

June 2017

AUTHOR

Harald Carlens

Quantitative Analyst
VP, Electronic Products
harald.carlens@itg.com

Duncan Higgins

Managing Director
Head of Electronic Products,
EMEA
duncan.higgins@itg.com

CONTACT

APAC +852.2846.3500
CAN +1.416.874.0900
EMEA +44.20.7670.4000
US 1.212.588.4000
info@itg.com
www.itg.com

MiFID II: Systematic Internalisers and Liquidity Unbundling

EXECUTIVE SUMMARY

The European equity liquidity landscape is in flux as brokers and venues adapt to new dark trading rules soon to be imposed by MiFID II. This paper examines the impact on the ability of buy-side traders to source liquidity effectively.

The rules curtail trading in dark venues, requiring many venues and brokers to change the way they operate. Double volume caps and the obligation to bring electronic trades on-venue, leading to the disappearance of broker crossing networks, are expected to have the widest-ranging impact.

Many venues have implemented mechanisms designed to comply with the new rules. The two main approaches are to focus on enabling Large in Scale trading, which is exempt from the volume caps, or to set up periodic auction mechanisms, which are pre-trade transparent in a limited way.

Brokers generally have not announced their strategies for next year. The broker crossing network (BCN), a structure used by many brokers to cross client orders, is not compatible with the new rules and will not continue to exist come January 2018. While some of the activity taking place in BCNs will be able to continue in systematic internalisers (SIs), they are not a replacement.

We review the regulatory dialogue around SIs and offer our interpretation of which subsets of BCN trading will continue as SI trades. We expect brokers to continue to aggregate liquidity across SIs and other venues through smart order routing technology, resulting in

limited disruption for their clients. There is a potential benefit to the buy-side trader from increased post-trade transparency and more granular control over trading counterparties.

The more things change, the more they stay the same. MiFID II rules designed to restrict trading away from central limit order books are causing venues and brokers to change their structures. But while the exact trading mechanisms may change, we expect the extent of alternative liquidity available to buy-side traders through brokers' liquidity aggregation tools to remain largely unchanged. For the buy-side trader, finding liquidity under MiFID II will be business as usual.

INTRODUCTION

With just over six months to go until MiFID II takes effect, some of the impending rule changes have visibly affected the liquidity landscape already. Others, including the systematic internaliser regime, continue to draw a wide variety of interpretations across the industry, leaving many observers unclear on what the actual impact will be. Following recent regulatory clarification, we believe the picture of the SI regime has cleared, and we present our view in this paper.

Our previous paper, "Building Blocks of the Future"¹, laid out the new ground rules of dark trading under MiFID II, and the initial focus on Large in Scale trading. Some of the trends we highlighted—the growth of multilateral trading facility dark trading beyond 8% and the growth of electronic block trading systems in particular—have continued and show no signs of slowing.

Is there a nine-month grace period for BCNs converting to SIs?

No, at least not for equities. Because of the obligation for firms to bring frequent and organised trading on-venue, doing these trades in a BCN [that is, OTC] will no longer be allowed under MiFID II. Firms operating BCNs in equities will need either to convert to SI or bring this liquidity onto an RM or MTF by 3 January 2018.

For non-equity instruments, firms will need to become an SI only if they pass a certain calculated test. This test is based on data from January 2018 onward, so there is an initial period of nine months allowing for the collection and analysis of this data. During this period, firms trading non-equity instruments OTC can still choose to opt up to becoming an SI.

A recent area of focus across the industry, following exchanges between the European Securities and Markets Authority and the European Commission, is the SI regime. The entanglement of several of the new requirements—not just the share trading obligation, but also the rules on trade reporting and transaction reporting—put SIs firmly into almost every MiFID II conversation.

Despite convergence of opinion across ESMA, the EC and key industry participants, the likely future state of SI liquidity and its availability to buy-side trading desks has not been broadly understood, and many fear a dearth of liquidity starting in January 2018. While the shift from block crossing networks into SIs is contrary to the hopes of some policymakers, we believe it may actually improve the buy side's ability to effectively source high-quality liquidity when accessed in the right way.

In this paper we review the key aspects of the SI regime and other developments that may affect investment firms' ability to source liquidity under MiFID II, and we present our view of the coming liquidity unbundling inherent in the new landscape.

A BRIEF HISTORY OF BROKER LIQUIDITY AND SYSTEMATIC INTERNALISERS

The systematic internaliser regime was introduced through MiFID in 2007, with the goal of allowing firms to make their principal liquidity available to their clients. This option to provide liquidity outside of regulated markets and MTFs carried with it a lightweight quoting obligation. With no requirement to become an SI, and significant flexibility in the rules on crossing, brokers largely opted to have clients interact with their principal liquidity on an over-the-counter basis through the structure of a broker crossing network [BCN].

Many large European brokers adopted this BCN framework. Some firms chose to operate both a BCN and an MTF. Examples of this include Goldman Sachs [Sigma/Sigma X] and UBS [PIN/UBS MTF]. Agency or agency-style brokers such as ITG and Instinet, interested only in matching client orders against other client orders, structured their dark pools as MTFs [POSIT MTF and Blockmatch].

