



Guide to Equity Exchanges 2016

Global Market Structure

Passion to Perform



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Launching Global Market Structure

Dear Client,

We are pleased to launch our annual guide to global equity exchanges. We hope you find this a useful reference document.

This first edition marks the launch of a new service to our clients – the Global Market Structure team – who provide information to clients to help them respond to and potentially shape market structure.

For several years, Deutsche Bank has benefited from taking an internal global coordinated approach to understanding the markets' competitive trends and regulatory reforms. We have experts located in the three main regions in order to engage with local policy makers, infrastructure providers and innovators. Increasingly this has enabled us to identify that questions arising at a national or regional level invariably have a global context, which can lead to a more reasoned response. We now wish to share that approach with our clients so that together we can support the evolution of the market. The team will continue to work with and inform buy and sell side to help build consensus.

At the same time, we have seen an increasing demand from our clients for information as to how to understand and respond to changing markets. Our Global Market Structure team will engage with you locally to deliver expertise and a better understanding of local and global issues and we are launching this now as the importance of buy side engagement in evolving and adopting market structure initiatives is sure to continue to grow.

I look forward to continuing to grow our partnership.



Andrew Morgan
Head of Cash Execution

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2 015 marked the start of the European equity markets' response to MiFID. We also saw the equity markets continue to move towards the broadly supported structure of European equities being traded within one marketplace rather than via a number of linked marketplaces.

Before considering the impact of MiFID 2 last year and the impact it may have in the future we should first recap the key reasons for the implementation of MiFID 2. MiFID 1 introduced new competition to the markets which unleashed innovation. In parallel the adoption of lower latency and higher frequency trading techniques was progressing rapidly. In addition, dark pools were created to assist larger orders to be executed with less market impact than if such orders were executed on lit venues. These larger orders were subsequently split into smaller sizes and the pools which were using MiFID's reference price waiver dominated the dark pool space. As a result of the rise in volumes of these smaller orders in dark venues, policy makers were concerned that such trading techniques may harm price formation and thus needed to be curtailed. MiFID 2 responded to this concern by introducing 4% and 8% caps on the use of two of the reference price waivers.

The commercial rationale for trading in dark pools remains unchanged; however, for them to stay within the rules, and deliver the benefit of high matching probability without market impact, new ways of operating will need to be developed. It is the initiation of this process that has created most of the innovation in the European market microstructure in 2015, as venues seek ways to increase the size of fills achievable in dark venues so that they may use the Large in Scale waivers and thus not become subject to the caps set out above.

We have seen in 2015 the introduction of services such as Turquoise Block Discovery™, BATS's periodic auction book, the London Stock Exchange's proposal of intra-day auctions and the Deutsche Boerse's refined hybrid book structure for their Volume Discovery Order platform. There were also other initiatives introduced in 2015 and we are aware of several more of a similar type which may be launched in 2016. Whilst some of these initiatives have shown great potential it is fair to say that none of them has yet achieved material volumes. Perhaps this is to be expected as many equity traders will be moving to the new models not because they are inherently better than the current structure but because the current models will no longer comply with the applicable rules. The market is presently determining the preferred model for trading in larger size orders with such decision being deferred until closer to 1 January 2018 (note that this is the likely implementation date of MiFID 2).

Such innovations are exciting for those involved in European equities trading but we must also note that 2015 saw more progress towards comprehensive adoption of CCP interoperability which in turn led to clearing houses delivering a more efficient service together with competitive prices. This process has been underway for over 10 years but there is still some way to go. Increasingly, the venues refusing to deliver these cost savings and efficiencies to the market appear dated and MiFID 2's open access provisions will make such venues evermore conspicuous. In 2015 we also saw progress with the T2S initiative. Although the change in the settlement landscape is moving slowly, there is now a lot of focus to see whether the efficiency gains promised by T2S's proposal of linking CSDs can be delivered before blockchain is introduced and fundamentally reshapes the settlement landscape.



