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# MiFID II Double Volume Cap:

Slam Dunk or Air Ball?



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GROUP



## Vision

While much has been commented on how European dark trading will be fundamentally impacted by the implementation of the proposed Markets in Financial Instruments Directive II (MiFID II) Double Volume Cap (DVC), the cap itself may prove to have little impact on overall volumes of dark activity. Instead it is more likely to alter the mix of dark activity. There are important exceptions to the DVC. It does not cover all types of dark trading, nor all venues. Establishing which trades will fall under the DVC and when may prove just as onerous as calculating the DVC itself.

The onerous industry compromise has left market practitioners along with regulators scratching their heads to understand just how the cap will work in practice. Firstly, the 4% and 8% caps are dependent on data that is currently not available. Even if the data is made available by venues today, there is little opportunity for the industry to verify this data given that information will come from individual venue sources rather than across the industry.

A harmonized calculation methodology across trading venues, including single-counted transactions, will be critical starting 3 January 2017, but the supposed solution of a Consolidated Tape is still far from reality. There are no Consolidated Tape Providers (CTPs) scheduled and IT systems will need to be in place by the start of 2016 for firms to be compliant. Time is fast running out and fear of unwittingly breaching the caps is creating a climate of fear.

So does disaster loom? Not quite. Firms have the opportunity to avoid the Double Volume Cap provided they trade using the Large-in-Scale (LIS) or Order Management Facility (OMF) waiver, and in some instances a subset of transactions executed under the Negotiated Transaction (NT) waiver. Once again the level of complexity surrounding order execution and the necessary data to be passed onto market participants and regulators alike via the use of the correct trade flag identifiers highlights the need for greater technology.

Firms may still be able to execute in the dark via a subset of waivers, but there are still questions in relation to best execution. One argument is that market participants will lose the ability to price improve on smaller orders; and if investors have to pay the spread, this ultimately puts firms at odds with their obligations under best execution. However, exposing order flow on the lit book also risks information leakage and again makes meeting best execution obligations harder to achieve.

This will not be the end of dark innovation. The London Stock Exchange has already introduced enhancements to its hidden mid-price pegged order functionality to facilitate Large-in-Scale (LIS) dark trading directly on the SETS order book. Market participants can enter an order above the LIS threshold at the mid-point without displaying either price or volume to other participants. This initiative is likely to be just the start of a new round of industry innovation.

However, the largest elephant in the room is the ambiguity surrounding the future of Broker Crossing Networks (BCNs). The DVC only applies to transactions taking place on a trading



venue, i.e. a regulated market (RM)/exchanges or a multilateral trading facility (MTF). It does not apply to transactions executed outside a trading venue, such as a Systematic Internaliser (SI), or trades conducted Over the Counter (OTC). A large question mark still hangs over whether the majority of BCNs will be forced to register as MTFs and only genuinely bilateral trading systems will be able to operate under the SI regime. Clarification on the definition of the Systematic Internaliser thresholds is due in the forthcoming Delegated Acts (DAs). These Acts were due to be released in July 2015, but have been delayed due to continued negotiation still taking place. However, there is growing consensus that if the firms crossing activity is systematic and material to their business as opposed to ad-hoc in nature, the chances are the forthcoming DA will tighten the definitions of SI activity to force BCNs down the multilateral route.

This will create challenges. Currently crossing networks facilitate a large number of client orders, providing liquidity by systematically dealing on own account via “riskless principal” activity to execute. This enables firms to facilitate client orders by off-setting any risk via a corresponding order direct into the market. Regulators are now discussing the removal of “riskless principal” to steer the market back to “agency” or “principal” only activity. This may result in buy-side firms still being able to trade in the dark under the Large-in-Scale waiver, but without the brokers’ ability to facilitate, orders may remain marooned on dark venues, unable to complete execution. This may slow down execution capabilities just when the ability to demonstrate best execution is increasing in its intensity.

One point is certain. The imposition of the DVC will not automatically deliver a reduction in dark trading, but we may inadvertently end up with a concentration of trading activity on a reduced number of venues. The regulators may unwittingly have shot an air ball rather than the slam dunk they had hoped for. Once again, European equity and now equity-like trading is set to become far more complex in the pursuit of best execution.