BROKER LIQUIDITY AND SYSTEMATIC INTERNALISERS UNDER MiFID II

MiFID II brings about a key change to some of these broker structures, in that equity OTC trading on a systematic, regular or frequent basis will no longer be allowed,² so brokers will no longer be able to operate BCNs.

Before evaluating the available alternatives, it's worth considering some of the different types of liquidity present in current BCNs to understand the commercial drivers for their operators. Firms operating BCNs typically use them to bring together in-house principal flows, client orders and electronic liquidity provider [ELP] flows. This allows them to cross client orders against their own flows, against ELP flows, or against other client orders. Their clients may have the option to choose which of these flows they want to interact with when sending orders to the broker's BCN.

The introduction of the share trading obligation means that brokers operating BCNs will need to find a new approach to bring together liquidity. The available options are combinations of regulated market, multilateral trading facility or SI.

Setting up an RM or MTF is not a straightforward process and, given the scale of firms' regulatory compliance programs, it is unlikely that many brokers will have the resources to consider this during 2017. Besides, the RM and MTF frameworks are more restrictive than BCNs [rules must be non-discretionary³] and, if operating under the reference price waiver, these venues will be affected by the double volume caps.

Bringing orders together on external MTFs or RMs is technically feasible, but not as interesting from a commercial perspective because of the trading fees these venues charge. The last option of becoming an SI could alleviate these commercial concerns, and thus initially SI became the de facto option for brokers looking to replace their BCNs.

² Article 23 of regulation [EU] No. 600/2014

³ Article 4 1. [22] of Directive 2014/65/EU

Trade reporting

Under MiFID II, all trades must be immediately followed by a trade report containing the volume and price, published to the market. For trades on an RM or MTF, the venue publishes this report. For trades with an SI, the SI publishes the report. For OTC trades, the obligation to report is on the seller.

This leaves buy-side firms with the potentially onerous new obligation of trade reporting all the OTC trades in which they were the seller. Some of these firms are taking the view that they will move to trading only on-venue (or with SIs) under MiFID II, to avoid creating an obligation they may be unable to fulfil. This move puts pressure on brokers to bring all their trades on-venue, and so even smaller brokers whose only OTC business comprised crosses done through a high-touch desk may be looking at becoming SIs.

As the buy side opened to the idea of their brokers' likely future liquidity structure involving SIs, other participants saw an opportunity to use the SI framework. Electronic liquidity providers (ELPs), until now participants in third-party RMs, MTFs and BCNs, would use the more broadly adopted SI framework to make their liquidity available on their own terms.

While SIs are designed for internalising client flows against principal liquidity, early interpretation of the SI rules saw brokerage firms potentially looking to extend their SIs to facilitate matching client orders against one another via matched principal activity. This was the prevailing interpretation in the market until recent clarification from regulatory bodies.

REGULATORY DIALOGUE AROUND SYSTEMATIC INTERNALISER NETWORKING

As far back as December 2014, ESMA stated in its technical advice that it was aware of concerns that "the systematic internaliser regime could be used to circumvent the trading obligation for shares, unless the boundaries of the systematic internalisation activity are further specified".⁴

Little more was said on this topic until 1 February 2017, when Steven Maijoor, the chair of ESMA, sent a letter to the European Commission stating that ESMA was "very concerned" about the potential loophole of "networks of systematic internalisers to circumvent certain MiFID II obligations".

The cause of concern here involved the potential for firms to convert their BCNs into "networks of interconnected SIs...supported by liquidity provision agreements between members of the networks". The outcome of this would be that brokers could continue to cross the same sets of flows in their future SIs as in their current BCNs, through networks and agreements among them, their clients and ELPs.

The response from the European Commission was clear. On 16 March 2017, the EC replied with a letter stating they had been made aware by a group of exchanges that "attempts are in progress to create electronic communication networks which would link several investment firms operating under the SI status with liquidity providers". As to the legality of these networks, their response was that while they might "potentially not infringe the letter of MiFID II as it stands, such interconnected networks would not reflect the spirit of the MiFID II reforms".

To provide further clarity to market participants, ESMA published additional Q&A on the SI networking issue on 5 April 2017. This stated that "SI activity is characterised by risk facing transactions that impact the Profit and Loss account of the firm", and that the rules "prevent SIs from operating any system that would bring together third party buying and selling interests in functionally the same way as a trading venue".

Going further, they stated that it would not be in the spirit of the rules for an SI to operate "one or more systems or arrangements, be they automated or not, intended to match opposite client orders"—a clear indictment of the structure some may have planned to use.

On 20 June 2017, the EC took this view all the way back to the level 2 regulation by publishing a draft amendment to the delegated acts clarifying that "an investment firm shall not be considered to be dealing on own account... where that investment firm participates in matching arrangements with the objective or consequence of carrying out de facto riskless back-to-back transactions".⁵

THE IMPACT OF SI RULES ON BROKER LIQUIDITY

Aside from the direct effects of the dialogue between ESMA and the EC, a consequence of the regulatory focus on SI networking is that brokers will be less creative in the structures they implement for their SIs, leading them to need to externalise more flow.

