



EUROPEAN EQUITIES – MARKET MICROSTRUCTURE SURVEY

Survey of Volumes and Market Share
Q1 - 2020

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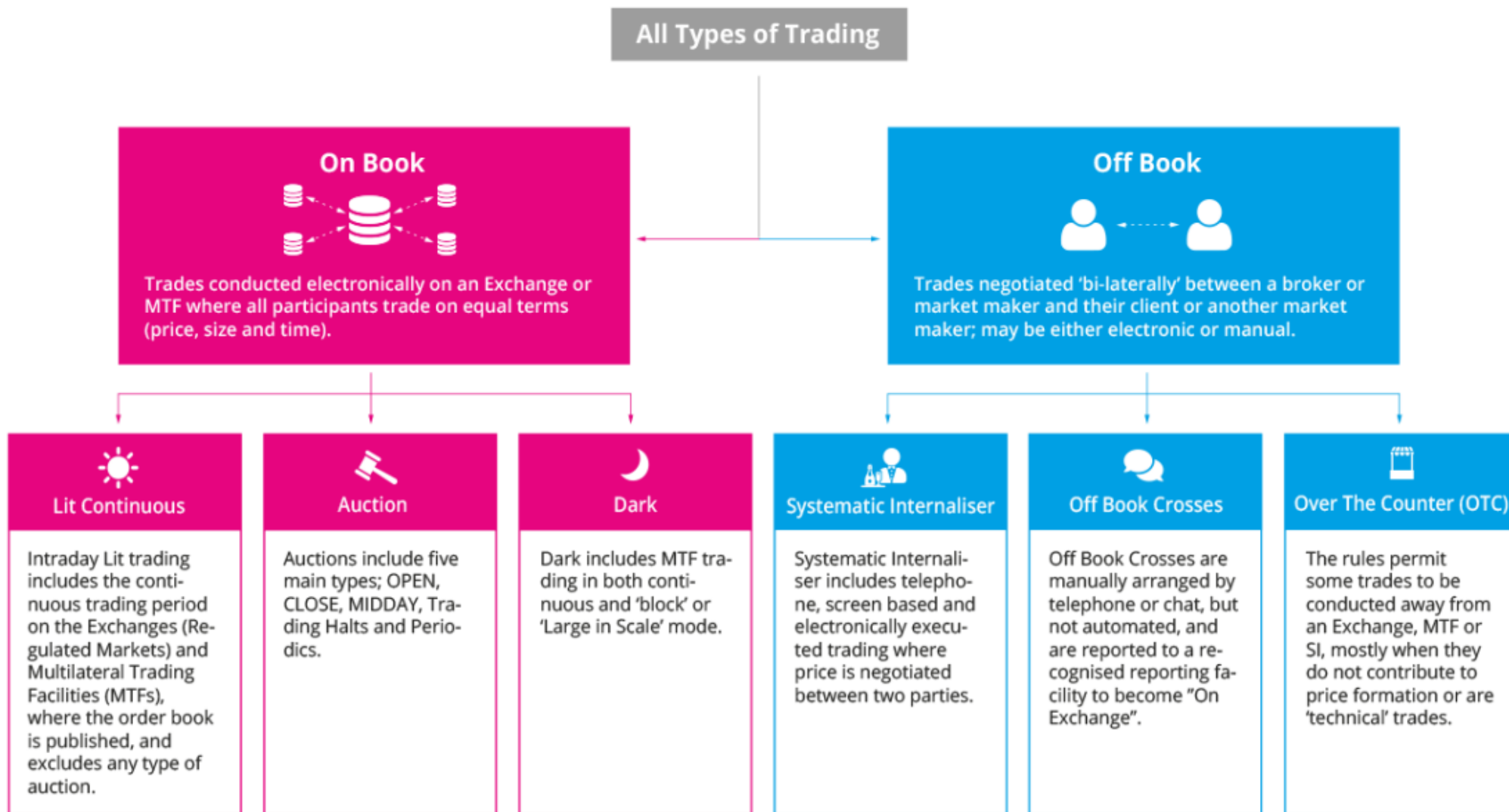
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INTRODUCTION



1. Building on extensive and detailed daily collection of trading tick data, this survey presents information on market volumes, describes how liquidity is distributed between different types of trading venue and how that is changing over time.
2. This information is essential context to investors and traders in defining and optimising their execution strategies. Together with other analytical tools, it helps to inform how best to capture liquidity and monitor trading performance. It is produced in conjunction with our Liquidity Cockpit application which can provide daily updates and more detailed analysis.
3. In this survey, we look at Q1 2020. We provide some high level observations of the trends and we welcome feedback and ideas for further areas of analysis.
4. The scope covered in this review is European Equities. We mostly limit the analysis to the Mifid2 era when changes to trade reporting led to more reliable off order book data. We include both on order book and off order book trading but we exclude those trades that we consider to fall outside of price formation processes.

MICROSTRUCTURE 101: Terms and classifications used in the review.



PREVIEW: European equity market volumes and proportions.

