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Finance for Europe

Understanding the Liquidity Landscape in European Equity Markets

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Association for Financial Markets in Europe
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Introduction

AFME strongly believes that financial markets regulatory policy should be data-driven and be based on evidence provided by thorough data analysis. New policies should demonstrate the benefits for end investors, issuers and other participants, and enhance the European financial markets ecosystem. They should not value the interests of intermediaries over users and policy changes should be subject to robust impact assessments.

This paper aims to contribute to this evidence-based analysis and set out AFME's understanding of the liquidity landscape in the European equity markets. This analysis was produced using data provided by Big xyt, an independent analytics firm[1].

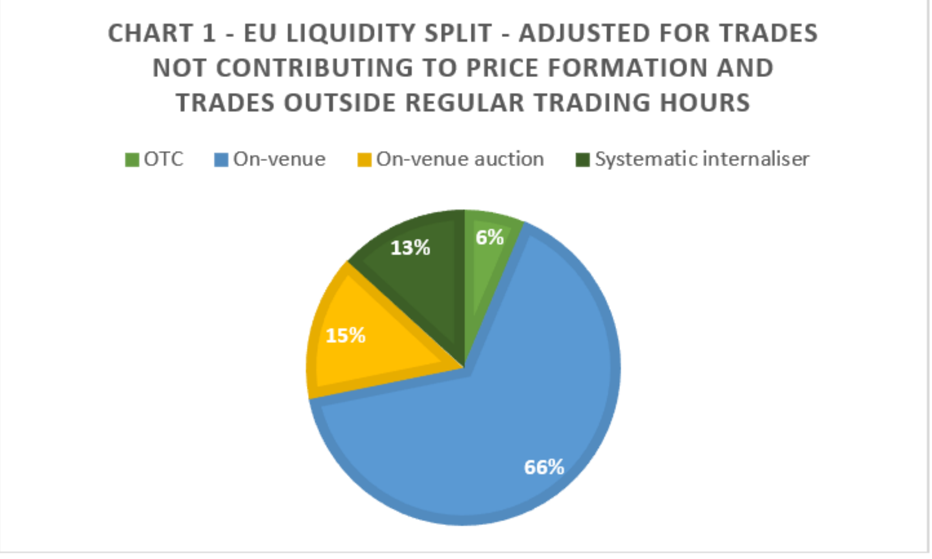
Executive Summary

- Since MIFID was reviewed there has been considerable discussion about the evolution in the distribution of market liquidity across various execution venues in general, and about the proportion of equities trading conducted on venues vs systematic internalisers in particular. The purpose of this publication is to provide a detailed factual analysis of actual activity across all segments of the market.

- A diverse set of open and competitive execution venues for equities trading help different end users achieve their objectives, on the one hand by issuers raising capital at attractive prices and on the other hand by investors efficiently allocating their investments. A robust market structure also fosters financial stability by providing a reliable cushion during distressed market conditions.

- Further improvements of data definition and data quality are key areas for AFME. We support substantial improvement of the identification of different trade categories, which should help ensure that regulators and policy makers are able to develop a more detailed understanding of the status of European equity markets.

- Our data analysis[2] shows that on-venue trading represents almost 81% of the total addressable liquidity[3]. Volume traded off-venues, on systematic internalisers and pure OTC, only represent about 19% of the total volume of the total addressable liquidity.



Source: Big xyt

[1] Information about Big xyt can be found at https://big-xyt.com/.
[2] The charts in this paper show the share of aggregated notional traded amounts on different execution venues during the first half of 2020.
[3] Non-addressable liquidity includes i) transactions that do not contribute to the price discovery process; ii) transactions that occur outside trading hours; and iii) pre-negotiated transactions that are large in scale, when they are non-addressable. When seeking to understand the addressable liquidity landscape in Europe, these transactions should not be considered. For a more detailed explanation of what is addressable and non-addressable liquidity, please refer to a section below.