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## The Double Volume Cap

The Double Volume Cap (DVC) is a mechanism by which Markets in Financial Investments Regulation (MiFIR) limits the use of the Reference Price and Negotiated Transaction waivers in order to constrain the recent rise in dark (off-exchange trading). Under the recent Regulatory Technical Standards or the Implementing Technical Standards, the European Markets and Standards Authority (ESMA) was unable to review the cap as this was not mandated by the European Commission. Its only remit was to frame out the transparency requirements for equity and equity-like instruments both pre- and post-trade.

### The Misconceptions

The DVC applies not only to trading in shares, but also equity-like products such as depositary receipts, exchange-traded funds (ETFs), certificates, and other similar financial instruments admitted to trading on a regulated market (RM) or traded on a multilateral trading facility (MTF). It does not apply to trading in fixed income, derivatives and other non-equity instruments.

Nor does the DVC apply to all transactions. It only applies to transactions taking place on a “trading venue,” i.e., a regulated market/exchange or MTF. It does not apply to transactions executed outside a trading venue. This exemption includes transactions conducted on an “execution venue” — such as a Systematic Internaliser, or OTC.

The DVC does not apply to all waivers. It only applies to:

- Transactions executed under the **Reference Price waiver**
- Ones that are a subset of transactions executed under the **Negotiated Transaction waiver**, i.e., negotiated transactions in liquid instruments other than “negotiated transactions subject to conditions other than the current market price of the financial instruments” (see Annex II).

The DVC does not apply to:

- Negotiated transactions in illiquid names
- Negotiated transactions “subject to conditions other than the current market price of the financial instrument”
- Transactions executed under the Large-in-Scale waiver and the Order Management Facility waiver.
- Combinations of LIS waiver and Reference Price or Negotiated Transaction waiver: when a transaction is executed on the basis of two orders benefitting from the LIS pre-trade transparency waiver, the transaction does not count towards the volume calculated for the Reference Price waiver or the Negotiated Transaction waiver, even when the LIS orders benefitted from the Reference Price or the Negotiated Transaction waiver as well.

## How It Works in Practice

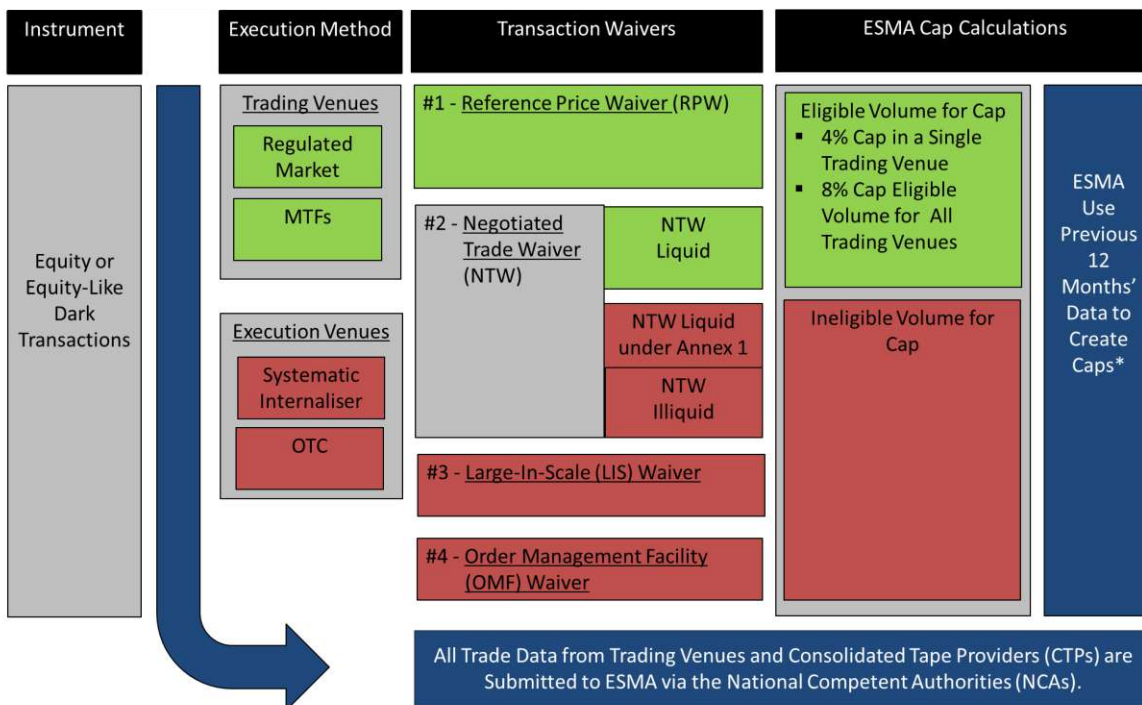
There will be a 4% cap on the amount of trading in an equity or equity-like instrument that can be carried out on a single trading venue, whether it's a regulated market/exchange, or an MTF, using either the Reference Price waiver or relevant Negotiated Transaction waiver, as defined previously.