⁴ Paragraph 27 on p. 224 of ESMA's technical advice of 19 December 2014 [ESMA/2014/1569]. https://www.esma.europa.eu/sites/default/files/library/2015/11/2014-1569_final_report_-_esmas_technical_advice_to_the_commission_on_mifid_ii_and_mifir.pdf
⁵ Draft delegated regulation - Ares[2017]3070825

The one segment of crossing business that can unambiguously continue in an SI, as previously in a BCN, entails providing risk capital to clients, which is the original intended purpose for SIs.

The other segments are more nuanced. Except in certain scenarios, it is difficult to see how brokers could cross opposing client orders in their SIs. Two probable exceptions are high-touch crosses and hedging activities related to derivative transactions such as contracts for difference [CFDs].

For high-touch crosses, ESMA clarified in its Q&A that a broker “may accidentally receive two opposite matching buying and selling interests and match them but it should not have systems in place aimed at increasing opportunities for client order matching”.

Where buy-side clients are trading on swap, the broker is undertaking the equity trade as a hedge on its own book, which would allow it to use those orders to provide liquidity in its own SI. This could then match against other clients taking liquidity from the SI.

At this time it’s difficult to see how cash-settled electronic client orders could possibly be made to be a liquidity provider in an SI, and so it is difficult to conceive of a scenario where brokers could cross opposing client orders of this nature in their SIs. This leaves MTFs or RMs as the likely destination for these crosses. Brokers who own MTFs are likely to try to use their own MTFs where these are not restricted by the double volume caps.

In situations where brokers do not operate or are unable to use their own MTFs for these crosses, they will need to bring them onto external MTFs or RMs. The choice of venues here will likely be driven by a combination of trading fees and the extent to which a venue can guarantee two matching orders from the same broker to cross against each other. For orders below LIS size, we expect brokers to use lit venues such as periodic auction facilities, and as detailed in the table at the end of this paper, several of these venues have included a broker priority option enabling this capability.

Another segment of BCN crossing unlikely to be able to continue in SIs is electronic liquidity provider orders crossing against client orders. ESMA’s view is that “by crossing client trading interests with other liquidity providers’ quotes... [an] SI would be bringing together multiple third party buying and selling trading interests in a way functionally similar to the operator of a trading venue”.⁶ And that, ESMA had said earlier, “should not be allowed”.⁷ Thus, buy-side traders wishing to trade with ELPs will need to find another way to do so than through the broker’s SI.

These changes are likely to cause extra work in the short term while the industry builds solutions to help the buy side deal with its consequences. However, we think that long term, the buy side will continue to be able to access liquidity effectively with unprecedented control over the counterparties they choose to interact with—in effect, an unbundling of liquidity sources from broker pools.

THE IMPACT OF LIQUIDITY UNBUNDLING ON BUY-SIDE TRADERS

With the removal of ELP liquidity from broker pools, the expected outcome is a proliferation of SIs and thus an increase in overall fragmentation.

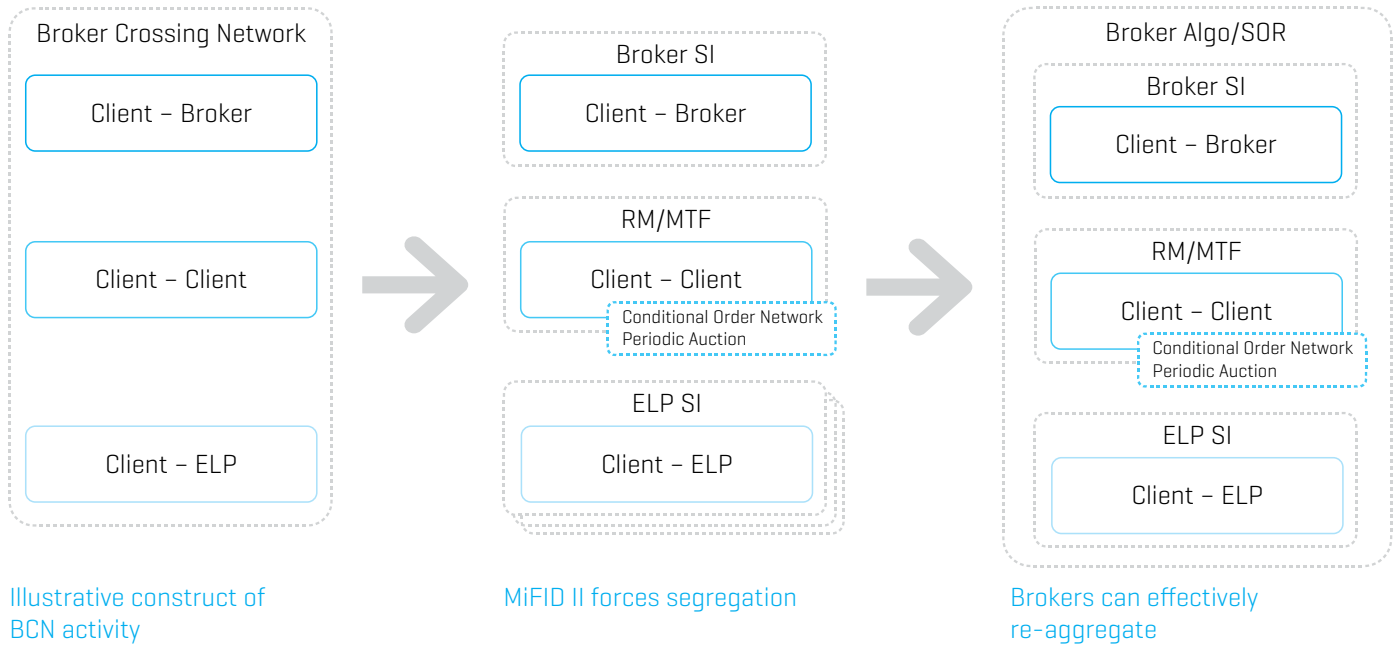
The exact result is still unclear, and it depends on the structures brokers implement around their SIs. One potential structure would allow the buy side to access the SI only through a smart order router that is also able to access other venues, including MTFs and ELP SIs, effectively aggregating the same liquidity that previously resided in their BCN. The alternative is for the brokers to encourage direct access to their SIs, at least for select participants.