- Furthermore, we believe that a significant proportion of large-in-scale ("LIS") trading should also be classified as non-addressable and should therefore be closely considered. When applying the additional step of classifying LIS liquidity as non-addressable, on-venue trading represents around 92% of the total addressable liquidity with systematic internalisers and pure OTC representing only 8%. We discuss this further in Section 3.

- **In summary, available data shows that there has been no material post-MiFID II increase or decrease in the proportion of trading executed across the various types of execution venues. Moreover, there has been no observable decline in the quality of the price formation process.**

Key Findings

- The relatively low volume of risk-intermediated trading activity on systematic internalisers is not substitutable by other non-intermediated trading , and it would not migrate to a continuous lit order book trading if systematic internalisers were not providing risk-intermediation for some of their trading with their pension and investment fund clients. This trading activity does not impact the quality of the price formation process in Europe post MiFID II and is subject to strict post-trade transparency obligations, as any other trading activity.

- Amongst the trading volumes traded on-venue, 8% is non-displayed. Non-displayed liquidity traded on-venue also serves the needs of pension and investment funds by enabling firms to manage their clients' implicit costs by reducing market impact. It is capped by law at 8% of the total trading. This trading activity run by trading venues is also subject to strict post-trade transparency obligations.

- The various ways of trading across existing execution venues all serve different functions and market needs. No trading modality is superior to others. Investors of all natures have different objectives and strategies. Continuous lit order book trading is valuable but not interchangeable with banks' systematic internaliser risk-intermediated trading, which plays a critical role for pension and investment funds. Pensioners and savers would be worse-off if diversity of ways of trading is curtailed.

- A suboptimal trade reporting framework, with insufficient identification and flagging of the different trade categories, including of those that are only technical trades, increases the complexity of the European equity markets structure that otherwise would be easier to understand and better placed to serve the interests of end users.

Key Recommendations

- AFME commends ESMA, National Competent Authorities and policy makers for the continued work to improve the quality and completeness of data. AFME remains committed to help in this difficult, yet critical task by responding to questionnaires on how to improve post trade transparency reporting, by actively participating on data workshops organised by European and national regulators and by making this data analysis public.

- AFME supports ESMA's data strategy which could be underpinned by the setting up of a consultative working group to ESMA's Data Standing Committee. More broadly, AFME supports a more formalised, more inclusive public industry wide forum to leverage from market participants' experience and contribution to improve data quality and availability.

- AFME recommends that further work on improving data should be prioritised before considering more substantial changes to the EU transparency framework so soon after MiFID II implementation.

I - Liquidity Landscape in EU Equity Markets – a data analysis

AFME believes that reported data needs to be analysed in a more granular fashion than what has so far been publicly presented by some market participants and regulatory bodies. ESMA itself has concluded that the current level of data granularity available to regulators, or otherwise available in other platforms, is insufficient to address major issues such as assessing the use of waivers or qualifying the contribution of systematic internalisers ("SIs") liquidity or OTC trading to price formation.

Data definitions and quality are key areas of focus for AFME members. We support substantial improvement of the identification and flagging of different trade categories, which should help ensure that regulators and policy makers alike are able to develop a more detailed understanding on the status of European equity markets, including the distribution of activity across different types of trading across execution venues. AFME continues to work alongside other industry stakeholders and the regulatory community to achieve this objective.

AFME sought to address the challenge of data quality to give an approximation of what is likely to be the state of equity trading in Europe. In order to provide an accurate picture of the European equity landscape, AFME, using Big xyt data, applied filters to remove non-price forming trades, technical trades occurring outside of trading hours and SI and OTC trades that are above "large in scale" ("LIS"). A clean picture of the European equities landscape ought to be the starting point to possibly consider incremental steps to the existing market structure or devise a new policy.

