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Understanding the Impact of MiFID in the Context of Global and National Regulatory Innovations European Study

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Executive Summary

Introduction

- The study *Understanding the Future Impacts of MiFID* (London Economics, 2010) included findings of a consultation of UK stakeholders on impacts of MiFID pre- and post-trade transparency requirements. The present study seeks to verify whether these results can be generalised across the EU or are UK-specific.

Consultation approach

- European stakeholders participating in the present consultation (that is, 'non-UK EU stakeholders') were posed the same questions as their UK counterparts to allow a comparison of the results.
- A sample of brokers, buy-side firms and trading venues were consulted across European financial centres including: Amsterdam, Dublin, Brussels, Copenhagen, Frankfurt, Luxembourg, Madrid, Paris, Stockholm and Vienna.

Key findings on pre-trade transparency

Use of waivers

- There are differences in perceptions of the impact of waivers between UK, and other European, stakeholders. UK stakeholders perceived waivers to be important for protecting trading strategies. However, non-UK EU stakeholders provided mixed views, with some having considered uncertainty in the use of waivers to have undermined pre-trade transparency.

Price impacts

- Non-UK EU stakeholder views about the price impacts of pre-trade transparency requirements were not clear cut. This is because they found it difficult to disentangle these effects from the impact of the financial crisis.
- Stakeholders focused on costs incurred through compliance with pre-trade transparency. They perceived that the costs of connecting to multiple venues for price information, for instance, could lead to lower trading activity among brokers and, therefore, result in less efficient price formation.
- The results of the previous consultation with UK stakeholders focused on the role of high frequency traders. MiFID has, in-part, facilitated their trading activity by providing pre-trade transparent quote and order-flow information. It was suggested that this could yield positive price outcomes (e.g. tighter spreads).

Liquidity impacts

- The results of the previous consultation also concentrated on the role of high frequency traders in connection with liquidity impacts. The main

finding was that UK stakeholders perceived high frequency trading activity to have driven other liquidity providers out of the market.

- The findings of the present consultation touched on high frequency trading. Nominally, pre-trade transparency allows for the identification of liquidity posted by high frequency traders. In terms of effectiveness however, it was felt that this liquidity was not accessible due to short periods of availability and technology costs (i.e. costly trading tools required to track high frequency trades).
- More generally, non-UK EU stakeholders felt that liquidity fragmentation had occurred as a result of pre-trade transparency. The basis for this view is that pre-trade transparency has increased exposure risk¹ which has led liquidity to migrate towards/ into dark markets. This, in turn, has brought about liquidity fragmentation because some market participants do not have access to dark pools of liquidity.

Key findings on post-trade transparency

Impact of a lack of consolidated price information on best-price execution

- The findings across UK and non-UK EU stakeholders were consistent. Price consolidation was considered to be important to achieving best-price execution. Moreover, several barriers to establishing consolidated prices were identified. These are as follows:
 - i. the reliance on commercial data vendors to provide aggregate data solutions;
 - ii. the cost of acquiring post-trade information; and
 - iii. poor data quality, especially for over-the-counter trades.
- Additionally, non-UK EU stakeholders provided the following recommendations to address a lack of consolidated price information:
 - i. poor data quality and high data costs could be addressed by having market participants (e.g. trading venues) compete with data vendors over data provision; and
 - ii. data quality could be improved by clarifying precisely what information to provide and when for best execution, which may include providing distinct best execution standards for different categories of business.

¹ Exposure risk is a term describing the following circumstance: public knowledge of an initial order hitting the order book (perhaps due to pre-trade transparency) may cause market participants to use this information to exploit the expected price movement at the expense of the initial order, which may not find enough liquidity if prices move away from its target (see Harris, 1997; in Valiante, 2011).

1 Introduction and background

The study *Understanding the Future Impacts of MiFID* (London Economics, 2010) investigated the impact of the Markets in Financial Instruments Directive (MiFID) on secondary market equity trading.

This work included a consultation of UK stakeholders on the impact of MiFID pre- and post-trade transparency requirements. The consultation provided information on UK stakeholder views on: the implementation of pre-trade transparency requirements and price and liquidity impacts; and the impact of a lack of consolidated price information on best execution in terms of price ('best-price' execution).

To verify whether the views of UK stakeholders are held more generally across the EU, the City of London Commissioned London Economics to undertake a similar survey of pre- and post-trade transparency in a number of European financial centres outside of the UK.

The remainder of the report is structured as follows.

- Sections 1.1 and 1.2 provide background information on the objectives and economic rationale for MiFID pre- and post-trade transparency.
- Section 2 reports the consultation results on pre-trade transparency including findings on implementation and price and liquidity impacts.
- Section 3 provides consultation results on post-trade transparency, in particular, on the impact of a lack of price consolidation on best execution in terms of price ('best-price' execution).
- Section 4 provides concluding remarks.
- Annex 1 and Annex 2 provide details on the methodology followed in conducting the consultation and the consultation topic guide, respectively.