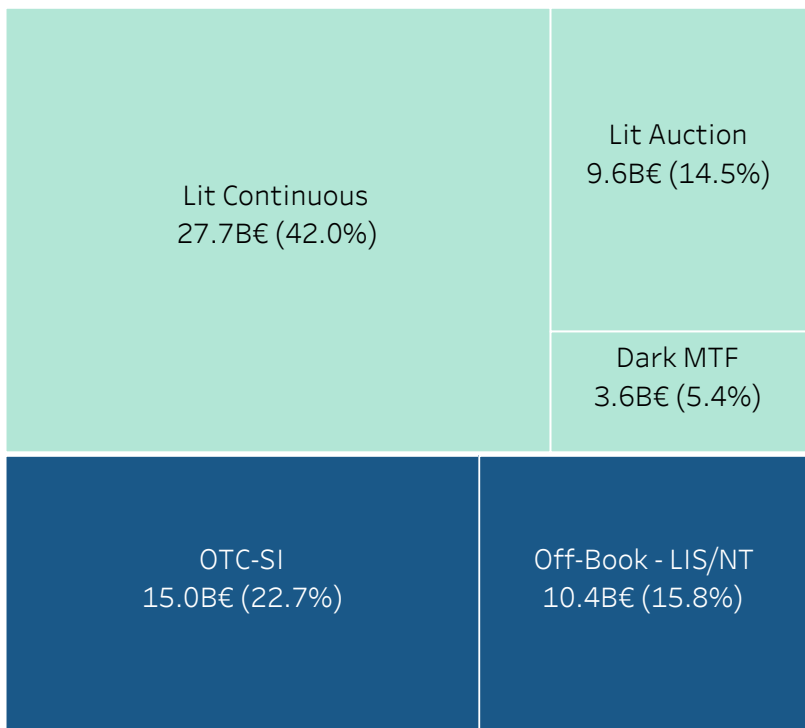


ON/OFF

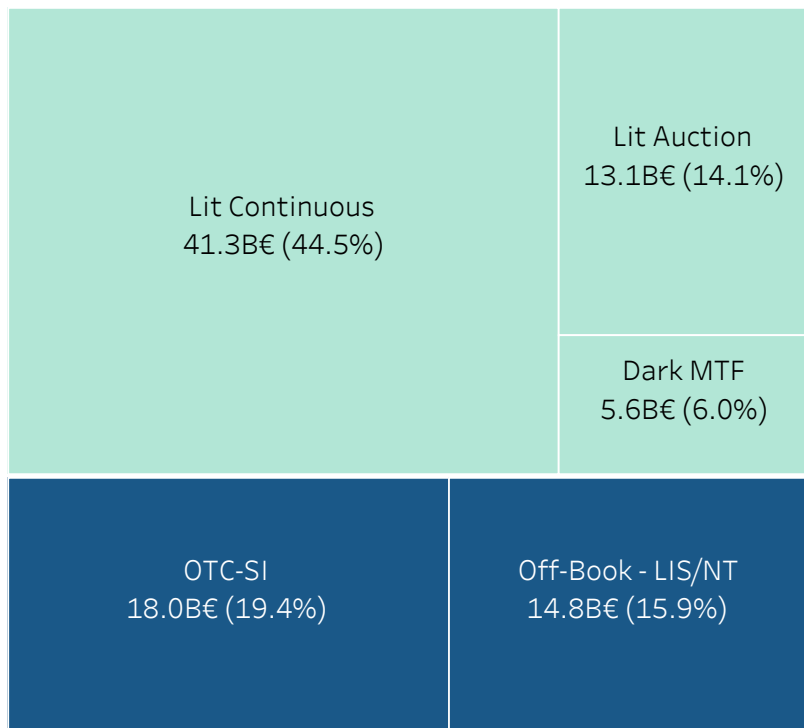
■ Off Book

■ On Book

Market Size ADVT 2019



Market Size ADVT Q1 2020





Q1 2020 HEADLINES

1. Lit Continuous trading finally reversed the two year decline in volumes, taking market share from Off Book trading.

Following a 20% reduction from 2018 to 2019, Lit Continuous venues increased average daily volumes by 49% from 28 B€ in 2019 to 41 B€ in Q1 2020 and by 106% to 57B€ in March, increasing market share for the first time in 2 years by 2.9% at the expense of Systematic Internaliser (SI) trading.

2. All other types of venues increased by similarly record amounts.

Compared with 2019 ADVT;

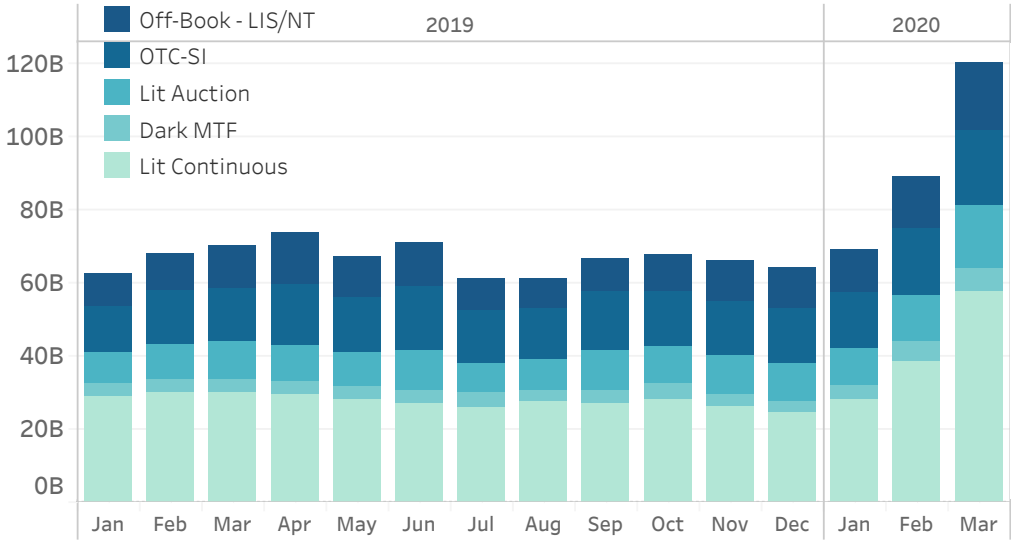
- Dark trading increased 56% from 3.6 B€ to 5.6 B€ and 6.9 B€ in March, and market share by 0.6%.

- Auction trading increased 37% from 9.6 B€ to 13.1 B€ and 16.8 B€ in March, but losing market share by 0.2% (and still 1% above the 2018 level).

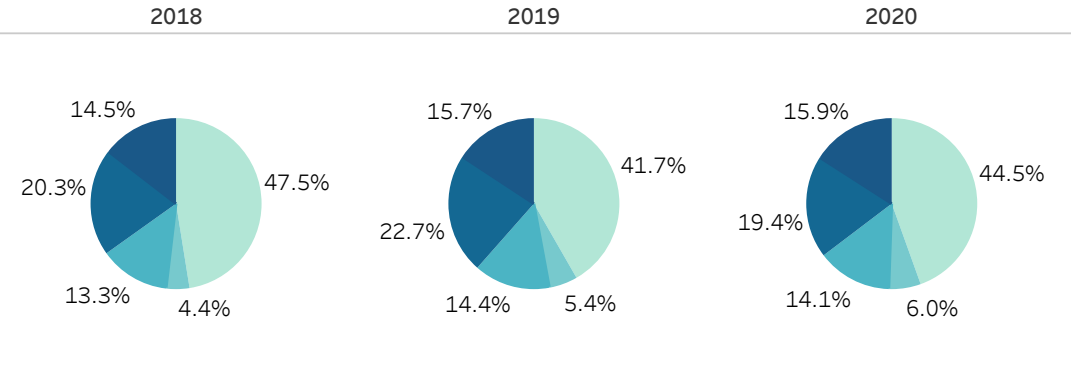
- SI trading increased 20% from 15 B€ to 18 B€ and 20.3 B€ in March, also losing market share, by 3.4%.

- Off Book/On Exchange negotiated trading increased 42% from 10.4 B€ to 14.8 B€ and 18.7 B€ in March, but losing market share by 3.4%.