Once these filters are applied, the percentage of addressable liquidity is approximately split between 81% on lit venues, (including 8% of non-displayed liquidity), and about 19% on systematic internalisers and pure OTC.

A more detailed analysis and the process of filtering out non-addressable liquidity from the European equity markets landscape is set out below.

In the appendix, examples and further information on technical trades are provided.

II - Addressable and non-addressable liquidity

Determining which reported transactions should be deemed as addressable or non-addressable liquidity is critical to a fully informed secondary markets policy.

Non-addressable liquidity is not considered to be "new" liquidity or liquidity that could have been traded against at any point in time and/or in any other execution venue or trading modality other than the transaction entered into by the parties to such transaction, at the particular time and place where the transaction took place. Non-addressable liquidity does not contribute to the price formation process and by definition cannot interact with other active trading interests. ***Addressable liquidity*** is all the other liquidity, as reported.

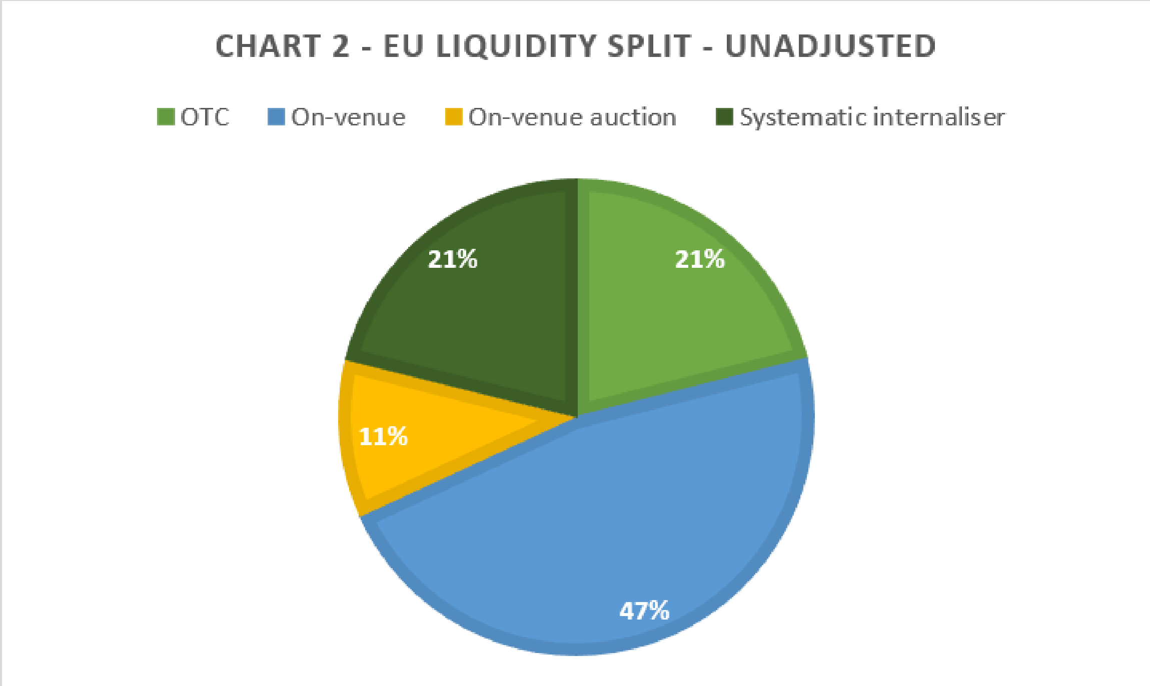
Non-addressable liquidity is identifiable due to ill-devised reporting frameworks and insufficient flagging of the different trade categories, or otherwise by unintended over reporting. Amongst the transactions that are deemed to constitute non-addressable liquidity it is important to consider i) transactions that do not contribute to the price discovery process; ii) transactions that occur outside trading hours; and iii) a subset of transactions that are large in scale.