1.1 Pre-trade transparency

The objective of the MiFID pre-trade transparency requirements, broadly, is to improve the "efficiency of the overall price formation process for equity instruments" and assist in "the effective operation of best execution obligations".²

Pre-trade transparency requirements state that regulated markets (RMs) and multilateral trading facilities (MTFs) that are quote-driven are required to publish best bid and offer information of every market maker; and RMs and MTFs that are order-driven are required to publish their five best bids and offers. Systematic internalisers (SIs) are required to provide quotes to market participants for stocks that also trade on RMs.³

² Implementing Directive 2006/73/EC Recital 44

³ A number of Articles within MiFID deal with pre-trade transparency: Article 27 [Obligation for

A number of economic arguments for and against pre-trade transparency have been put forward in the economic literature.⁴

Price quality⁵ may increase and price volatility may fall as a result of increased transparency. As market participants possess greater information on the value of equities, prices are less likely to deviate from their efficient levels. Liquidity, measured by market depth may rise also. This is because pre-trade transparency may also lead to greater activity among previously less informed market participants.

However, pre-trade transparency may give rise to costs as well. Liquidity may contract due to pre-trade transparency creating larger exposure risk⁶. Under these circumstances, investors may choose to withdraw liquidity to dark markets, which would also have an impact on price quality and volatility. The impact of dark markets on market quality is ambiguous insofar as it is unclear what the impacts of interactions between lit⁷ and dark markets are.

In light of these considerations, MiFID pre-trade transparency requirements have been implemented in order to achieve the benefits outlined above but, through complementary measures (e.g. waivers to pre-trade transparency), have also sought to mitigate the potential costs involved.

1.2 Post-trade transparency

Post-trade transparency requires trading platforms to provide details of executed trades for equities admitted to trading on RMs even if they are over-the-counter (OTC) trades or executed on RMs, MTFs or SIs. The information required by MiFID post-trade transparency includes data on trade time stamps, prices, quantities and execution venues, to be provided as close to real-time as possible (although there are some exemptions to this).⁸

Post-trade transparency contributes to the goal of best execution in terms of price. However, a challenge to realising this benefit is the present lack of post-trade data consolidation.

The next section considers stakeholder perceptions of aspects of pre-trade transparency. The results in section 3 provide information on stakeholder

investment firms to make public firm quotes], Article 29 [Pre-trade transparency requirements for MTFs] and Article 44 [Pre-trade transparency requirements for regulated markets].

⁴ See Sabatini and Tarola (2002) in Valiante (2011) for a detailed theoretical and empirical literature review of pre-trade transparency on secondary markets.

⁵ Price quality is defined as the accuracy with which prices reflect fundamental values and is sometimes measured as the ratio of short-term to long-term return variances.

⁶ See footnote 1 on page 2.

⁷ Markets under the scope of MiFID pre-transparency requirements in regard to publishing pre-trade bid and order information.

⁸ See MiFID Article 28 [Post-trade disclosure by investment firms], Article 30 [Post-trade transparency requirements for MTFs] and Article 45 [Post-trade transparency requirements for regulated markets]

perceptions of the impact of a lack of price consolidation on best-price execution.

2 Consultation results on pre-trade transparency

2.1 Implementation and behavioural responses

This section considers the implementation of, and behavioural responses by market participants to, pre-trade transparency requirements.

Subsection 2.1.1 summarises the findings of the consultation, with non-UK EU stakeholders, and compares these to the findings of the consultation with UK stakeholders in *Understanding the Future Impacts of MiFID* (London Economics, 2010).

Subsection 2.1.2 describes the findings of the present consultation in greater detail, by market participant.

2.1.1 Key findings

There are differences in perceptions of waivers between UK and other European stakeholders. UK stakeholders perceived waivers to be important to protecting trading strategies. However, non-UK EU stakeholders provided mixed views, with some believing that uncertainty in the use of waivers undermined pre-trade transparency.

In addition, non-UK European trading venues perceived the transposition of the waiver regime into national law across Member States to have been inconsistent. They considered this to have created further uncertainty, affecting competition between trading venues.

2.1.2 Details of stakeholder perceptions

Broker views

Brokers noted that pre-trade transparency requirements have led to liquidity fragmentation. The basis for this view is that pre-trade transparency causes exposure risk⁹, which leads to liquidity migrating to dark markets. This, in turn, brings about liquidity fragmentation because some brokers do not have access to these liquidity pools.