ADVT in €



Market Share

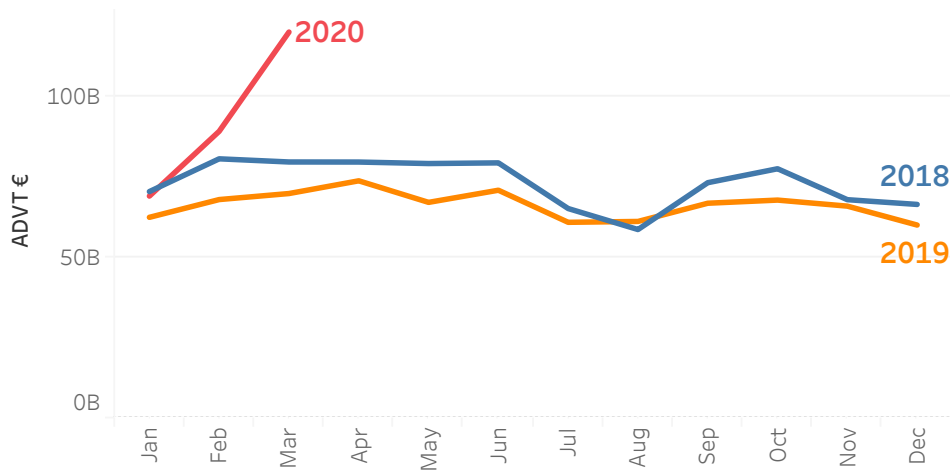


WHOLE MARKET VOLUMES:

Record volume in Q1 2020; ADV increased 41% v 2019 quarterly average.



Average Daily Volume Traded



Q1 2020 quarterly volumes were the highest in the Mifid2 era.

- 5.9 T€ v 4.5 T€ average over previous 8 quarters (+33%).
- 93 B€ ADVT v 66 B€ ADVT in 2019 (+41%)
- Beat previous best quarter in Q2 2018 (79B€) ADVT by 17%.

March monthly volumes were the highest in the Mifid2 era.

- 2.6 T€ v 1.4 T€ monthly average in 2019 (+86%)
- 120 B€ ADVT v 66 B€ ADVT in 2019.
- Beat previous biggest month in May 18 (1.8T€) by 44%.

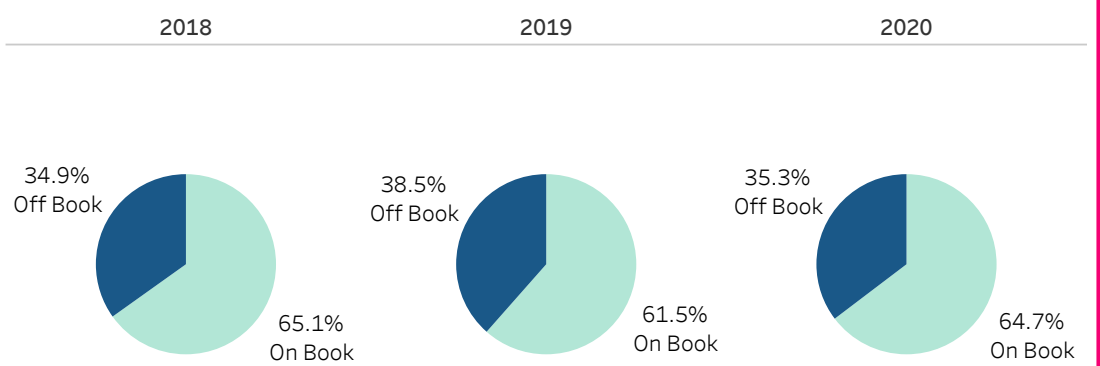
On Order book trading regained ground lost to Off Order book.

- On order book volumes 65% in Q1 2020 v 61.5% in 2019.
- March On Order Book volumes were 2.5x that of December (1781 B€ v 756 B€).

Market Overview

Quarter of Date	2018			2019			2020		
	Traded Value €	ADVT €	% Chg ADVT	Traded Value €	ADVT €	% Chg ADVT	Traded Value €	ADVT €	% Chg ADVT
Q1	4,829B	77B		4,193B	67B	-6%	5,937B	93B	44%
Q2	5,074B	79B	3%	4,430B	70B	6%			
Q3	4,240B	65B	-18%	4,143B	63B	-11%			
Q4	4,534B	71B	9%	4,258B	65B	3%			
Average	4,669B	73B		4,256B	66B	-10%	5,937B	93B	41%

Market Share On/Off Exchange



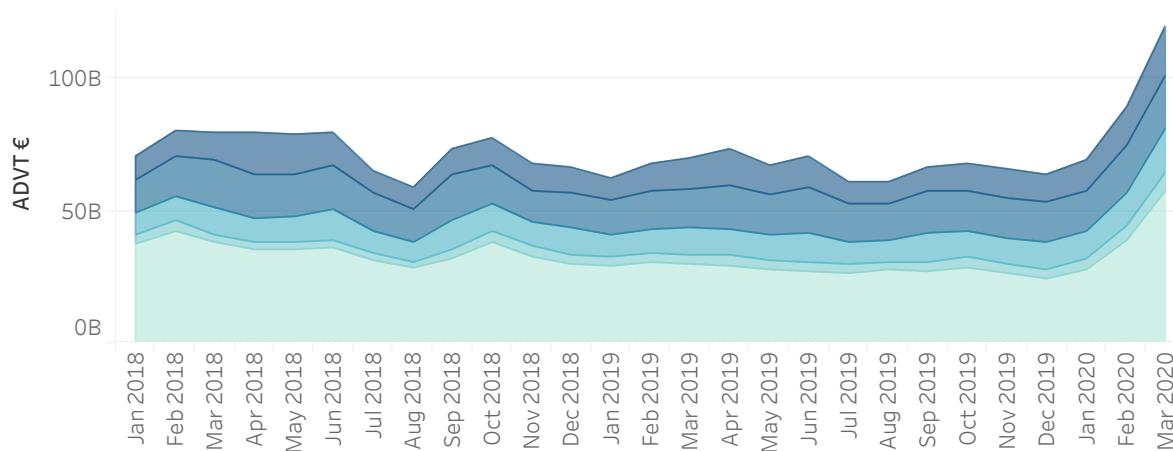
Off order book volumes adjusted to accessible volumes only (includes Off Order Book negotiated trades and some SI.)

FRAGMENTATION:

Lit Continuous trading takes back some market share by nearly 3% v 2019, still 3.2% off v 2018.



Average Daily Volume Traded



We observe every type of venue substantially increasing ADVT in March. The Lit Continuous trading venues increased the most, gaining back 2.9% mostly from SI trading (-3.4%). Other changes to market share were less than 1%.

