



Regulatory Affairs Department
Winchester House
1 Great Winchester Street
London EC2N 2DB

Tel: +44 (0) 207 545 8380
Email: Daniel.Trinder@db.com

CESR
11-13 Avenue de Friedland
75008 Paris
France

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Dear Sir, Madam,

Re: DB Response to Call for evidence on Micro-structural issues of the European equity markets

Deutsche Bank appreciates the opportunity to respond to your call for evidence on 'Micro-structural issues of the European equity markets'. Please find our detailed responses to your questions below. In the third question on Sponsored Access we have also included reference to an Appendix which is submitted separately and which should remain confidential.

I. High Frequency Trading (HFT)

1. Please describe trading strategies used by high frequency traders and provide examples of how they are implemented.

'High frequency trading' is an undefined term that has been used to describe a number of quantitative, automated trading strategies. There are two main categories of strategy used by HFTs: statistical arbitrage and electronic market making and these can be used across a range of asset classes such as equities, FX and US Treasuries.

Statistical arbitrage techniques identify short-term opportunities where securities and derivatives are mispriced. The mispricing can occur across venues, asset classes or over time having been identified using reversion and correlation techniques. Electronic market making strategies attempt to capture spread and earn rebates whilst managing positional risk in real time. They all use powerful mathematical programs that rely on vast amounts of data and processing power to identify pricing differentials in the marketplace.

These strategies generate large volumes of small to medium sized orders and hold positions for short time periods. Their low potential profit per transaction means that they are highly sensitised to transaction costs and operational efficiency.

2. Please provide evidence on the amount of European trading executed by HF traders (including the source(s) of that information). CESR is particularly interested in statistical material on: a) market share of HFT in orders/trades in Q1/2010 (and, if possible compared to 2008 and 2009), b) average trade size in Q1/2010 (and, if possible compared to 2008 and 2009),

c) market participants, d) financial instruments traded (including cash vs. derivatives). If possible, please distinguish between HFT on transparent organised trading platforms and on dark pools of liquidity.

The data that we hold is not able to be extrapolated to reflect the market as a whole. It is also important to remember that as HFT has yet to be properly defined, any statistics available will be subjective.

3. What are the key drivers of HFT, and (if any) limitations to the growth of HFT?

The key drivers of HFT are improved technology and innovation, reduced marginal costs, high market liquidity and a viable stock-loan market. Further clarification on sponsored access requirements by the FSA, as well as regional infrastructure requirements, has increased the pace of demand for co-location and hosting, which has helped drive down latency.

We believe that the market share of HFT will reach a natural plateau in the near future due to the limited potential profitability of these strategies.

4. In your view, what is the impact of high frequency trading on the market, particularly in relation to:

- **market structure (eg tick sizes);**
- **liquidity, turnover, bid-offer spreads, market depth;**
- **volatility and price formation;**
- **efficiency and orderliness of the market?**

Please provide evidence supporting your views on the impact of HFT on the market.

The positive market impact that MiFID has had in terms of competition and innovation has been one of the major catalysts for the increased presence of HFTs. Many of the trading platforms have actively pursued a strategy of building technology and pricing models with HFTs in mind in return for the benefits that they offer.

Tick sizes are determined by trading platforms. It is important that tick sizes reflect the liquidity and price of the instruments involved and are thus meaningful and appropriate. However, a degree of standardisation is important to prevent business being pushed into OTC or dark pools.

HFTs compete against each other for business rather than against other market participants and we believe that this competition will lead to further technology and strategy innovation. HFTs do not trade in competition with traditional high touch traders as the advantages that an automated trader might employ are of no benefit when trading against a traditional trader.

In terms of liquidity, HFT increases the amount of liquidity in the market through implementation of their trading strategies and this has the follow on effect of reducing bid-offer spreads. Due to the predominant types of HFT strategy employed, HFT has had minimal effect on market depth.

It is difficult to distinguish the impact that HFT has had on volatility due to the unprecedented volatility seen following the collapse of Lehman Brothers. We believe that as HFT causes the market to react more quickly, volatility should be more quickly corrected. HFT has had a positive impact on price formation as a result of any departure from fair value is very quickly arbitrated out of the market.