There will also be an 8% cap on the amount of trading in an equity or equity-like instrument that can be traded across all trading venues (regulated markets/exchanges and MTFs) again either using the Reference Price waiver or relevant Negotiated Transaction waiver across the Union.

Negotiated transactions on otherwise lit exchanges would for instance be combined with reference price transactions on dark pools for the calculation of the 8% cap dark pools.

The caps will be based on the total volume of trading on all trading venues in that stock over the previous 12 months. As waivers apply to orders and not to transactions, where a transaction is executed on the basis of two orders benefitting from the Large-in-Scale (LIS) waiver, the transaction should not count towards volumes calculated under the RPW or NTW (see Annex I for full list of waivers).

**Exhibit 1**  
**Order Flow Diagram**



\* Note: (1) ESMA will publish the percentage of trading in each instrument falling under the DVC on each trading venue and across the EU over the last 12 months within five days after the end of each month. If the figure reaches either 3.75% on a trading venue or 7.75% on a pan-European basis for a stock, ESMA will publish an additional report within 5 days after the 15<sup>th</sup> of the month for that stock. (2) CTPs will have to submit to NCAs total volumes of trading in each financial instrument executed on all trading venues with total volumes separately for each trading venues, as well as total volumes executed under the RP waiver and the relevant NT waiver separately for each waiver and for each trading venue.

Source: TABB Group



If the venue-specific cap is breached, transactions under the Reference Price and Negotiated Transaction waivers in the instrument will be banned on **that venue** for six months, but not Large-in-Scale activity.

If the market-wide limit is breached, transactions under the Reference Price and Negotiated Transaction waivers in the stock will be banned across all trading venues, but not execution venues such as an SI — in Europe for six months. Again, the ban does not include activity under the LIS or OMF waivers.

## The Calculations

ESMA will be using two data sources for the Double Volume Cap calculations in each equity or equity-like instrument. Firstly, the daily total volume from trading venues provided to ESMA via National Competent Authorities (NCAs). NCAs are obligated to provide ESMA with the relevant data from a trading venue or CTP by 13:00 CET next working day following receipt.

Secondly, each trading venue will have to submit volumes of trading executed on its systems under the RP waiver or the relevant NT waiver to the National Competent Authorities (NCAs) or Consolidated Trade Providers (CTPs), when established, on the first and sixteenth day of each month. Information on orders benefiting from the Large-in-Scale waivers should not be included in trade reports, since it could expose transactions to adverse market impact.

The first report is due by January 3, 2017 (covering trading from January 3 to December 21, 2016); however, as the revised RP, NT and LIS waiver thresholds will be in place prior to January 3, official trading volumes cannot be produced. ESMA has therefore asked trading venues to provide reports on perceived “adjusted volumes” of trading executed under equivalent waivers under MiFID I. ESMA is expected to provide further clarity on how volumes should be “adjusted” volumes” for the first calculation.

CTPs will have to submit to NCAs total volumes of trading in each financial instrument executed on all trading venues with total volumes separately for each trading venues, as well as total volumes executed under the RP waiver and the relevant NT waiver separately for each waiver and for each trading venue. As yet there have been no registered CTPs.

ESMA will publish the percentage of trading in each instrument falling under the DVC on each trading venue and across the European Union over the last 12 months within five days after the end of each month.

If the figure reaches either 3.75% on a trading venue or 7.75% on a pan-European basis for a stock, ESMA will publish an additional report within five days after the 15<sup>th</sup> of the month for that stock.