Non-addressable liquidity should be excluded from data analysis to ensure an accurate representation of execution patterns, available liquidity pools and to meaningfully assess the way in which different market structure features interplay in the wider marketplace, including with respect to price formation.

Non-addressable, unfiltered liquidity landscape in EU equity markets

Chart 2 shows data reported up to early March 2020, without distinguishing between what liquidity is addressable and what is non-addressable, including all shares, ETFs, and other equity like instruments.

Using this high level, less granular approach to the existing data, the figures suggest that the breakdown of on-venue trading is approximately 58% on venues, 21% on SIs and 21% is OTC. These figures are roughly similar to the numbers used by ESMA[4] to support the recent consultation paper on equity transparency.



Source: Big xyt, 2020

AFME, using Big xyt data, undertook the exercise of assessing the raw data in a more granular fashion by categorising reports and removing OTC and SI transactions that represent non-addressable activity.

Transactions not contributing to price formation

The EU legislation recognises the importance of distinguishing between price-forming and non-price-forming transactions, and to that effect it has attempted to define transactions that do not contribute to the price discovery process[5].

Amongst those, one can consider (i) give-up or give-in transactions, or (ii) transactions which sole purpose is to transfer shares as collateral in bilateral transactions or in the context of central counterparty margin or collateral requirements or as part of the default management process of a central counterparty, or (iii) others that are executed by reference to a price other than the current market price (either because they are calculated over multiple time instances according to a given benchmark, or because they are executed by reference to a volume-weighted average price or a time-weighted average price).

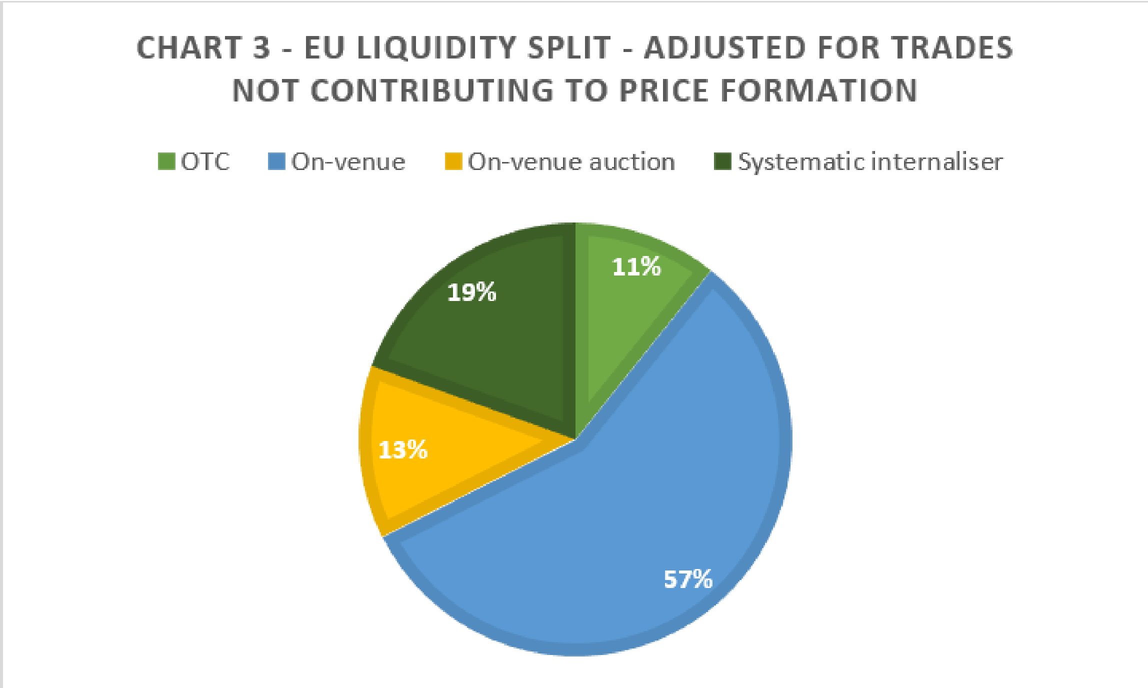
These transactions do not contribute to the price discovery process because they are either intra-group transactions for accounting or risk management purposes, or they fall under the group of the so-called "technical trades", which we discuss in more detail in Appendix 1.