Either way, with the addition of ELP SIs, the outcome is an increasing number of venues and increasing complexity. Some have expressed concerns at the buy side’s ability to deal with the complexity and fragmentation. But fragmentation isn’t the only outcome; other consequences contribute to a likely increase in transparency and efficacy of sourcing liquidity.

⁶ ESMA Q&A, April 5 2017

⁷ Directive 2014/65/EU

BCN LIQUIDITY SHIFT



Illustrative construct of BCN activity

MiFID II forces segregation

Brokers can effectively re-aggregate

Source: ITG

First, fragmentation is primarily a problem if it prevents opposing parties from meeting to agree a trade. For example, if two buy-side firms on opposing sides of a trade have an excessively large number of venues in which to represent their order, it may reduce the likelihood they would find and trade against one another. This is a problem the industry already has solutions for, mainly in the form of conditional order tools. By using these tools—either on the desktop [POSIT Alert, Liquidnet or Bats LIS] or through algorithms [POSIT Alert, Turquoise Plato, Bats LIS]—buy-side traders can represent their indicative orders in multiple systems at once, sending a firm order into a specific system only when a counterparty is found.

Fragmentation is less a problem when one party already knows the location of the other party. Currently, a buy-side trader who wants to trade with an ELP is likely, but not certain to be able, to do so through a multitude of BCNs and MTFs. Once the ELP sets up its own

SI, the buy-side firm knows that if an ELP has opposing liquidity, the ELP’s own SI is the best place to go to find it. So there is no loss in available liquidity, and finding the right liquidity may even be easier than before. In a certain sense, the buy side is getting more direct access to sources of liquidity, rather than these sources being bundled up in other venues. Just as with research and execution payments, we think this unbundling will have positive outcomes for buy-side traders and their clients.

Through this liquidity unbundling, buy-side traders will be able to select which sources of liquidity they interact with, and to measure and compare their interaction with each of these sources. Our research on executions through our own liquidity aggregation algorithms has supported the intuitive understanding that it is not just the choice of venue but also the counterparty liquidity sources and method of interaction with them that contribute to execution quality; venues

Transaction reporting

Transaction reporting is the requirement for investment firms to share details of their trading activity with their regulator on T+1. MiFID II increases the amount of detail required in these reports, with up to 65 data fields required, including information such as the investment decision maker.

The most significant change to transaction reporting under MiFID II is for trades done on either a matched principal or agency basis. For these trades, the guidelines indicate that buy-side firms will need to include full market-side execution-level detail in their transaction reports to the regulator, something that may involve additional technology work for the buy side or cooperation between buy-side firms and their brokers in the short term.

Continued on Page 7.

are just an amalgamation of participants brought together using some set logic.⁸ But it is the interaction with venues, not participants, that the buy-side trader generally has control over. The SI regime forces a convergence of venues and their participants, giving buy-side traders unprecedented control over their execution quality in liquidity-seeking strategies.

Second, a potential increase in post-trade transparency could be another positive outcome for the buy side. Currently, BCN executions are reported as OTC, and brokers have no obligation to share information on the amount of trading done in their BCN. SIs, on the other hand, are required to disclose quarterly trading statistics.⁹ In addition to this, some trade reporting service providers publish daily volume statistics per SI on a quarterly basis,¹⁰ which would lead to an increase in post-trade transparency for these trades if continued into MiFID II. This data allows the buy side to have a better and broader view of the trading activity done by different brokers and ELPs, which enables them to make better routing decisions and to better calibrate their routing tools to help them source the right liquidity on each order.

The combination of increasing post-trade transparency and finer control of counterparties through fragmentation results in a new landscape that empowers buy-side traders, more than ever before, to reduce their trading costs by sourcing and selecting appropriate liquidity for each order.

UPDATE ON THE BROADER LIQUIDITY LANDSCAPE

While the SI regime has dominated recent regulatory conversation, other developments have continued to help prepare the industry for the new pre-trade transparency rules coming next year.

The impending double volume caps are more relevant than ever; 2017 has seen record levels of dark trading so far, with dark MTFs representing more than 9% of pan-European volumes in three of the first five months of the year. Given that the majority of this is still taking place under the reference price waiver [RPW]¹¹, which will be capped at 8% under MiFID II, we expect to see significant change in MTF venue activity in January 2018.

One additional factor contributing to the importance of MTF venues is the inability of brokers to bring client-client flow from BCNs into their future SI structures, with MTFs being a good candidate for this trading activity.