## Currency Measurements

Where financial instruments are traded in more than one currency, trading venues and CTPs shall only aggregate transactions executed in the same currency and are required to report separately each aggregated volume in the relevant currency used for the transaction.

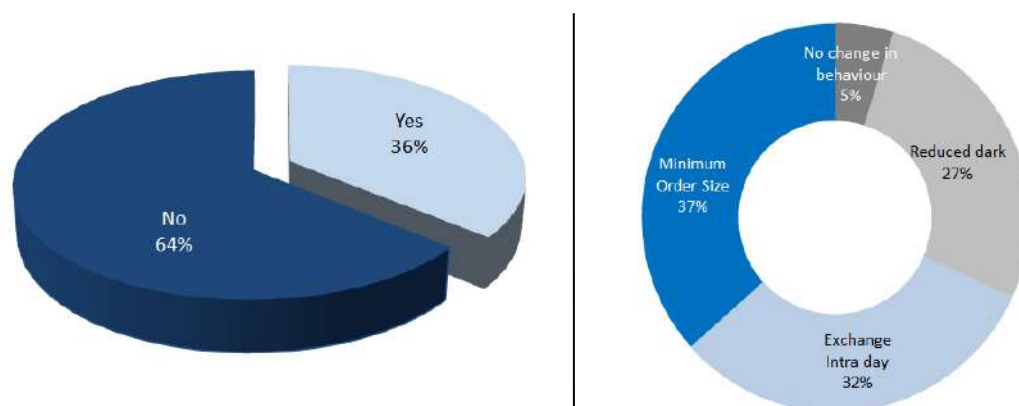
ESMA will then convert all volumes into EUR using average exchange rates published by the ECB.

## The Impact

There is unlikely to be any major impact on dark trading venues operating under the Large-in-Scale (LIS) waiver. In a recent TABB European Equities study conducted in 2015, participants stated they did not anticipate a change in their overall usage of dark trading (see Exhibit 2), however they do expect the need to implement a minimum order size to avoid the double volume cap. Only a quarter anticipate reducing their dark trading activity, but 37% anticipate implementing a minimum order size (see Exhibit 3).

### Exhibits 2 and 3

#### Will the Introduction of a Volume Cap Impact Your Usage of Dark Pools? / How Will You Respond?



Source: TABB Group

The question is what will happen to liquidity formation when the cap is reached across all trading venues in Europe. Given that LIS orders and SIs remain out of reach, market participants are likely to adapt trading strategies further to ensure alternative routes for dark trading in stocks or equity-like instruments remain open. On-venue negotiated transactions in liquid or illiquid names "subject to conditions other than the current market price of the instrument," may not be included in the DVC currently, but are likely to be given much more regulatory attention to avoid supposed "misuse." This will include

- Execution of LIS orders on trading venues
- On-venue order management facility order-type (e.g., iceberg orders)
- Systematic Internalisers:
- OTC transactions — with the caveat that MiFIR introduces a trading obligation for shares

In addition, there are logistical challenges if a parent order is split into child orders that execute against a variety of different order waivers — LIS, NTW and RPW. Although each execution could incur the relevant execution flag, the remaining resting order will presumably have to link back to the original parent order to ensure the opportunity to benefit from the LIS waiver remains. This will result in further order complexity as firms endeavor to link up partial orders executed via different methods. This may also restrict the movement of orders to find potential liquidity. Rather than flush out liquidity after the initial execution, firms will now need to establish where in advance to pool liquidity to maximize

execution capabilities. This potentially risks reducing the number of venues firms will choose to route orders to in the first instance, frustrating the ability for new entrants to gain a foothold.



## The Elephant in the Room

However, the greatest ambiguity remains around the treatment of Systematic Internalisers and trading OTC. This remains a source of continued legal uncertainty ahead of the Delegated Acts, which are now anticipated for publication at the start of 2016.

Currently an investment firm may only execute transactions in shares OTC if those transactions are “non-systematic, ad hoc, irregular, and infrequent” or “are carried out between eligible or professional counterparties and do not contribute to the price discovery process.”