Vienna Stock Exchange (Wiener Börse)

Market Information	
Time Zone	GMT +1
Instrument Code	Bloomberg: AV ISIN: AT Reuters: AT
Investor ID	Not Required
Trading Hours	<p>Open: Monday - Friday Market Model: Continuous trading</p> <ul style="list-style-type: none"> - Continuous Trading: 09:01 - 12:00 hrs and 12:03 - 17:30 hrs - Intraday auction: 12:00 - 12:03 hrs <p>Market Model: Single Intraday Auction</p> <ul style="list-style-type: none"> - Intraday auction: 12:00 - 13:30 hrs¹
Opening Auction Details	<p>Market Model: Continuous trading</p> <ul style="list-style-type: none"> - Pre-open: 08:00 - 08:55 hrs - Opening Auction: 08:55 - 09:04 hrs (up to 9:00 for ATX instruments) <p>Market Model: Single Intraday Auction</p> <ul style="list-style-type: none"> - Pre-trading: 08:00 - 12:30 hrs - Intraday Auction: 12:30 - 13:30 hrs
Closing Auction Details	<p>Market Model: Continuous trading</p> <ul style="list-style-type: none"> - Closing Auction : 17:30 - 17:34 hrs (17:33 for ATX instruments) - Post-trading: 17:34 - 17:45 hrs (17:33 for ATX instruments) <p>Market Model : Single Intraday Auction</p> <ul style="list-style-type: none"> - Post-trading: 13:30 - 17:45 hrs
Currency	EUR
Major Market Indices	<p>ATX: The ATX is a capitalisation weighted index which tracks the price trends of blue chips on the Wiener Borse in real time. The index uses free float adjusted shares for calculation.²</p> <p>Other Indices: CECE, RDX</p>
Basic Information	<p>Market Segments: The Equity market on the Wiener Börse is divided into 3 segments - Prime Market, Mid Market and Standard Market. The Prime Market consists of stocks which adhere to high standards of reporting, transparency and disclosure standards. The Mid Market comprises of those companies which have low capital requirements and wish to raise capital through the stock market. The Standard Market comprises of those stocks which do not meet the criteria of the Prime and the Mid Market.³</p> <p>Market Model: The Prime Market operates a continuous trading model. The stocks in the Mid Market and Standard Market segments are allocated either to continuous trading or to a single intraday auction process.</p>
Order Types Supported	<p>Limit Order Market Order Stop Orders (Stop Market Order and Stop Limit Order) Iceberg Order (Minimum Overall Quantity: 1,000, Minimum Peak Quantity: 100) Market-to-Limit Order</p> <p>Validity restrictions:</p> <ul style="list-style-type: none"> - Good for day - Good till date - Good till cancelled <p>Execution restrictions:</p> <ul style="list-style-type: none"> - Immediate or cancel - Fill or kill - Book or cancel - Top of the book - TOP+ order



Vienna Stock Exchange (Wiener Börse) (cont'd)

Stock Tick Size	Price Band	Tick Size
	0-9.999	.001
	10-49.995	.005
	50-99.99	.01
	100 and above	.5
Trading Units	1 share per lot	
Block Trading	No on-exchange block trading. Block trades can be concluded OTC and then brought under exchange rules.	
Odd-Lot Trading	Not applicable	
Short Selling	Permitted as per EU Short Selling Regulation	
Day Trading	Permitted	
Daily Price Limit	The exchange does not publish thresholds for price limits. However, a Volatility Auction is triggered when either a static or a dynamic price limit is breached. This auction lasts approximately 2 minutes and ends randomly. Further, if the price lies beyond the defined range, the auction continues until manually terminated. ⁴	
Foreign Ownership Limit	No general restrictions	
Settlement		
Settlement Cycle	T+2 (exchange transactions in CCP eligible securities)	
Equities Market Charges	<p>Stock Exchange Fees Stock exchange fees are based on the gross value of the respective transaction and are charged to the broker.</p> <p>Transaction fee approx 4 bps for both sides⁵</p>	
Supplementary Information		
Notes	Exchange website: http://en.wienerbourse.at Venue enquiries: info@wienerbourse.at	
Source	<p>All information sourced from the exchange website and Bloomberg. For additional information please see below:</p> <p>1 http://en.wienerbourse.at/marketplace_products/trading/tradinghours/index.html 2 http://www.bloomberg.com/quote/ATX:IND 3 http://en.wienerbourse.at/marketplace_products/segmentation/equitymarket/index.html 4 http://en.wienerbourse.at/static/cms/sites/wbag/media/en/pdf/marketplace_products/feinspez_xetra_marktmodell.pdf 5 http://en.wienerbourse.at/static/cms/sites/wbag/media/en/pdf/agb/agb_4.pdf</p>	