GROWTH OF DARK MTF MARKET SHARE



Sources: ITG, Bats

⁸ RTS 27 of Directive 2014/65/EU

¹⁰ https://www.bats.com/europe/equities/trs/si_quarterly/

¹¹ <https://www.itg.com/thinking-article/dark-trading-mifid-ii-need-know/>

Transaction reporting cont'd

A potential stopgap solution that has been discussed is for brokers to conduct all trading for their clients on a principal basis by stepping between their buy-side client and the market on every trade. For example, a buy-side firm using a broker's algorithms would continue trading with that broker in the same way, but executions would be flagged as principal rather than matched principal or agency. This would remove the buy-side firm's obligation to provide market-level execution data in its transaction report, allowing it instead to submit data showing total volume and average prices on blocks traded with that broker.

While this workaround may help with the specific transaction reporting obligation, it is likely to cause issues elsewhere. Consider how trade reporting will be done for this type of trading.* The market side of the trade will certainly need to be trade reported, either by the venue (if an on-venue trade) or by the broker (if selling and OTC). But arguably the broker-client side of the trade will also need to be trade reported so the regulator can match the buy-side client's transaction report to market activity. Will this be trade reported as SI or OTC? Because of the automated nature of algorithmic trades, if it is traded as OTC it would break the requirement for frequent and systematic organised trades to happen on a venue. If it is trade reported as SI, it contributes to the amount of non-risk business done in the broker's SI, and may lead to the SI being seen as undertaking de facto riskless back-to-back transactions "on a regular and not occasional basis", in violation of the SI rules.^{12,13}

For this reason, it does not seem like principal trading is a comprehensive solution to the buy side's transaction reporting requirements.

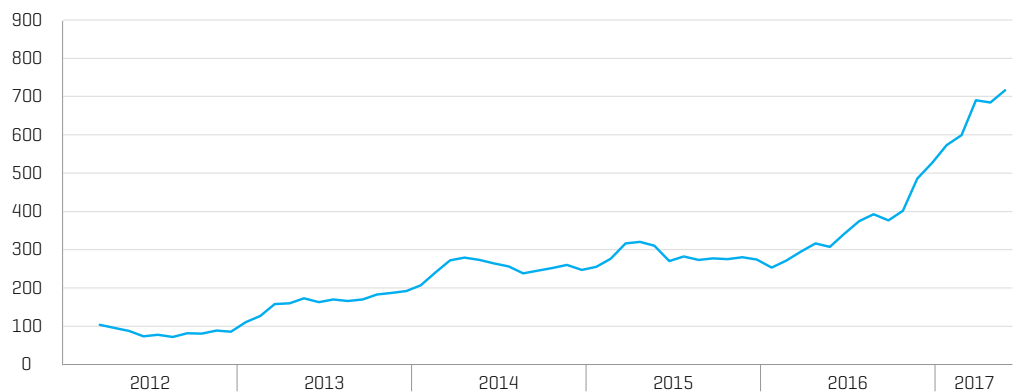
Many new solutions have been announced or launched to help the industry deal with the MTF rule changes. The ones that have received the most interest broadly fall into two categories: periodic auction books and electronic block trading systems.

Periodic auction books, such as those operated or proposed by Bats, Nasdaq and Goldman Sachs, are pre-trade transparent venues where auctions take place throughout the day. During each auction call period, the indicative uncrossing price and volume are disseminated. The reason these may be suitable for some order flow currently being routed to dark venues is that the auctions last for extremely short durations, often on the order of 100 ms, limiting the amount of pre-trade information given out to the market. In addition, the existing periodic auction venues are structured so that information on the orders in the system is disseminated only

when opposing orders are present. If an order is placed in a periodic auction without a counterparty being present, no information is disclosed to the market—just as in a dark pool. But no waiver is required because there is pre-trade transparency, so these venues will not be subject to the double volume caps.

Electronic block trading systems provide mechanisms that allow market participants with large block-size orders to find similar orders with opposing trading intentions. There has been significant growth in this space: Venues have gone from only two at the beginning of 2014 to four now, with at least one more due to go live shortly, and total traded value on these systems more than doubled in the past year. While some of these venues are still trading under the RPW, we expect they will all start using the LIS waiver by January, making them exempt from the double volume caps.

THE RISE IN DARK BLOCK TRADING



Source: Normalised total value traded across European block trading platforms—POSIT Alert, Turquoise Block Discovery, Bats LIS and Liquidnet—using three-month moving average