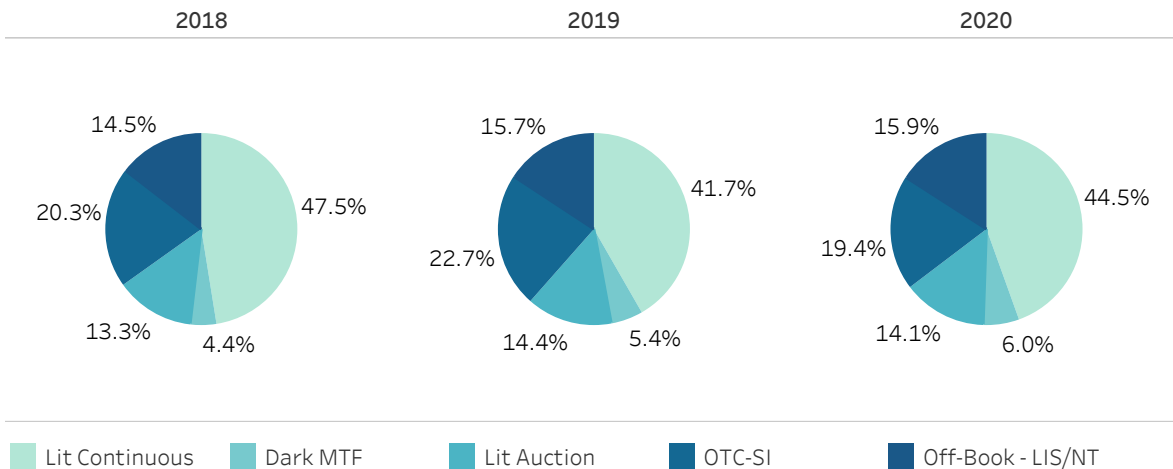
- In March, Lit Continuous trading reached a Mifid2 era high of 57 B€ ADVT, up 106% on the 2019 average, and a market share of 44.6%, although still not up to the levels of 2018 (47.5%).

- Dark trading also reached a record 6.9 B€ ADVT, also twice the average 2019 level of 3.6 B€ ADVT, and overall market share of 6% v 5.4% in 2019. Interestingly still not fully at the upper limit of the DVC caps.

- Auction trading, and mostly in the Close, joined the record-breakers on 16.8 B€ ADVT in March, up 75% from 9.6 B€ ADVT in 2019, but also giving up 2.7% share of on order book trading to the Lit Continuous venues.

- Off Order Book volumes also reached record levels, with SI trading up 33% versus the 2019 ADVT, at 20 B€ ADVT and Off Book/On Exchange cross trades up 78% at 18.7 B€.

Market Share

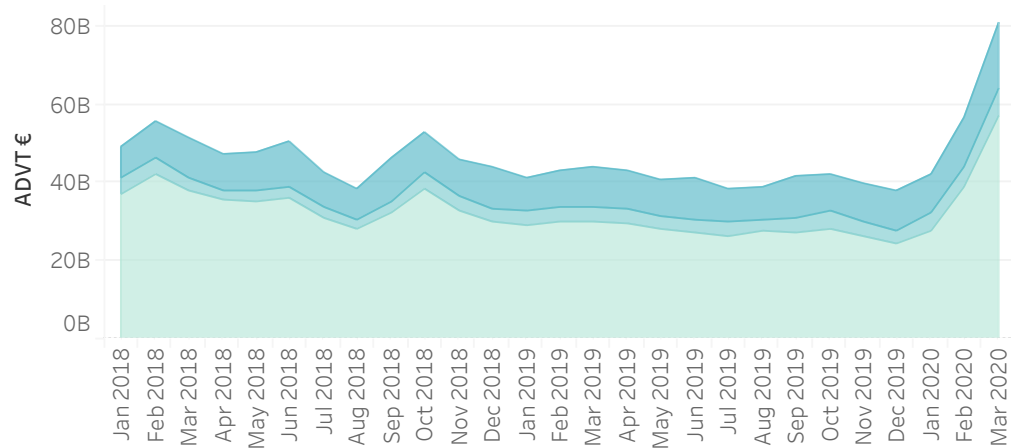


ON ORDER BOOK:

Lit Continuous and Dark venues gain 1.5% market share from the Auctions.



Average Daily Volume Traded



RECORD VOLUMES, ESPECIALLY IN MARCH

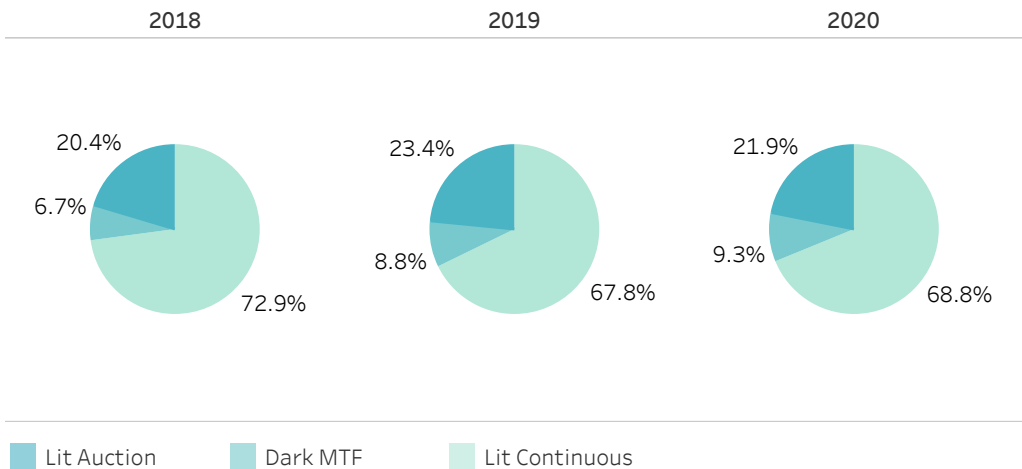
The increase in volumes in Q1 over the 2019 average is remarkable, but it was the March volume increase that is the story of the quarter.

- Lit Continuous trading reached its Mifid2 era low point in December at just 24 B€ ADVT and then powered to a record high of 57 B€ ADVT in March, a jump of 106%. Compared with the 2019 ADVT of 28 B€ , Lit Continuous was 41.3 B€ in Q1 2020, +49%.

- Despite a huge spike in Auction volumes of 36% from 9.6 B€ ADVT in 2019 to 13.1 B€ ADVT in February and 16.8 B€ ADVT in March, the Auctions, gave up 1.6% share of the order book from 23.4% to 21.8%. Of this, 1% went to the Lit Continuous trading venues and 0.5% went to the Dark trading venues. This is the first time in the Mifid2 era that we have seen a reversal in the long term rise in Auction market share.