The list of transactions that ESMA perceive do not contribute to the price discovery process is similar to the list of Negotiated Transactions subject to conditions other than the current market price with one noticeable exception: it does not include the last flexible item in the list, i.e., “any transactions equivalent to those described [above] and which is contingent on technical characteristics that are unrelated to the current market valuation of the financial instrument traded” (see Annex II). In respect of “non-systematic, ad-hoc, irregular, and infrequent” the same criteria may be implemented as for the definition of Systematic Internalisers; again this requires clarification in the DA.

Currently a Systematic Internaliser is an investment firm which, on an organized, frequent, systematic, and substantial basis deals on own account when executing client orders<sup>1</sup> outside a regulated market, a Multilateral Trading Facility (MTF), or an organized trading facility (OTF)<sup>2</sup> without operating a multilateral trading system.

Trading thresholds are yet to be set by the European Commission to quantify “frequent and systematic” on the one hand, and “substantial” on the other. The SI definition applies only where the two pre-set limits are both crossed or where the investment firm chooses to opt-in, on an instrument-by-instrument basis.

ESMA delivered its Technical Advice to the EU Commission on those thresholds in December 2014 for all asset classes. They are a complex combination of number and volume of OTC transactions, either compared to the firm’s overall OTC transactions in that instrument or to the wider European market turnover. Criteria and thresholds vary depending on whether the instrument is liquid or not. However, it is uncertain whether the EU Commission will retain the same thresholds as ESMA have proposed in the DA.

### Principal vs. Agency

In the Final Report on Draft Regulatory and Implementing Technical Standards for MiFID II/MiFIR, ESMA noted that there is a possibility that current broker crossing could potentially continue to be undertaken by SIs via riskless principal trading, thereby re-introducing the concept of an Organised Trading Facility (OTF) category in equities.

<sup>1</sup> A firm may only deals on own account when executing client orders if it is authorized both for the execution of orders on behalf of clients and for the dealing on own account investment services.

<sup>2</sup> [http://ec.europa.eu/finance/securities/docs/glossary\\_en.pdf](http://ec.europa.eu/finance/securities/docs/glossary_en.pdf)

*"[I]f ultimately allowed for the SI, riskless principal trading would de facto enable the matching of two client orders by interposing the SI own account between them for a fraction of time, i.e., taking very limited market/counterparty risk<sup>3</sup>."*

ESMA has raised its concern on this matter to the European Commission, but as ESMA has no relevant empowerment to address this, currently the text stands as currently written. The question remains as to how the classification of SIs is ultimately finalized as to whether firms will choose to utilize SI regime or not. If the publication of quotes under the SI regime becomes a regulatory burden with little business value, there will be little incentive for firms. However, the loss of the SI may result in a reduction in client facilitation of orders. We run the risk that markets will become intransigent, split between sparse lit and locked dark activity, unable to shift venue without losing the protection of a waiver.

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<sup>3</sup> [https://www.esma.europa.eu/system/files/2015-esma-1464\\_-\\_final\\_report\\_-\\_draft\\_rts\\_and\\_its\\_on\\_mifid\\_ii\\_and\\_mifir.pdf](https://www.esma.europa.eu/system/files/2015-esma-1464_-_final_report_-_draft_rts_and_its_on_mifid_ii_and_mifir.pdf)

## Conclusion

The recent rise of dark trading is in direct conflict with the regulators objective of providing greater transparency across European capital markets, hence the imposition of the DVC. However, a number of questions remain outstanding. If the quantity of dark trading should be reduced, imposing a system that ignores large chunks of dark activity would appear to preference one style of dark trading over another, while avoiding the need to improve the quality of dark activity.

The current quality of lit venues, the economic environment, and growing fiduciary responsibilities to deliver best execution will continue to ensure the buy side remains willing participants in the dark. Proposed legislation will not automatically return trading to the lit. Of more advantage would be greater understanding of what happens when order flow is traded on any particular venue — dark or lit — thereby ensuring buy-side traders have full control of their implicit as well as explicit trading costs, and will be critical to improving confidence in current European market structure.

There is market speculation that the increase in dark activity is predominantly based on touch (bid or offer) activity rather than at the traditional midpoint. Unfortunately, without mandated reporting, all this will simply remain speculation. Until a system of mandated reporting exists based on FPL FIX tags or MMT typology, there is no incentive for all participants to detail all activity in the dark. Some may choose to be fully transparent with individual clients, but this is based on preferential treatment rather than an industry standard.

