart below shows the top eight providers of dark trading venues for Q1 2021 (those with more than 0.5% market share). In practice this picture changes only during key events. For example, the end of regulatory equivalence between the EU and Switzerland in 2019 saw the SIX dark pool grow considerably.

Dark Trading Market Share and ADV



Apart from dark venues, a substantial proportion of daily volumes are traded in intra-day randomised auctions known as Frequent Batch Auctions or Periodic Auctions. As they publish indicative volumes and prices they are considered to be lit venues, and are not subject to the same rules as dark venues. They are useful alternatives to dark pools and continuous lit books and we will cover them in the next episode of Microbites on European Auctions.

In the remainder of this article, we will go into the main mechanisms in European dark trading. Please read on only if you want to get into those details.

Firm Orders

Participants are able to place orders into the venue with or without a limit price and they will execute as soon as they become marketable. Remember that they can only execute at the mid price of the corresponding lit venue with the greatest liquidity.

Minimum Acceptable Quantity

Dark order types can normally be entered with Minimum Acceptable Quantity (MAQ) thresholds which guarantee that the order will not be filled for a share quantity below that specified by the trader. This is a protection against matching against counterparties who are 'fishing'.

Conditional Orders

Many dark venues offer indicative order types which a participant can enter into the book and wait for a match to be found (of course the price and size is not displayed to the market). If a contra order is found the participant will receive a request from the venue to confirm the order. The participant must respond with a yes or no in a very short and predetermined space of time. If the contra orders are both confirmed, the venue executes the trade at the prevailing lit market MID price. These conditional order types are only available for large orders with a minimum value starting at around €1M - a requirement which is set by the venues rather than by regulation.

Conditional Order types are very useful because they allow you to be present in several dark venues at the same time to take advantage of incoming liquidity without the danger of being overfilled. If you are notified of a match in one venue, you can quickly cancel the orders in other venues before confirming your conditional order. However the catch is that the venues impose very strict rules which in summary mean if the rate at which you confirm your orders drops below a threshold, or if your firm up is too slow (normally around 100ms), you can be suspended from the venue.

Conditional venues are currently offered by Cboe, Instinet, ITG Posit, Liquidnet and LSE's Turquoise.

About big xyt

big xyt provides independent smart data and analytics solutions to the global trading and investment community, enabling firms to process and normalize large data sets on demand and in real time, in order to analyze execution performance, comply with regulatory standards, and reduce the complexity and costs of technology and operational requirements.

Our clients include major global investment banks, buy-side firms (asset managers, hedge funds, pensions, indexers), leading exchanges, trading venues, and regulatory bodies.

Navigating fragmented markets remains a challenge for participants needing easily digestible information on trading analysis. The big xyt analytics platform responds to these market challenges, and provides clients access to transparent, accurate and normalized data.

big xyt has created a global ecosystem for tick data analytics covering more than 120 trading venues, across Equities, ETFs, Futures, FX and Options. Our unique technology normalizes trade conditions of venues allowing consistent aggregations of trading volumes, comprehensive analysis, and delivery of results in a flexible and customizable format.

big xyt's innovative analytics solutions are relevant for a broad range of use cases including strategy development, performance trends and analysis, back testing, quantitative research, and regulatory changes. The platform delivers information through a convenient and interactive user interface, and can be easily connected to our cloud-based platform via APIs.

big xyt is wholly owned by its founders and employees, which means there is no conflict of interest when evaluating your execution needs or analyzing broker performance.

About the Author

Richard Hills is Head of Client Engagement at big xyt. Richard has over 30 years' experience in capital markets, and before joining big xyt, he established and ran the electronic trading business at a major European investment bank before becoming managing director of the global equities execution team.

Richard is a market leader in market microstructure and is the author of big xyt's European Market Microstructure Survey, which is released at the end of each quarter.

For more information visit https://big-xyt.com or email sales@big-xyt.com.