In our experience, HFT has led to a more efficient and orderly market as a result of the benefits that these strategies bring. In order to protect the integrity of the market, trading platforms monitor their order books and have infrastructure in place to protect against suspect / rogue orders. They also demand extensive testing of customer technology before allowing customers to connect.

5. What are the key benefits from HFT? Do these benefits exist for all HFT trading strategies?

The key benefits from HFT are:

- Increased liquidity / fill rates
- Improved price formation and reduced spreads
- Technology innovation, especially in terms of market data, latency and hosting
- Increased market efficiency and orderliness
- Reduced volatility
- Significant impact in market evolution

6. Do you consider that HFT poses a risk to markets (eg from an operational or systemic perspective)? In your view, are these risks adequately mitigated?

We do not believe that HFT poses additional risk to markets. HFT uses technology to facilitate more efficient trading and we believe that this technology is more than sufficiently developed to deal with these requirements. In addition, the use of automation and technology actually helps mitigate risk through the guaranteed provision of an audit trail and the reduced opportunity for human error. Trading platforms are responsible for the integrity of their order books and have protective infrastructure in place. Existing market abuse rules provide sufficient coverage of HFT.

The media perception of HFT might understandably generate concern for those parties used to a more traditional way of trading. For example, concerns have been voiced that HFT encourages a situation where the primary objective is the execution of the trade rather than obtaining ownership of the underlying stock. However, for a market to be robust and efficient both investors and market makers are required and HFTs often act as the agents that bring buy and sell demand together in the market. HFT also contributes to an efficient and orderly market by increasing market liquidity and reducing spreads - leading to vastly improved fill rates – and the presence of additional trading strategies in the market brings diversity and robustness.

7. Overall, do you consider HFT to be beneficial or detrimental to the markets? Please elaborate.

We believe HFT is beneficial to the markets. Trading strategies, such as electronic market making and statistical arbitrage have been used for many years. Technology innovation and development has led to significant latency reduction, allowing these strategies to become vastly more efficient and therefore more visible in the market. HFTs compete against each other for business rather than against other market participants and we believe that this competition will lead to further technology and strategy innovation. HFT has also helped contribute to a reduction in the cost of trading through the creation of new pricing tariffs by the trading platforms

For a market to be robust and efficient both investors and market makers are required and HFTs often act as the agents that bring buy and sell demand together in the market. HFT contributes to an efficient and orderly market by increasing market liquidity and reducing spreads - leading to vastly improved fill rates – and the presence of additional trading strategies in the market brings diversity.

Any market participant is able to invest in technology for HFT and the market should not be forced to move at the pace of the slowest participant as this hinders innovation and is detrimental to market efficiency and quality.

8. How do you see HFT developing in Europe?

We believe that the market share of HFT in the market will naturally reach a plateau in the near future due to the limited potential profitability of such strategies. HFT groups will continue to compete

against each other rather than other market participants, which will lead to further technology and strategy innovation.

9. Do you consider that additional regulation may be desirable in relation to HF trading/traders? If so, what kind of regulation would be suitable to address which risks?

No.

II. Sponsored Access (SA)

1. What are the benefits of SA arrangements for trading platforms, sponsoring firms, their clients and the wider market?

It is crucial to differentiate between naked sponsored access, sponsored access and hosted direct market access. Deutsche Bank has interpreted these terms using the definitions published in Market Watch 30 by the FSA (Nov 2008). The key benefit of sponsored access is increased liquidity in the market, which benefits all parties. The decreased latency associated with sponsored access results in a more orderly and efficient market and enables risk to be managed more effectively. Deutsche Bank does not believe that naked sponsored access would be beneficial for European equity markets but would like to see a consistent framework for sponsored access put in place across the European Union.

2. What risks does SA pose for the orderly functioning of organised trading platforms? How could these risks be mitigated?

Trading platforms must manage their order books and have infrastructure in place to protect against suspect / rogue orders. Trading platforms also demand extensive testing of customer technology before allowing them to connect. The monitoring and control obligations round SA should be distributed evenly between trading platforms – it is essential that there should be no competitive advantage to be gained by tolerating insufficient validation controls set by a platform or broker. Existing market abuse rules provide sufficient coverage of SA.