* See Page 3 for trade reporting

¹² Recital [19] of the Commission Delegated Regulation [EU] 2017/565

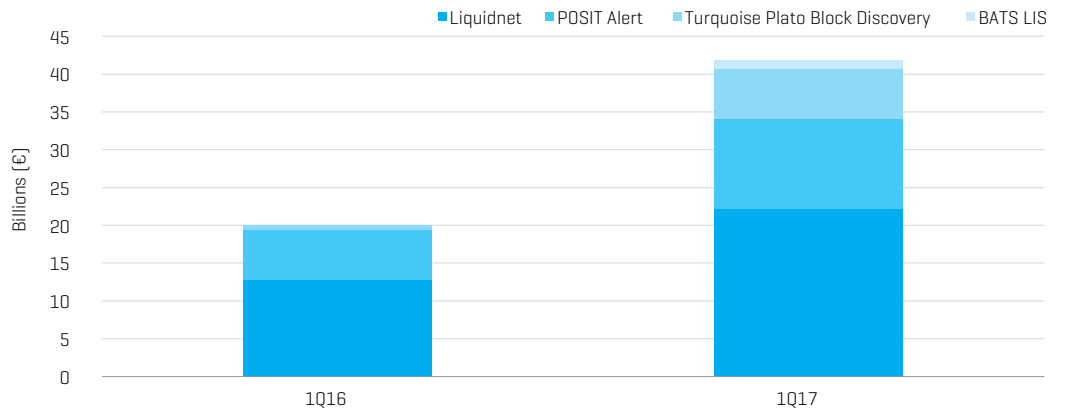
¹³ Draft delegated regulation Ares[2017]3070825

The key mechanisms employed by electronic block trading tools to successfully bring together large orders while minimising opportunity cost involve either blotter-sweeping tools or algorithmic conditional orders. Some systems, such as Turquoise Plato Block Discovery and Liquidnet, employ one of the two mechanisms: others, such as Bats LIS and ITG's POSIT Alert, bring together liquidity through both mechanisms. This remains an area of rapid change, with Bats LIS having seen significant growth since it added

blotter sweeping to its system earlier this year, Euronext launching its new Block MTF shortly, and Turquoise Plato having just made a change to allow opposing conditional orders to be notified of trading opportunities immediately rather than at periodic intervals.

The Market Initiatives table at the end of this document covers a range of new initiatives in more detail, including some of the block trading and periodic auctions venues already mentioned.

RECENT GROWTH OF ELECTRONIC BLOCK TRADING PLATFORMS



Sources: ITG, Bats and Turquoise

SIs and quoting

Unlike BCNs, SIs are not dark pools. SIs have an obligation to publish firm two-way quotes for a minimum size of 10% of standard market size, and these quotes must reflect prevailing market conditions. For client orders with size below SMS, they are not able to offer price improvement on these quotes except under certain specific circumstances.

When executing client orders above SMS, these restrictions don't apply. In this case, SIs have discretion over both pricing and dissemination [or not] of quotes, and the information dissemination is similar to the current BCN structure.

Average value of transactions (AVT) in EUR	Standard market size
AVT < 20k	10k
20k ≤ AVT < 40k	30k
40k ≤ AVT < 60k	50k
60k ≤ AVT < 80k	70k
80k ≤ AVT < 100k	90k
100k ≤ AVT < 120k	110k
120k ≤ AVT < 140k	130k
Etc.	Etc.

Source: MiFID II RTS 1, Annex II, Table 1
http://ec.europa.eu/finance/securities/docs/isd/mifid/rts/160714-rts-1-annex_en.pdf

CONCLUSION

European market operators have been busy preparing for the coming dark trading rules. Some new initiatives, such as LIS-enabling conditional order tools, have already demonstrated their worth through rapid uptake. Others, such as periodic auctions venues, are ready to be used when alternatives disappear.

While many of the rules have been known for years, the interpretation of the rules around SIs was clarified only recently¹⁴, and as such the brokers' response to those rules is not yet public. We expect brokers to continue to aggregate liquidity across SIs and other venues through smart order routing technology. Regardless of the exact structures brokers implement, we think there is enough clarity to see that the resulting liquidity unbundling—the move from BCNs to some combination of SIs and MTFs—will lead to positive outcomes for the buy side through enhanced control and post-trade transparency.

The more things change, the more they stay the same. While the mechanics and regulatory status of venues and the way liquidity is being aggregated will change, the direct impact on buy-side traders should be limited. Just as broker liquidity aggregation tools will deal with the additional complexity of suspensions due to volume caps, these tools will adapt to deal with whatever structure brokers implement for their liquidity.

As the market gathers data and evaluates the new venues, the buy side [in cooperation with their brokers and analytics providers] should be able to leverage the outcome of the new rules to implement the next generation of liquidity aggregation tools with unprecedented control and liquidity access.