[4] Figure 6, p. 21, ESMA CP on MiFID review report on the transparency regime for equity and equity-like instruments, the double volume cap mechanism and the trading obligations for shares.
[5] Article 2 of the Commission Delegated Regulation 2017/587 of 14 July 2016 supplementing Regulation 600/2014 of the European Parliament and of the Council.

Parties to those transactions are unable to enter into such type of non-price forming transactions on continuous lit order books, either because such trading modality does not provide executable prices that reflect multiple time instances or volume-weighted or time-weighted transactions, or mere account transfers between settlement accounts or entities part of the same group, which are commonly used transactions by pension and investment funds.

Therefore, in the initial stage of our analysis, we have removed trades flagged as not contributing to price formation.

Once removed, on-venue trading represented 70% of the total volume traded.



Source: Big xyt, 2020

Transactions that occur outside trading hours

Another set of activity deemed as non-addressable liquidity includes transactions that occur outside the normal trading hours at clients' request or otherwise as back office transfers which ensure that positions are held in the correct account.

These are likely to be technical transactions, for example, give in/give ups or risk transfers between entities of the same group[6], or other transactions that by occurring outside the normal trading venues' hours of operation are deemed as non-addressable by other trading modalities normally available during the trading schedule.

These transactions are directly arranged between the parties (i.e. for instance entities of the same group) and are trade reported at the end of the day or at the beginning of next trading day. They do not reflect normal trading activity of systematic internalisers during trading hours[7].

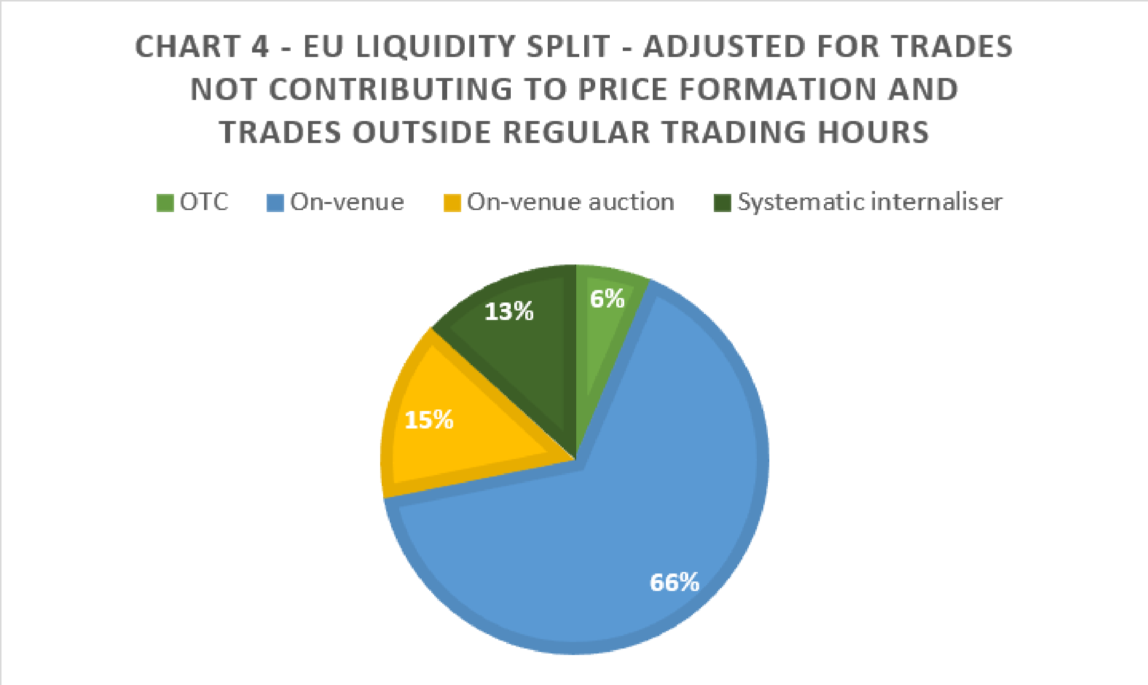
Similar to transactions not contributing to price formation, parties to transactions occurring outside trading hours are unable to enter into such type of technical trades on a continuous lit order book, either because