- Dark trading, including block venues, stepped up by 1 B€ or more in each month from December to March, going from 3.4 B€ to 6.9 B€ ADVT and from 8.8% of 2019 order book share to 9.3%.

Market Share by Venue Type



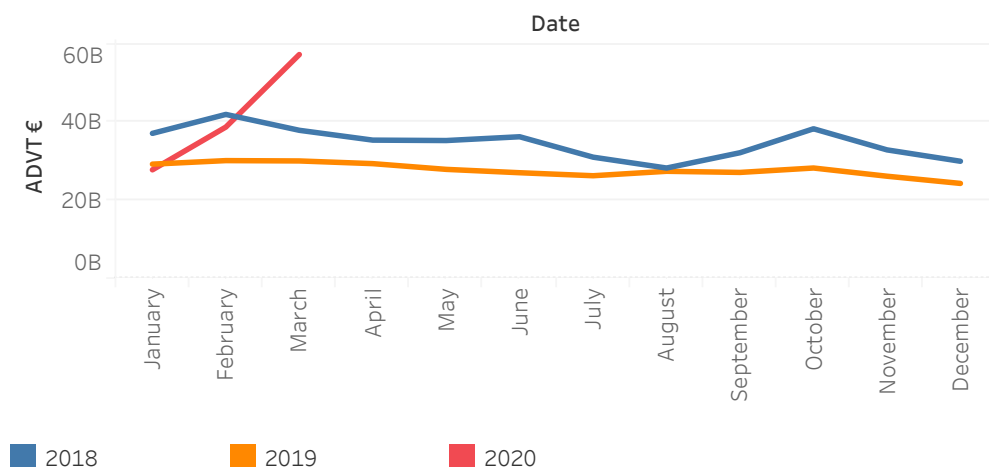
Within the order books, it is notable that the shift of volume share between venue types (Lit, Dark and Auctions) is substantial but perhaps less than we might expect given the upheaval of the final month. We observe very little change in the distribution of volume through the day in the volume curves, and it is perhaps a sign of the high proportion of automated execution strategies that spread trades over the day with highly consistent use of all available venue types despite market conditions.

LIT CONTINUOUS:

Volumes more sensitive to change than other venues ?



Lit Continuous Volume



LIT CONTINUOUS: REVERSAL OF FORTUNE

Lit Continuous trading has had a bad couple of years, sparking debate amongst participants and regulators. Whilst overall market volumes decreased by 9% from 2018 to 2019, nearly all the reduction was absorbed by the Lit Continuous venues, resulting in a fall of 20% or 7 B€ per day.

Meanwhile, apart from Dark venues (where the data are noisy because of the caps), all other On Book and Off Book venue types maintained or grew in ADVT remaining within a few % of their 2018 average.

From Q1 2018 to Q4 2019, Lit Continuous lost €12 Bio ADVT. In the first 8 quarters of Mifid2, only one had an increase in value traded (Q4 2018).

In January 2020, this trend continued with Lit Continuous at 28 B€ ADVT and in line with the low volumes of 2019. In February, volumes jumped to the second highest of the Mifid..



In 2019 we saw all other types of venue consistently maintain ADVT even when overall volumes are reducing, and that it is Lit Continuous venues that absorb the ups and downs of broader market volumes.

One explanation may be that Lit Continuous volumes are more sensitive to overall volumes because market makers and liquid providers respond to increases in the level of natural liquidity in these venues, but less so in auctions and block crossing activity. Q1 2020 tends to back up this picture in the reverse direction, as all types of trading venue grew significantly, but Lit Continuous by proportionally the most.

Lit Continuous

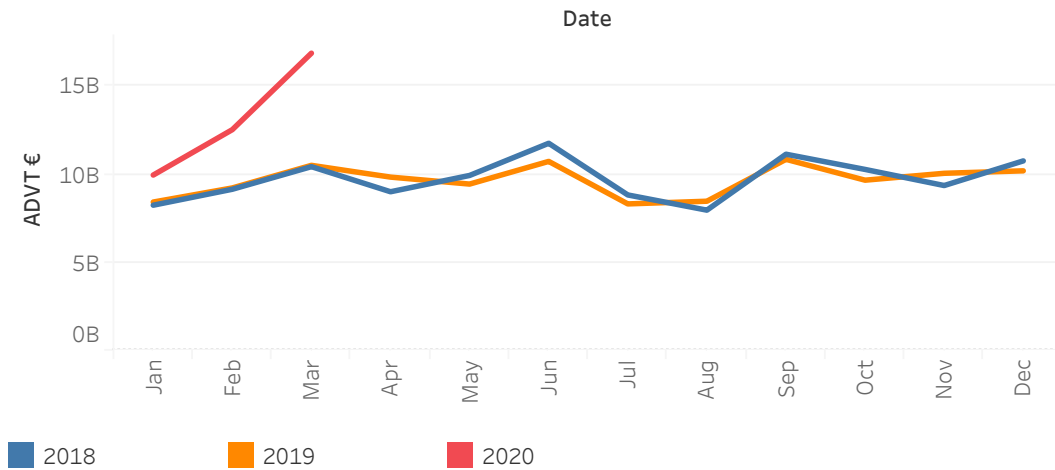
	2018		2019		2020	
	ADVT €	% Chg ADVT	ADVT €	% Chg ADVT	ADVT €	% Chg ADVT
Q1	39B		30B	-12%	41B	57%
Q2	36B	-8%	28B	-6%		
Q3	30B	-15%	27B	-4%		
Q4	34B	12%	26B	-2%		
Average	35B		28B	-20%	41B	49%

AUCTIONS:

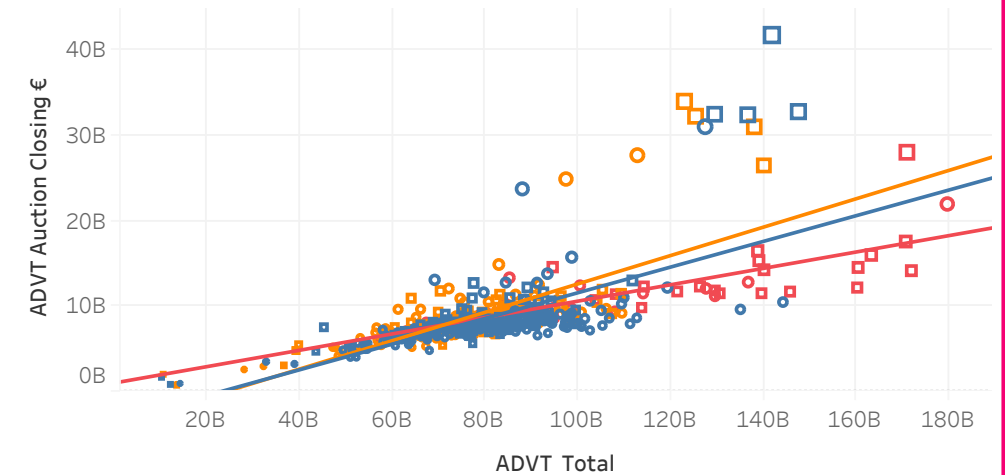
Auction volume closely follows overall volume.