MARKET INITIATIVES

Market Initiative	What Is It?	Who's Doing It?	How Does It Work?	Why Will It Be Exempt From the Caps?	What Has the Response Been?
Turquoise Plato Block Discovery™	Initially launched in October 2014 as Turquoise Block Discovery™ and renamed following a cooperation agreement with the Plato Partnership finalised in September 2016, Turquoise Plato Block Discovery offers a conditional order service designed to facilitate trading of larger blocks than traditional dark pools.	Turquoise, the equity trading venue that is majority-owned by the London Stock Exchange, in cooperation with the Plato Partnership, a not-for-profit industry group comprising asset managers and broker-dealers.	It continuously matches undisclosed block indications that execute at randomised timings in Turquoise Plato Uncross™.	Though currently operating under the reference price waiver, Turquoise Plato Block Discovery is designed to support block executions and so is expected to transition to using the large in scale waiver to qualify for exemption. Orders participating in the service are already subject to a minimum order threshold, expressed as a % of LIS, and more than half of value traded via Turquoise Plato Block Discovery is above 100% LIS.	Significant buy-side interest initially helped gather the support of the sell side, with several brokers including ITG interacting with the service from day one. As of June 2017, 25 active participants are offering access to Turquoise Plato Block Discovery through either block indications [conditional messages] or block discovery notifications [firm orders explicitly opting in to interact with the service]. Several of these have integrated the service into their algorithms. May 2017 set a monthly record of €3.34bn value traded, 27% higher than the prior record of March 2017.
Bats LIS	An indication of interest (IOI) negotiation and execution platform for large in scale trades. The first phase [sell-side algo conditionals] went live in December 2016. The second phase [buy-side desktop conditionals] went live in March 2017.	Bats Europe, operator of the BXE and CXE lit and dark order books, together with BIDS Trading, operator of an existing broker-sponsored block trading network in the U.S.	Participants submit IOIs to the Bats LIS system to identify potential matches. When a match is identified, both parties choose a designated broker for clearing, and the trade takes place on-exchange. Buy-side participants can control IOIs through their EMS or OMS.	Order size is restricted to a minimum of LIS, making trades eligible for exemption under the LIS waiver.	As of June 2017, 16 brokers are actively using the direct LIS [algo conditionals] service, and 14 brokers are acting as designated brokers to the buy side using the desktop. The service has seen significant growth since the buy-side desktop launch, with a record monthly value traded of €1.7bn in May 2017. ¹⁵
POSIT Conditional Orders	A conditional order service allowing sell-side participants to contribute their liquidity to ITG's POSIT Alert liquidity pool, announced in April 2017.	ITG, an independent broker and financial technology provider, and operator of POSIT MTF.	Sell-side participants can send uncommitted conditional orders to the POSIT Alert system to identify potential matches with ITG's buy-side POSIT Alert users, other sell-side conditionals, or other eligible flow. When a match is identified the broker can send in a firm order. Executions take place in POSIT MTF.	Designed for block orders, order size can be restricted to a minimum of LIS, making trades eligible for exemption under the LIS waiver.	The new conditional order functionality adds to POSIT Alert's global crossing capabilities. POSIT Alert set new trading records in the first quarter of 2017, with more than \$440mm in average daily value traded in EMEA.

Market Initiative	What Is It?	Who's Doing It?	How Does It Work?	Why Will It Be Exempt From the Caps?	What Has the Response Been?
Bats Europe Periodic Auctions	A periodic auction book, launched in October 2015.	Bats Europe, operator of the BXE and CXE lit and dark order books.	A lit order book operating in parallel to the continuous order book, holding very short regular auctions with prices collared by the EBBO. The frequency of the auctions is between 100 ms and five minutes, depending on the liquidity of the stock. Minimum order size allowed is currently €3,000. Allocation is done on a price-size-time basis.	The indicative price and size of each auction are published, so the mechanism is considered pre-trade transparent and thus the caps do not apply.	As of June 2017, 13 brokers are participating regularly in the Periodic Auctions book. On 21 October 2016, Bats introduced a new minimum acceptable quantity [MAQ] feature, a welcome addition bringing the available functionality more in line with traditional dark pools. A record €442 million traded in the Bats Periodic Auctions book in March 2017.
Nasdaq Auctions on Demand	A periodic auction book, launched in June 2017.	Nasdaq, operator of the primary stock exchanges in Copenhagen, Helsinki, Iceland and Stockholm.	A lit order book operating in parallel to the continuous order book, holding very short regular auctions with prices collared by the EBBO. The auction call period can last anywhere between 25 and 100 ms. Orders can be pegged to PBBO mid, and are protected by an EBBO price collar.	The indicative price and size of each auction are published, so the mechanism is considered pre-trade transparent and thus the caps do not apply.	The first day of trading was 7 June. Some regional brokers, including SEB, have given public support to the service.
Sigma X Auction Book	A new periodic auction segment as part of Sigma X MTF.	Goldman Sachs, which operates Sigma X MTF as a reference price dark venue.	Some details around the exact mechanics are still to be confirmed. While similar to the other two existing periodic auction venues, Sigma X Auction Book introduces some innovations around protection and price discovery. Auctions are triggered when a potential match is detected, and will last for up to 125 ms. The uncrossing price is set at the beginning of an auction and is held fixed. Priority is based on price/broker[optional]/size/time for orders that trigger auctions, and time only once the call period begins.	The indicative price and size of each auction is published, so the mechanism is considered pre-trade transparent and thus the caps do not apply.	The new segment was announced at TradeTech 2017 and planned launch is in Q3 2017. No public information is available on the number of brokers planning to integrate with the service from day one.
Large in scale trades on UBS MTF	An additional pre-trade transparency waiver introduced into UBS MTF on 16 January 2017.	UBS MTF, the dark multilateral trading facility operated by UBS.	Most of the mechanics of the MTF remain unchanged, but trades that meet the LIS size requirements are consummated under the LIS waiver. Other trades will continue to take place as RPW.	Trades taking place under the LIS waiver are exempt from the caps.	Just over 1% of value traded in UBS MTF in May 2017 took place under the LIS waiver. Of the trades done under RPW in April 2017, 29% of value traded was done at the bid or offer. It is not yet clear what will happen to these trades after 3 January 2018, as bid and offer trading under RPW will no longer be possible.