3. What risks does SA pose for sponsoring firms? How should these risks be mitigated?

We undertake extensive post-trade monitoring of our SA clients in the same way that we would for our own trading, but in addition, we also review the adequacy of training and controls at the client. We also implement so called 'fat finger' controls to limit human error and we install limits on client trading that follow from counterparty limits. We have included details of our current control requirements in Appendix I. Such measures are crucial to safeguard market integrity.

Both brokers and trading platforms must have pre-trade validation controls in place to prevent potential market irregularities and protect the integrity of the market. The monitoring and control obligations round SA should be distributed evenly between trading platforms – it is essential that there should be no competitive advantage to be gained by tolerating insufficient validation controls set by a platform or broker.

4. Is there a need for additional regulatory requirements for sponsored access, for example:

- a. limitations on who can be a sponsoring firm;**
- b. restrictions on clients that can use sponsored access;**

- c. additional market monitoring requirements;**
- d. pre-trade filters and controls on submitted orders.**

Currently regulation already requires trading platforms to ensure that there are controls at the order book interface. Brokers have an obligation to 'know their client' and both these concepts apply in the context of sponsored access. Some trading platforms, for example Chi-X Europe, have set up a sponsored access service, which allows various validation and control criteria to be applied by the sponsor. The monitoring and control obligations round SA should be distributed evenly between trading platforms – it is essential that there should be no competitive advantage to be gained by tolerating insufficient validation controls set by a platform or broker. We have included details of our current control requirements in Appendix I.

5. Are there other market wide implications resulting from the development of SA?

Sponsored access, where effective controls are in place, is a legitimate market tool, which brings benefits to the market.

III. Co-location

1. What are the benefits of co-location services for organised trading platforms, trading participants and clients/investors?

Co-location reduces latency and network load, resulting in increased liquidity, which benefits all parties. The decreased latency associated with sponsored access results in a more orderly and efficient market and enables risk to be managed more effectively. In addition, co-location also potentially removes the requirement for a broker to be located near to a trading platform in order to be competitive, thereby levelling the playing field.

2. Are there any downsides arising from the provision of co-location services? If yes, please describe them.

It is important to ensure that the access of co-location services is equally available to all market participants who wish to invest, to ensure a level playing field.

3. What impact do co-location services have on trading platforms, participants, and the wider market?

The primary impact that co-location services has had on the market is a reduction in latency and network load. This is beneficial for HFTs, leading to increased market liquidity and fill rates and decreased spreads. As market infrastructure evolves, this leads to further innovation in technology. Trading platforms are forced to invest in their own technology and infrastructure in order to remain competitive. Co-location also potentially removes the requirement for a broker to be located near to a trading platform in order to be competitive, thereby levelling the playing field.

4. Does the latency benefit for firms using co-location services create any issues for the fairness and efficiency of markets?

Co-location services are potentially available to each market participant and there should not be a penalty for investing in infrastructure. The benefits that co-location bring result in a more efficient and orderly market.

5. In your view, do co-location services create an issue with the MiFID obligations on trading platforms to provide for fair access?

No, co-location ensures equality of opportunity for all market participants. If a trading platform chooses to make co-location services available then it provides all market participants with the potential to obtain minimum latency regardless of where the market participant is located. There should not be a penalty for investing in infrastructure.

6. Do you see a need for regulatory action regarding any participants involved in co-location, i.e. firms using this service, markets providing the service and IT providers? Please elaborate.

We would like to see pre-trade validation control requirements harmonised across Europe to ensure that all parties adhere to minimum standards and that adequate market safeguards are in place.

IV. Fee structure

1. Please describe the key developments in fee structures used by trading platforms in Europe.

Trading platforms have a corporate obligation to price their services in a way that best serves the needs of their business. They have responded to their customers' requirements by developing a range of pricing tariff structures. The newer platforms have tended to appeal to those members that post liquidity to the market, for example, through the use of maker-taker tariffs, thus benefiting the market as a whole. Passive traders expose their balance sheet to risk and the maker-taker tariff rewards them for the implicit option they write to the market when they leave orders visible on lit order books.