The ability to measure performance and prevent the potential toxicity of certain dark pools will be far more valuable in the longer term. Ultimately the buy side will vote with its feet, and the ability to correctly analyze individual venue performance will determine where institutional investors choose to trade. As execution becomes further divorced from the research process, proving best execution has been delivered will be critical.

The vast amounts of data that firms are going to need to collect, parse, store, and make available to ensure they are compliant as and when will be a minefield. For firms that owe best execution obligations to clients, this can present a marketing opportunity in terms of technology capabilities to achieve best execution, but can also result in practical challenges, such as how many venues does our organisation wish to engage with to meet best execution obligations.

The political situation as it stands is unlikely to provide any immediate solutions. Although the European Parliament inserted a clause for the European Commission to review the DVC in March 2019, nothing will be in place by January 2017. Added to which the recent European Parliament elections have resulted in new Members of the European Parliament (MEPs) who are not able to draw on the experience of MiFID I. The result has resulted in a new Committee on Economic and Monetary Affairs (ECON) often starting from scratch. This makes the implementation of the DVC looking more like an air ball than a slam dunk. Rather than the reduction in dark trading, we are likely to see a myriad of order types and venues until the industry consolidates back down to the bare minimum. The question then becomes whether this will deliver best execution.

## Annex I

There are 4 categories of pre-trade transparency waivers under MIFIR, as under MIFID I, but with some differences in the way they operate. Waivers are subject to authorisation by the National Competent Authorities (NCAs).

- i. the **Reference Price waiver (RFW)**: the price at which the transaction is executed on a dark order book is taken/imported from either the EU regulated market on which the instrument was first admitted to trading or from the most liquid trading venue (measured by turnover) for that instrument; The transaction may only take place at the midpoint within the current bid and offer prices of that trading venue or, outside the continuous trading phase of that trading venue, at the opening or closing price.
- ii. the **Negotiated Transaction Waiver (NTW)**: the transaction is negotiated bilaterally outside the facility of a trading venue and then printed on the trading venue, subject to certain pricing conditions. No pricing conditions apply when the transaction is "subject to conditions other than the current market price of that financial instrument" (e.g. portfolio trades, benchmark trades, give-up/give in. See Annex I for the exhaustive list of such negotiated transactions under Article 6 of RTS 1).
- iii. the **Large in Scale (LIS) waiver**: large orders above the thresholds set out in the RTS (see Annex II) may remain dark. The residual part (stub) of partially executed LIS orders continues to benefit from the waiver even when below the LIS threshold as long as the order is not amended.
- iv. the **Order Management Facility waiver**: the order is sent to a trading venue but is not disclosed in the order book until the triggering event materialises e.g. stop orders, iceberg/hidden orders.

## Annex II

### NEGOTIATED TRANSACTIONS SUBJECT TO CONDITIONS OTHER THAN THE CURRENT MARKET PRICE (Article 6 of Regulatory Technical Standards (RTS) 1<sup>4</sup>)

A negotiated transaction in shares, depositary receipts, ETS, certificates and other similar financial instruments is subject to condition other than the current market price if any of the following circumstances applies:

- a) the transaction is executed in 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;
- b) the transaction is part of a portfolio trade (5 or more different financial instruments);
- 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 meant to be executed only as a single lot such as exchange for related positions;
- d) the transaction is executed by a management company as defined in Article (2)(1)(b) of Directive 2009/65/EC or an alternative investment fund-manager as defined in Article 4(1)(b) of Directive 2011/61/EU and of the Council which transfers the beneficial ownership of financial instruments from one collective investment undertaking to another and where no investment firm is party to the transaction;
- e) the transaction is a give-up or a give-in;
- f) the transaction has as its purpose the transferring of financial instruments as collateral in bilateral transactions or in the context of a central counterparty margin or collateral requirements or as part of the default management process of a central counterparty;
- g) the transaction results in the delivery of financial instruments in the context of the exercise of convertible bonds, options, covered warrants, or other similar financial derivative;
- h) the transaction is a securities financing transactions,
- i) the transaction is carried out under the rules or procedures of a trading venue, a central counterparty or a central securities depository to effect buy-in of unsettled transactions in accordance with Central Securities Depositories Regulation (EU) 909/2014;
- j) any transaction equivalent to those described before in point a) to i) and which is contingent on technical characteristics which are unrelated to the current market valuation of the financial instrument traded.