Market Initiative	What Is It?	Who's Doing It?	How Does It Work?	Why Will It Be Exempt From the Caps?	What Has the Response Been?
Euronext Block MTF	A new block-focused dark MTF, scheduled for launch on 10 July 2017 (subject to regulatory approval).	Euronext, operator of the primary stock exchanges in Amsterdam, Brussels, Lisbon and Paris and of Smartpool, the London-based dark MTF that will be revamped into a new block-trading MTF.	Euronext Block MTF will accept only LIS orders, on either a firm or conditional basis. Optional functionality will allow IOIs to be displayed to selected counterparties, with the sender having control over who receives IOIs.	Trades taking place under the LIS waiver are exempt from the caps.	With the launch scheduled for 10 July 2017 the exact list of firms that will connect to the service is not yet known, but Euronext has confirmed that it includes global bulge-bracket banks and agency brokers as well as local brokers.
LIS on SETS order book	Hidden orders within the LSE SETS lit order book, with peg option.	London Stock Exchange Group.	Block orders can be sent to the LSE's lit order book but will remain concealed from other participants provided they meet the LIS thresholds. The orders can have a limit applied, or be pegged to the midpoint of the best bid and offer. In a sense, this offering could be viewed as a dark order book sitting within the main LSE lit market order book, therefore interacting with both dark and lit contra liquidity. In addition to resting orders, midpoint IOC orders and aggressive IOC orders can also interact with this order type. Participants can specify a minimum execution size (MES).	Orders must be large in scale to be posted to the book, and so can become exempt under the LIS waiver.	No information is available on the number of members using the service. LSE saw a record month totalling £81.8mm traded through midpoint orders in May 2017, an increase of 146% YoY. Total value traded in the first five months of 2017 increased by 60% from the same period of 2016.
Deutsche Borse volume discovery orders	An enhanced iceberg order type to allow execution of large orders within the Xetra book, launched in December 2015.	Deutsche Borse, the operator of Xetra.	The new volume discovery order allows the hidden part of an iceberg order to be executed (matched) against other volume discovery orders at the midpoint of the bid-ask spread in the order book through a second limit. An optional minimum executable quantity ensures that only large orders will qualify for matching.	Midpoint executions from volume discovery orders benefit from exemption under the LIS waiver. Executions at the bid or offer due to normal iceberg behaviour continue to take place under the order management facility waiver.	It is not clear how many brokers are connected to the service.
Nasdaq Nordic LIS Block	Hidden orders integrated within the Nasdaq Nordic lit order books, with peg option.	Nasdaq, operator of the primary stock exchanges in Copenhagen, Helsinki, Iceland and Stockholm.	Hidden limit orders can be submitted to the Nasdaq lit order book if they meet the LIS thresholds. Hidden orders rank below displayed orders in execution priority at given price levels. MAQ values, and various peg types are supported. Hidden orders pegged to the mid-price gives an instant exposure to all crossing orders.	Orders must be large in scale to be posted to the book, and so can become exempt under the LIS waiver. If the volume of an original LIS order is reduced due to a partial execution, the hidden order ("stub") remains non-displayed even when the residual is smaller than LIS.	No information is available on the number of members using the service or on the total value traded. Some stocks have LIS trades happening several times a week, but even the most active stocks don't have LIS trades every day. Nasdaq believes that Nordic LIS Block orders resting at the mid-point in the lit book with a 25% MAQ could have meaningful liquidity capture potential. Nasdaq Nordic data suggests that 10% of all aggressive orders are larger than €25k and 1% are larger than €125k.



© 2017 Investment Technology Group, Inc. All rights reserved. Not to be reproduced or retransmitted without permission.

Broker-dealer products and services are offered by: in the U.S., ITG Inc., member FINRA, SIPC; in Canada, ITG Canada Corp., member Canadian Investor Protection Fund ("CIPF") and Investment Industry Regulatory Organization of Canada ("IIROC"); in Europe, Investment Technology Group Limited, registered in Ireland No. 283940 ("ITGL") [the registered office of ITGL is Block A, Georges Quay, Dublin 2, Ireland]. ITGL is authorized and regulated by the Central Bank of Ireland; in Asia, ITG Hong Kong Limited (SFC License No. AHD810), ITG Singapore Pte Limited (CMS License No. 100138-1), and ITG Australia Limited (AFS License No. 219582). All of the above entities are subsidiaries of Investment Technology Group, Inc. MATCHNowSM is a product offering of TriAct Canada Marketplace LP ("TriAct"), member CIPF and IIROC. TriAct is a wholly owned subsidiary of ITG Canada Corp.

These materials are for informational purposes only, and are not intended to be used for trading or investment purposes or as an offer to sell or the solicitation of an offer to buy any security or financial product. The information contained herein has been taken from trade and statistical services and other sources we deem reliable but we do not represent that such information is accurate or complete and it should not be relied upon as such. No guarantee or warranty is made as to the reasonableness of the assumptions or the accuracy of the models or market data used by ITG or the actual results that may be achieved. These materials do not provide any form of advice (investment, tax or legal). ITG Inc. is not a registered investment adviser and does not provide investment advice or recommendations to buy or sell securities, to hire any investment adviser or to pursue any investment or trading strategy. The positions taken in this document reflect the judgment of the individual author(s) and are not necessarily those of ITG.

All trademarks, service marks, and trade names not owned by ITG are the property of their respective owners.