Fees have reduced as tariffs move towards a variable transaction cost model, which suits smaller trade sizes. Fixed cost tariffs tend to reduce market efficiency by forcing traders to execute a minimum order size, thus increasing the absolute price achieved. Pricing tariffs are evolving but the cost of trading is still expensive and we would like to see costs decrease further. It is important to remember that trading platform fees are small compared to post-trade fees.

2. What are the benefits of any fee structures that you are aware of?

A range of tariffs brings diversity to the market and supports different trading strategies.

Market makers expose their balance sheet to risk and the maker-taker tariff rewards them for the implicit option they write to the market when they leave orders visible on lit order books. Fees have reduced as tariffs move towards a variable transaction cost model, which suits smaller trade sizes. A reduction in the marginal cost of trading would be beneficial to the market as it would enable more liquidity to be posted to the market by HFTs. Fixed cost tariffs tend to reduce market efficiency by forcing traders to execute a minimum order size, thus increasing the absolute price achieved.

3. Are there any downsides to current fee structures and the maker/taker fee structure in particular? If yes, please describe them.

Tariffs that include a fixed cost component tend to be complex and the removal of this fixed cost component would help simplify pricing.

4. What are the impacts of current fee structures on trading platforms, participants, their trading strategies and the wider market and its efficiency?

Fee structures on trading platforms are influenced by the needs of their customers. Pricing tariffs are added and amended to reflect the increasingly varied number of trading strategies, which leads to diversity.

5. How important is the fee structure of a trading platform in determining whether to connect or not to it for trading. Please elaborate.

Platforms must be competitive. We consider a wide range of factors before deciding whether to connect to any platform and this includes pricing.

6. Do you consider that the fee structures of trading platforms should be made public to all market participants? Please provide a rationale for your answer.

We believe that all trading platforms display their fee structures publicly.

7. Is there a role for regulators to play in the fee structures? If yes, please describe it.

No, competition is the best solution. However, there is a growing concern that closing auctions are an area of activity where incumbent exchanges still hold a monopoly and there is a potential for further pricing moves to charge higher fees for those executions. This should be monitored.

V. Tick size

1. In your view, what has been the impact of smaller tick sizes for equities in Europe on the bid-ask spreads, liquidity, market depth and volatility of these markets? Are there any spill-over effects on derivatives markets?

The concept of “*smaller ticks*” is not a simple reference to the absolute size of the tick but only has meaning when the tick is expressed as a percentage of the stock it is applied to. Therefore, as a stock’s price rises, the tick size reduces in relative terms until a point where an increase in absolute tick size is required to remedy the effect. Conversely, as stock price reduces, a point comes where the absolute tick becomes relatively so large that a smaller tick is required. It is this dynamic that drives the creation of tick tables as the representation of the stock price levels at which absolute tick sizes change.

There is a subjective impression that some ticks sizes in continental Europe have become too small, negatively impacting the quality of the order book. The ‘race to the bottom’ that occurred between the trading platforms in Q3 2009 was unhelpful to market participants and the agreements reached subsequently left some stocks with detrimentally small ticks. Prior to the agreement to standardise tick sizes, when some stocks had been selected by MTFs to have very small ticks, our traders reported unambiguously the ability to get business done in size was greatly diminished.

2. What are the benefits/downsides of smaller tick size regimes for shares in Europe?

There are no benefits per se to smaller ticks, just as there is no broad advantage to larger ticks. Smaller ticks support some trading strategies, whereas larger ticks support others. Reducing tick

sizes beyond a certain point results in thin order books with a reluctance for anyone to show size, making it progressively more difficult to transact large size on the market. Increasing tick sizes makes electronic market making more difficult.

Fortunately it would appear that both these effects only impact the market at extremes and there is a relatively broad range of “adequate” tick sizes.

3. Is there a need for greater harmonisation of tick size regimes across Europe? Please elaborate.

Yes.