[6] Please refer to the Appendix to a more in-depth illustration of this type of transactions
[7] Systematic Internalisers ("SIs") quoting obligations require them to align their trading times with trading venues market hours. This is due to the requirement for SIs to reflect prevailing market conditions (i.e. their quotes must be "close in price, at the time of publication, to quotes of equivalent sizes for the same financial instrument on the most relevant market in terms of liquidity). Furthermore, SIs public terms of business state that quoting is aligned, as mandated, with the most relevant market - generally the member state's primary trading venue. For these legal and operating reasons SIs opening times remain aligned with cash equity trading venues trading hours.

trading venues are closed or because such transactions are unfit for that trading modality due to their technical nature and the lack of availability of an appropriate reporting functionality on a continuous lit order book (instead these transactions are typically reported via approved publication arrangements).

Given this activity does not represent addressable liquidity, the second stage of our analysis excluded this type of transaction.

After accounting for and removing these out of hours transactions, addressable on-venue trading represented around 81% of the total volume traded, systematic internalisers represented 13% and OTC represented 6%.



Source: Big xyt, 2020

III – Available liquidity may not suit all trading activities

Liquidity varies significantly across different trading sizes and accordingly with the trading features involved. Within the spectrum of addressable liquidity, large size transactions are unusual and serve the objectives of only a limited number of counterparties. Pension and investment funds acting on behalf of their retail pensioners and savers are the main group of investors that need to trade in size to minimise the market impact on their portfolios.

Considering the unlikely chance of a willing buyer of a large portfolio of shares to find a willing seller of the same portfolio of shares, at exactly the same time, the role of banks' risk-intermediated trading capabilities to facilitate those transactions, and to minimise market impact, is key.

Transactions that are large in scale ("LIS"), and indeed those that are in big sizes below LIS, are primarily undertaken with the help of banks' systematic internalisers. These transactions do not fit well in other trading modalities.

Banks' risk-intermediated trading is not substitutable, and its curtailment would impact those investors acting on behalf of pensioners and savers that more acutely need banks' assistant to minimise market impact.

According to our estimations, a small proportion of systematic internalisers' liquidity could potential be executed on non-displayed facilities of trading venues. If, however, an attempt to replace the role of the systematic internaliser with another trading modality, or otherwise a decision to curtail such role, is undertaken, we anticipate that a significant proportion of the existing sizeable liquidity would disappear.

Transactions that are Large in Scale ("LIS")