Auction Volume



Closing Auction ADVT vs Total Market ADVT



Auction share has steadily increased for over a decade with the growth of passive investment. Auction volumes increased from 20.4% of the order book to 23.4% from 2018 to 2019. In March, this fell back to 22% as the Lit Continuous venues expanded faster. From a static 10 B€ per day for 2 years, Auction ADVT spiked to nearly 17 B€ a day in March, although note that the auctions get a kick from expiries and rebalances at quarter end.

Auction volumes follow overall market volumes in lock step, a trend which has strengthened over the past few years and has apparently been maintained in Q1. This is illustrated in the top right graph showing the correlation between Auction ADVT and overall market ADVT in the MIFID2 era (square markers are used for index expiry months).

This shows that auctions are a high priority for traders especially when targeting a Close benchmark or using VWAP. We see that over time, an increasingly large proportion of the day's trading is set aside for the Closing Auctions, removing natural liquidity from the intraday session both On and Off order book.

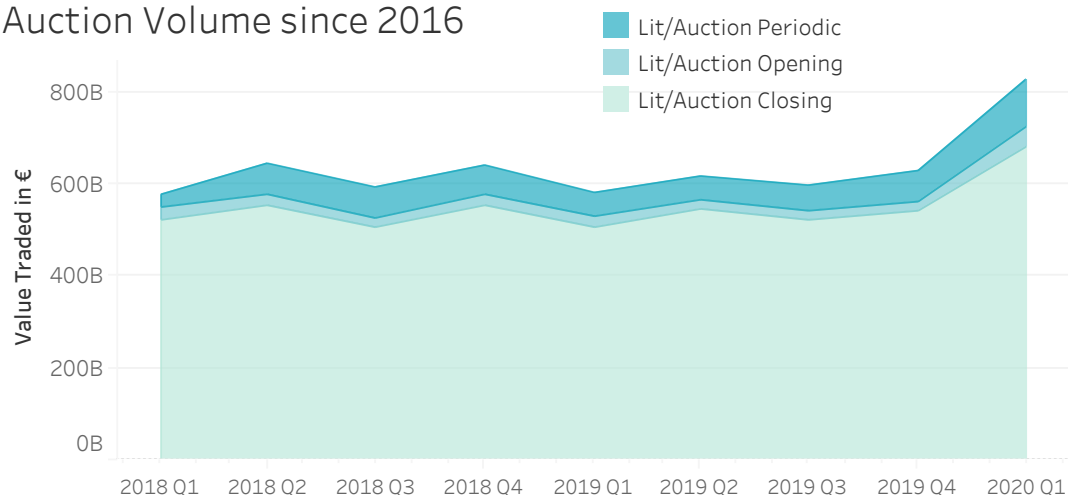
	2018		2019		2020	
	ADVT €	% ADV Chg	ADVT €	% ADV Chg	ADVT €	% ADV Chg
Q1	9.2B		9.3B	-7.3%	13.1B	32.0%
Q2	10.2B	10.6%	10.0B	6.5%		
Q3	9.2B	-9.9%	9.2B	-8.1%		
Q4	10.1B	9.5%	9.9B	8.6%		
Average	9.7B		9.6B	-1.0%	13.1B	36.7%

INSIDE THE AUCTIONS

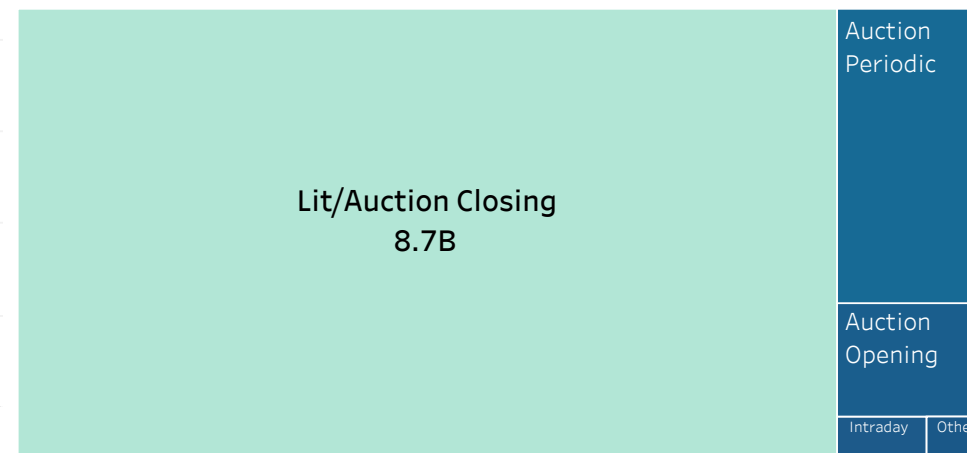
The Close continues to dominate.



Auction Volume since 2016



Auction Comparative Size - 2019



Auction Drill Down - Traded Volumes

		Lit/Auction Closing		Lit/Auction Opening		Lit/Auction Periodic	
		ADVT €	ADVT % Chg	ADVT €	ADVT % Chg	ADVT €	ADVT % Chg
2018	Q1	8.3B		0.4B		0.4B	
	Q2	8.6B	4.6%	0.4B	-17.6%	1.1B	147.4%
	Q3	7.8B	-10.0%	0.3B	-22.1%	1.0B	-3.2%
	Q4	8.7B	11.3%	0.4B	25.5%	1.0B	-8.4%
	Total	8.3B		0.4B		0.9B	
2019	Q1	8.0B	-7.1%	0.4B	1.9%	0.8B	-13.9%
	Q2	8.6B	7.2%	0.3B	-10.5%	0.9B	4.9%
	Q3	7.9B	-8.6%	0.3B	-10.2%	0.9B	-1.0%
	Q4	8.4B	7.2%	0.3B	13.9%	1.0B	19.0%
	Total	8.2B	-1.0%	0.3B	-9.2%	0.9B	1.0%
2020	Q1	10.6B	26.1%	0.7B	102.4%	1.6B	54.1%
	Total	10.6B	29.2%	0.7B	105.4%	1.6B	76.2%

AUCTION DRILL DOWN

Closing Auction volumes have been steady for two years having risen by over 50% prior to Mifid2. But as volumes in the overall market have stagnated, we have seen them take market share away from other Lit trading venues to reach nearly 24% of the Order Book in December 2019.