In the market's attempt to create a pan-European equity market, the ongoing proliferation of tick tables stands out as an inefficient and costly anomaly. Their continued use reflects poorly on Europe's attempts to move to a competitive pan-European execution.

Tick sizes are determined by exchanges in consultation with members. It is important that tick sizes reflect the liquidity and price of the instruments involved and are thus meaningful and appropriate. Deutsche Bank believes that even if there is a theoretically optimal tick size for a particular stock it would change on both a day by day and intra day basis and this is probably not calculable and certainly not practical.

Deutsche Bank believes that Europe should establish ‘pragmatic ticks’ drawn from standardised tick tables standardised across both stocks and platforms. It is important that tick sizes are broadly reflective of the liquidity and price of the instruments involved are thus meaningful and appropriate. To this end, FESE published a set of tables (available on their website) that categorised tick sizes into three groups: small, medium or large. However, the existence of the so called ‘FESE Table 4’ is not really part of that logical process but rather a partial adoption of ‘FESE Table 1’.

This limited number of tick size regimes leads to low priced stocks getting very large ticks and high priced stocks getting very small ticks. There is no market efficiency rational for this treatment but rather it appears to be an accommodation, reflecting system limitations on the part of some participants. It would be advantageous if the platforms made clear that in the medium term these limitations should be addressed.

For ‘blue chip stocks’ there has been a degree of standardisation on to the FESE tables. For ‘non-blue chip stocks’, there is no logic to the assertions that they “*do not fit*” the standardised tables and these claims appear to be motivated by desires other than the facilitation of efficient pan-European competition.

4. Is there a role for regulators to play in the standardisation of tick size regimes or should this be left to market forces?

Potentially.

Mechanisms for establishing which of the standardised tables apply to a particular group of stocks may be best left to market participants. However, in the absence of collaborative adoption of a standardised regime, regulatory pressure to do so may be appropriate.

5. Have organised markets developed an appropriate approach to tick sizes?

Partially.

As described above, FESE has endorsed a pragmatic regime and this has been partly adopted for most blue chip stocks. However, as FESE Table 4 is a partial adoption of FESE Table 1, the use of this table dilutes the effectiveness of the system. The majority of stocks have yet to adopt the FESE regime.

6. Should regulators monitor compliance with the self-regulatory initiative of the MTFs and FESE? If this initiative fails, do you see a need for regulators to intervene?

Yes.

Commercial pressures have so far been inadequate to ensure full compliance. Regulatory attention could promote greater adoption plus reduce the temptations for some platforms to amend tick sizes unilaterally for short term competitive advantage.

7. What principles should determine optimal tick sizes?

Attempting to calculate an “optimal” tick size is a futile exercise. The current collaborative exercise has shown that broad consensus can be achieved, with a tick size table being selected that broadly accommodates days when a stock is quiet or where it is particularly actively traded. Although not definitive, an excessive amount of time spent with a one tick spread may be an indicator of too small a tick. The approach adopted between the LSE and the MTFs for FTSE 100 stocks of an occasional objective review of tick sizes appears a pragmatic approach to the issue of allocating appropriate tables to particular stocks.

VI. Indications of Interest (IOIs)

1. Please provide further information on how IOIs are currently used in European markets by investment firms, MTFs and RMs?

IOIs provide indication of liquidity, which is helpful when ascertaining potential liquidity held by electronic liquidity providers ('ELPs').

2. Which are the key benefits/downsides of such IOIs? Please provide evidence to support your views.

IOIs provide an indication of potential dark liquidity held by ELPs but without the risk of information leakage to the market, thereby ensuring that the ELP dark liquidity remains dark

3. Do you consider that MiFID should be amended to clarify that actionable IOIs should be subject to pre-trade transparency requirements?

If IOIs were subject to pre-trade transparency requirements then it would result in information leakage to the market.

4. Do you see circumstances where it would be appropriate for IOIs to be provided to a selected group of market participants? Please provide evidence/examples to support your views.

We do not have any comments to add at this stage.

Please do not hesitate to contact us should you have any questions.

Yours sincerely,

Daniel Trinder
Regulatory Affairs Department
Deutsche Bank