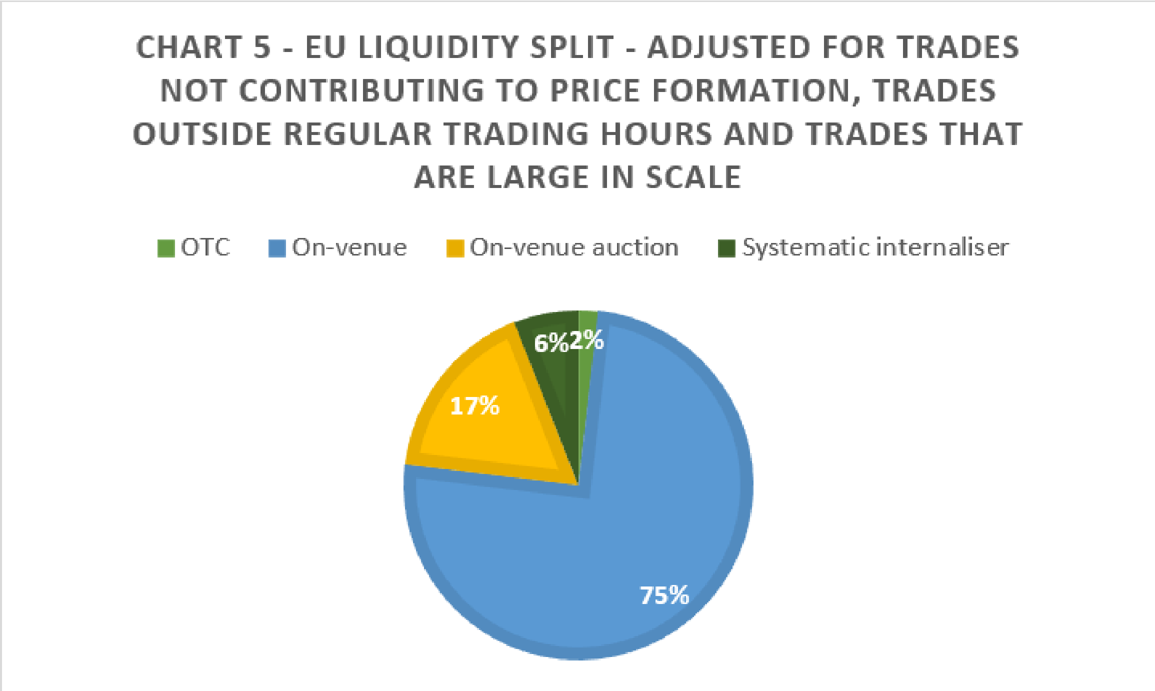
Transactions that are large in scale are pre-negotiated transactions between the parties. These transactions can be executed on non-displayed facilities of trading venues, off the continuous lit order book, or outside trading venues on systematic internalisers, or as pure OTC transactions, if they are entered into between eligible and/or professional counterparties.

Transactions that are large in scale executed by systematic internalisers, or pure OTC, should not be considered as liquidity that can reasonably be executed on continuous lit order books, openly to the wider market, or on other lit trading modalities because they are pre-negotiated, and unfit for the normal matching principles of a venue.

Investments firms executing those transactions would also not even be allowed to place those orders on continuous lit order books of trading venues to prevent unintended, and potentially unlawful market dislocations[8] [9].

These large in scale transactions are therefore a third set of trades that should be carefully considered, where a large proportion should be deemed as non-substitutable liquidity that does not suit all execution modalities. These transactions were therefore removed from the sample of reported transactions available to all execution venues in chart 5 below.

Once these transactions are removed from the sample of addressable and available liquidity, total on-venue trading is now 92% of the total volume traded. This is much higher than ESMA's recent figures that show on-venue trading ranging between 50-60% of the total volume traded[10].



Source: Big xyt, 2020

[8] The placing of orders on a continuous lit order book that are large in scale and represent a significant proportion of the daily volume of transactions in the relevant financial instrument, or may be expected to have the effect of abnormally moving the price or value of such financial instrument, may be deemed as indicators of manipulative behaviour relating to false or misleading signals, or misleading and abusive conduct. Cf. respectively Annex I.A.a) of the EU Regulation 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse; and, as an example, rule 8104/1.i) of Euronext's Rulebook.

[9] Article 15(1) of Commission Delegated Regulation 2017/589 supplementing Directive 2014/65 on pre-trade controls on order entry requires firms trading electronically to have pre-trade controls that prevent the placing of large orders on order books, which is equally valid for those intermediaries not trading electronically.