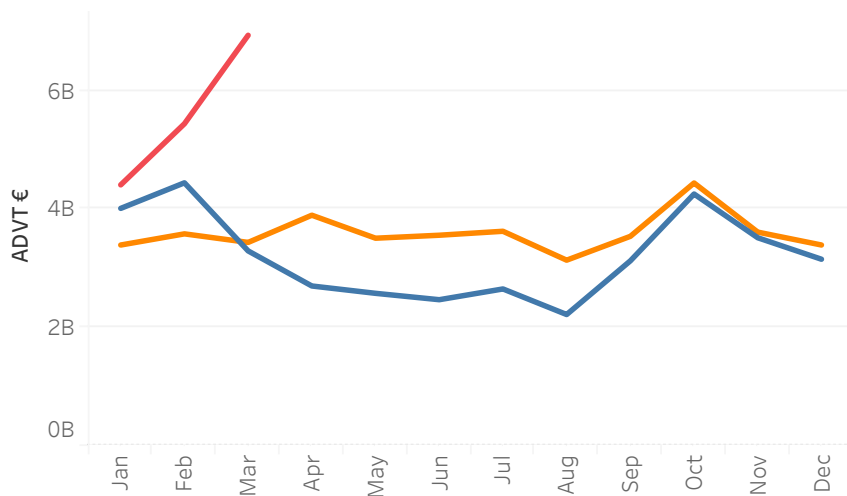
Periodic auctions (Frequent Batch Auction) are worth around 1 B€ ADVT and this does not change much. Nor do the Open auctions, around half the size of the Periodics at 400 M€ per day. In Q1 2020, we saw the periodics rise by 54% and in March to 2x their 2019 ADVT at 2 B€ ADVT. The Opening auctions followed suit, rising to 1 B€ per day which was again 2x the 2019 level.

DARK TRADING:

Sub LIS trades account for 2/3rds of Dark trading.



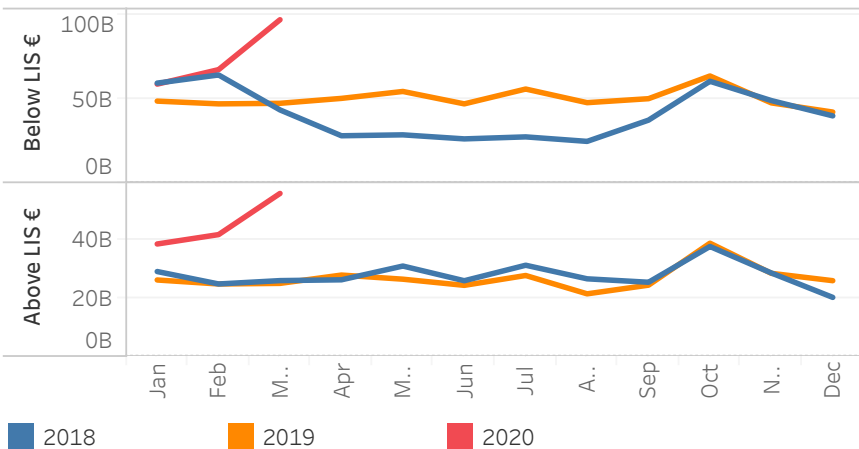
Dark Volume



There are two categories of MTF trading venues; 'Dark Order Books' that continuously match firm orders of any size and 'Block' venues that match orders above the formal 'Large in Scale' threshold using firm or conditional orders. Double Volume Caps limit dark trading for orders below LIS to no more than 8% and are calculated stock by stock.

Trading in both types of venue averages 3.6 B€ ADVT and around 1/3 of this is block size. Dark Order Book volume reduced by 35%, when Caps were first imposed on around 1000 names in March 2018, and rebounded again to the same level 6 months later (the suspension period lasts 6 months). This is clearly visible in the below left hand chart. Otherwise and apart from the last 2 months, dark trading volume is very stable. Dark trading reached a Mifid2 era record of 5.6 B€ ADVT in Q1, rising to 6.9 B€ in March, grabbing an extra 0.4% market share.

Monthly Volume Above and Below LIS



Dark Scorecard

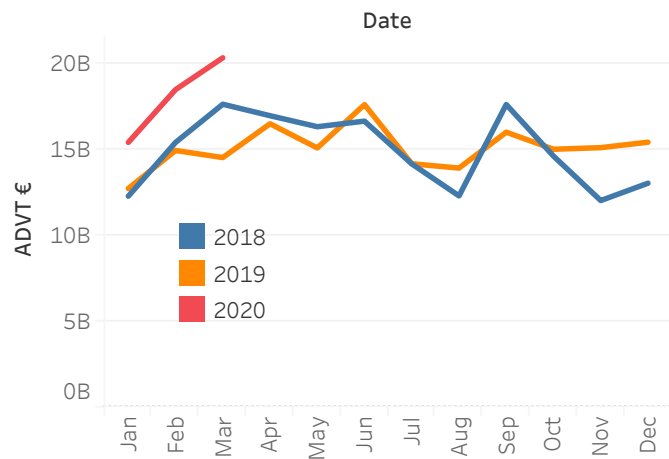
		ADVT €	Value Traded in €	Value Traded sub-LIS (€)	Sub LIS %
2018	Q1	3.90B	246B	167B	67.9%
	Q2	2.57B	165B	82B	50.0%
	Q3	2.64B	171B	89B	52.0%
	Q4	3.67B	235B	149B	63.5%
2019	Q1	3.46B	218B	143B	65.5%
	Q2	3.64B	229B	151B	66.1%
	Q3	3.43B	226B	153B	67.8%
	Q4	3.83B	245B	153B	62.4%
2020	Q1	5.59B	358B	223B	62.4%

OFF ORDER BOOK, Systematic Internalisation

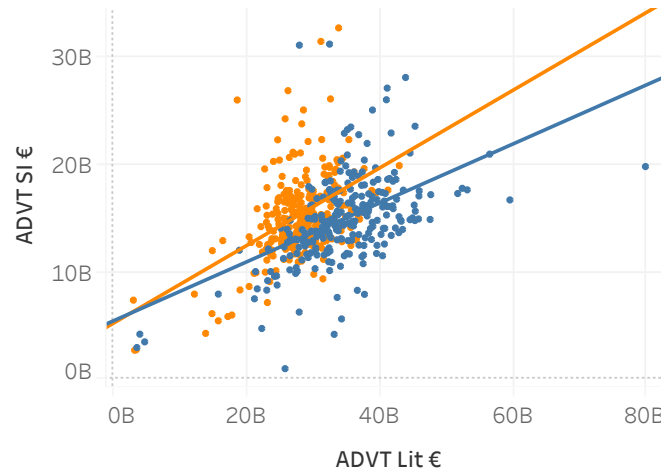
Complimentary to or Competing with Lit Trading ?