<sup>4</sup> <http://www.esma.europa.eu/content/2015-ESMA-1464-Annex-I-draft-RTS-and-ITS-MiFID-II-and-MiFIR>

## Annex III

### Orders large in scale compared with normal market size Regulatory Technical Standards (RTS) 1<sup>5</sup>

Table 1 – Shares and depositary receipts

| Average daily turnover (ADT) in EUR | ADT < 50k | 50k ≤ ADT < 100k | 100k ≤ ADT < 500k | 500k ≤ ADT < 1mil | 1mil ≤ ADT < 5mil | 5mil ≤ ADT < 25mil | 25mil ≤ ADT < 50mil | 50mil ≤ ADT < 100mil | ADT ≥ 100mil |
|-------------------------------------|-----------|------------------|-------------------|-------------------|-------------------|--------------------|---------------------|----------------------|--------------|
| Minimum order size in EUR           | 15k       | 30k              | 60k               | 100k              | 200k              | 300k               | 400k                | 500k                 | 650k         |

Table 2 – Exchange-Traded Funds (ETFs)

|                           |       |
|---------------------------|-------|
| Minimum order size in EUR | 1 mil |
|---------------------------|-------|

Table 3 – Certificates and other similar financial instruments

|                                     |           |           |
|-------------------------------------|-----------|-----------|
| Average daily turnover (ADT) in EUR | ADT < 50k | ADT ≥ 50k |
| Minimum order size in EUR           | 15k       | 30k       |

*Disclaimer: This note contains general information on MiFID/MiFIR and on the RTS published by ESMA on 28 September 2015. The information is not legal advice and should not be treated as such. TABB Group accepts no liability for the content of this note, or for the consequences of any actions taken on the basis of the information provided.*

<sup>5</sup> <http://www.esma.europa.eu/content/2015-ESMA-1464-Annex-I-draft-RTS-and-ITS-MiFID-II-and-MiFIR>

## About

### TABB Group

TABB Group is a financial markets research and strategic advisory firm focused exclusively on capital markets. Founded in 2003 and based on the methodology of first-person knowledge, TABB Group analyzes and quantifies the investing value chain, from the fiduciary and investment manager, to the broker, exchange and custodian. Our goal is to help senior business leaders gain a truer understanding of financial markets issues and trends so they can grow their businesses. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, visit [www.tabbgroup.com](http://www.tabbgroup.com).

### The Author

#### Rebecca Healey

A recognized thought leader in market structure, regulatory reform, and financial trading technology, Rebecca Healey joined TABB in March 2011, bringing over 15 years of direct industry experience in e-trading and financial services. Widely quoted in the financial, business and trade media, she has appeared on TV and radio discussing ongoing changes in capital markets for the *Financial Times*, *The Wall Street Journal*, *The Times*, *DeTelegraaf*, *Het Financieele Dagblad*, *IISore24*, *Handelsblatt*, *Finanz und Wirtschaft*, *L'Agefi*, *Le Monde*, *Les Echos*, CNBC TV, BBC TV, BBC Radio, Bloomberg and Reuters, among others. In 2012, Rebecca was invited to provide evidence for the UK House of Lords review into electronic trading and regularly contributes to wider debates on regulatory reform.

Rebecca has held various sales and trading positions with Bankers Trust, Goldman Sachs and Credit Suisse, where as vice president she was instrumental in launching the firm's successful Advanced Execution Services product to hedge funds from its inception in 2002 until 2008. Prior to this, she was the first electronic trader at Credit Suisse to be registered for all-electronic European cash equity markets and covered sales trading into Asia and then Europe between 1997 and 2000. She was based in the Middle East from 2008 to 2010, employed by the British Embassy in Bahrain, where she successfully launched the UK government's financial services strategy and set up the Bahrain Financial Services Roundtable, which remains a key source of information for the UK government today, especially in relation to Islamic finance.

Rebecca holds a Bachelor of Arts degree in Spanish and Latin American History and Politics from the University of London.

At TABB Group, Rebecca has authored an expanding catalogue of research papers and commentary covering European equities, FX, fixed income, dark pools, TCA, HFT, FTT, market surveillance, market structure and regulatory reform.



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