[10] In line with ESMA's approach, AFME analysis maintained in the sample of addressable and available liquidity those large in scale transactions reported to trading venues as "on-venue", off order book transactions.

Appendix – Understanding technical trades

According to EU legislation, we list below types of transactions that do not contribute to the price discovery process alongside practical examples where these transactions are used by market participants in EU markets.

Commission Delegated Regulation 2017/587 of 14 July 2016 supplementing Regulation 600/2014 of the European Parliament and of the Council

Article 2
Transactions not contributing to the price discovery process

Types of Transactions	Example
a) the transaction is executed by reference to a price that is calculated over multiple time instances according to a given benchmark, including transactions executed by reference to a volume-weighted average price or a time-weighted average price;	A volume weighted average price ("VWAP") is a trading benchmark which allows investment firms to fill client orders with the average price a security has traded at during the trading day based upon both volume and price. Similarly, a time weighted average price ("TWAP") provides an average price over a specified time.
b) the transaction is part of a portfolio trade;	A portfolio trade is a transaction in more than one security where those securities are grouped and traded as a single lot against a specific reference price. These are typically utilised by fund managers to invest in a basket of securities.
c) the transaction is contingent on the purchase, sale, creation or redemption of a derivative contract or other financial instrument where all the components of the trade are to be executed only as a single lot;	Many transactions in cash equities are reliant upon the execution of a related derivative(s) transaction which may be traded as a package, including the cash transaction.
d) the transaction is executed by a management company as defined in Article 2(1)(b) of Directive 2009/65/EC of the European Parliament and of the Council, or an alternative investment fund manager as defined in Article 4(1)(b) of Directive 2011/61/EU of the European Parliament and of the Council, which transfers the beneficial ownership of shares from one collective investment undertaking to another and where no investment firm is a party to the transaction;	Transfers between funds managed by the same management company.
e) the transaction is a give-up transaction or a give-in transaction;	Brokers utilise give-up/give-in transactions where they execute a trade on behalf of another broker (typically an executing broker on behalf of a prime broker) who will provide the resulting fill to their client.
f) the purpose of the transaction is to transfer shares as collateral in bilateral transactions or in the context of central counterparty (CCP) margin or collateral requirements or as part of the default management process of a CCP;	Transfer of shares as collateral and CCP margin and default management transactions.
g) the transaction results in the delivery of shares in the context of the exercise of convertible bonds, options, covered warrants or other similar derivatives;	Transactions to convert rights in shares,
h) the transaction is a securities financing transaction;	Securities financing transactions allow investors and firms to use assets, such as the shares or bonds

Types of Transactions	Example
	they own, to secure funding for their activities. A securities financing transaction can be: • a repurchase transaction - selling a security and agreeing to repurchase it in the future for the original sum of money plus a return for the use of that money • lending a security for a fee in return for a guarantee in the form of financial instruments or cash given by the borrower • a buy-sell back transaction or sell-buy back transaction • a margin lending transaction
i) the transaction is carried out under the rules or procedures of a trading venue, a CCP or a central securities depository to effect a buy-in of unsettled transactions in accordance with Regulation (EU) No 909/2014 of the European Parliament and of the Council.	Mandatory buy-in transactions

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About AFME

AFME (Association for Financial Markets in Europe) advocates for deep and integrated European capital markets which serve the needs of companies and investors, supporting economic growth and benefiting society. AFME is the voice of all Europe's wholesale financial markets, providing expertise across a broad range of regulatory and capital markets issues. AFME aims to act as a bridge between market participants and policymakers across Europe, drawing on its strong and long-standing relationships, its technical knowledge and fact-based work. Its members comprise pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants. AFME participates in a global alliance with the Securities Industry and Financial Markets Association (SIFMA) in the US, and the Asia Securities Industry and Financial Markets Association (ASIFMA) through the GFMA (Global Financial Markets Association). For more information please visit the AFME website: www.afme.eu.

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