SI Volume



SI ADVT vs Lit ADVT



SI Scorecard

	2018		2019		2020	
	ADVT €	% Chg ADVT	ADVT €	% Chg ADVT	ADVT €	% Chg ADVT
Q1	15B		14B	6%	18B	19%
Q2	17B	10%	16B	16%		
Q3	15B	-12%	15B	-10%		
Q4	13B	-9%	15B	3%		
Average	15B		15B	1%	18B	20%

Assessing SI volume and market share is challenging as there are many types of trading scenarios classified as SI, only some of which are relevant in terms of addressable liquidity. At big xyt we have invested in detailed analysis of trade reports to filter out some of the noise and better understand the scale of bilateral capital commitment away from public order books. By applying a consistent classification we are able at least to look at trends.

SI ADVT is ~15 B€ and changes little over time. SI market share growth of 2.5% over the last 2 years seems to be down to a reduction in overall volumes being absorbed primarily by Lit Continuous venues. Does this mean that SI is sucking liquidity out of the Lit Continuous venues, which are supposed to be the key mechanism for price formation ?

The middle chart shows that SI and Lit Continuous volumes tend to increase and decrease at a similar rate, implying that rather than competing for volume, SI liquidity is efficiently reflected into the Lit Continuous markets as risk traders unwind or hedge their positions, creating liquidity for other natural traders.

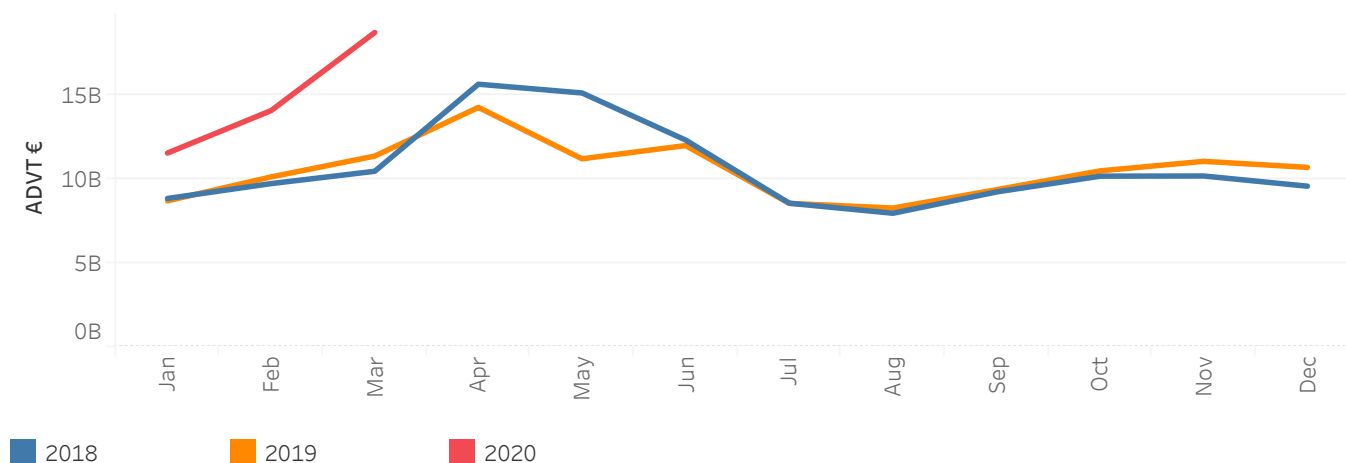
However, as this is not a strong relationship and there is plenty of room for multiple scenarios to play out simultaneously. Ultimately, this underlines the need for more granularity in the trade reporting regime to make the whole area of SI more comprehensible.

OFF ORDER BOOK: On Exchange/Off Order Book

Manually Negotiated Trades: a seasonal impact on market share ?



Off-Book Volume



An important part of trading in natural liquidity, manual trading of blocks accounted for around 10 B€ per day and 15.7% market share in 2019. Like all other parts of the market, this category rose steeply in Q1 2020 by 50% of ADVT and to 16% market share.

Manually arranged trades can be both above and below the LIS threshold, so there was some reduction due to the imposition of the caps on dark trading in Q2 2018. The average size of the trades in this category varies widely but note that trades above LIS account for 75% of the total value traded.

Manually Arranged Trades Scorecard

	2018				2019				2020			
	ADVT €	% Chg ADVT	Value Traded..	Sub LIS %	ADVT €	% Chg ADVT	Value Trade..	Sub LIS %	ADVT €	% Chg ADVT	Value Traded..	Sub LIS %
Q1	10B		607B	20.0%	10B	0%	631B	26.2%	15B	38%	945B	24.6%
Q2	14B	49%	917B	14.5%	12B	24%	780B	22.9%				
Q3	9B	-40%	554B	24.3%	9B	-30%	573B	27.3%				
Q4	10B	17%	638B	24.4%	11B	23%	696B	24.9%				
Average	11B		2,715B	20.1%	10B	-2%	2,680B	25.2%	15B	42%	945B	24.6%

We see a seasonality to this segment, probably due to some very large cross trades processed as part of the dividend season, starting in March and going through to May, with a second smaller increase in September and October.

SUMMARY



1. It is news to no-one, but Q1 2020 broke all the records, and more precisely the four weeks from February 24th. Just for completeness, March 13th was the biggest volume day of the Mifid2 era and at 172€, nearly 3 times the long term ADVT. Six out of the biggest trading days in the last 9 quarters happened in the first two weeks of March.
2. Perhaps the surprising thing about Q1 2020 is not the record breaking volumes but the relatively small changes (<3%) in market share between venue types which leads to the view that the market structure is quite stable in terms of the way that the industry approaches trading, and perhaps a reflection of the very high levels of automation.
3. We have surveyed the microstructure landscape for 2 years in the context of ever decreasing volumes and noticed that the decrease is most evident in the intraday lit order books. Now we have a chance to observe that the reverse is also true; when market volumes and volatility increase, the intraday lit order books increase fastest, possibly because of the amplifying affect of market makers and liquidity providers.
4. We highlight the relative opacity of the SI regime, and the need for greater transparency, which requires more detailed trade reporting classifications and consistency by participants in their application,

The data in this review (and much more) is updated daily, and made available within the Liquidity Cockpit, together with further research and commentary produced by the big-xyt team. Please follow the link below to find our website.

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