Trading on broker crossing networks was highlighted as a channel for this effect because they are not subject to pre-trade transparency. It was speculated that these networks could supersede other venues in transaction volumes in the future, especially if there is a 'joining-up' of networks. This would effectively reduce the scope of pre-trade transparency.¹⁰

⁹ The results of our consultation suggested brokers had experienced exposure risk. One broker, defined as an SI and engaging in proprietary trading, observed that having to publish its trading book under pre-trade transparency requirements was "contentious" because other market participants could trade against it. This broker also described how execution of large orders is "poorer" due to pre-trade transparency requirements.

¹⁰ This suggests a treatment of trading venues under MiFID that takes into account changes in

Brokers also emphasised the widespread use of waivers as a means of avoiding pre-trade transparency. One stakeholder even commented: "The limited order display rule has become impotent. Every single broker regularly uses waivers with clients."

Buy-side firm views

The views of buy-side firms were relatively positive about pre-trade transparency.

Buy-side firms noted that pre-trade transparency had increased reporting of OTC trades and had brought about disclosure of quote and order flow information for all shares admitted to trading on regulated markets.

However, they also stated how brokers have been able to avoid complying with pre-trade transparency requirements. Misunderstandings regarding the pre-trade transparency requirements of different pre-trade "situations" were identified as opportunities for brokers to exercise discretion in the amount of pre-trade information they provided. SIs, for instance, were described by a market participant and commentator as having avoided pre-trade transparency by categorising trades, variously, as 'internalising' or 'crossing'.¹¹

Trading venue views

Representatives of trading venues perceived implementation of pre-trade transparency requirements to have been more successful¹² than other stakeholders. Indeed, the majority of trading venues commented that existing pre-trade transparency requirements exceeded MiFID provisions.

However, issues relating to the application of waivers and OTC trades were also reviewed.

Trading venues consider waivers to have undermined the aims of pre-trade transparency due to the uncertainty that their inconsistent application had created. Inconsistency across trading venues was emphasised due to problems with the transposition of the waiver regime into national laws across Member States.

A number of principles were suggested for re-designing the waiver regime. Firstly, waivers should be circumscribed to orders where there is a clear economic rationale for waiving pre-trade transparency requirements (e.g. for large orders). A benefit of this approach is that it may be relatively clear which orders are eligible/ineligible, which in turn benefits the transposition of rules into national laws. The cost of this approach is inflexibility, as orders with a legitimate economic rationale for waiving pre-trade transparency

market shares held by different venues over time.

¹¹ <http://www.thetradenews.com/asset-classes/equities/4873>

¹² Stakeholders were asked to rate how successfully they believed pre-trade transparency requirements had been implemented on a scale of 1-5 where 1 was "very unsuccessfully" and 5 was "very successfully".

requirements may be deemed to be ineligible for a waiver, resulting in negative impacts on outcomes.

Two other principles were put forward to address this issue. Trading venues suggested that waivers should: “reflect market reality” and “be regularly scrutinised by regulators”. For example, one market development that a stakeholder suggested should be scrutinised is the use of order management facilities to avoid pre-trade transparency.

OTC business was commented on sparsely with only one trading venue representative noting that its growth is partly driven by its less stringent regulation.

2.2 Pricing impacts

This section considers the views of stakeholders on the price impacts of pre-trade transparency requirements and is structured in a similar way to the section above.

Subsection 2.2.1 summarises the findings of the consultation with non-UK EU stakeholders, and compares these to the findings of the consultation with UK stakeholders in *Understanding the Future Impacts of MiFID* (London Economics, 2010).

Subsection 2.2.2 describes the findings of the present consultation in greater detail, by market participant.

2.2.1 Key findings

Non-UK EU stakeholder views about the price impacts of pre-trade transparency requirements were not clear cut. This is because they found it difficult to disentangle these effects from the impact of the financial crisis.

The views expressed in the previous consultation with UK stakeholders highlighted the role of high frequency traders. MiFID has, in-part, facilitated their trading activity by providing pre-trade transparent quote and order-flow information. It was suggested that this could yield positive price outcomes (e.g. tighter spreads).

Non-UK EU stakeholders focused on the costs of complying with pre-trade transparency. They perceived that the costs of connecting to multiple venues for price information, for instance, could lead to lower market participation among brokers and, therefore, less efficient price formation.

2.2.2 Details of stakeholder perceptions

Broker views

The main observation is that trading activity among smaller brokers would fall due to costs of complying with pre-trade transparency requirements. And, as smaller brokers may specialise in trading less liquid equities such as mid-caps, their absence may impact upon the prices of these equities as well.

Buy-side firm views

It was observed that price quality had improved and price volatility had reduced as a result of pre-trade transparency.

Increased information availability was one mechanism through which these effects were perceived to operate. For instance, it was observed that some information providers publish pre-trade price information in less than a millisecond at negligible or zero cost to buyers. While market participants previously only had access to home exchange prices as a benchmark, they now have a far broader view of prices trading on multiple platforms.

However, it was also observed by buy-side firms that compliance costs of pre-trade transparency requirements (e.g. costs of connecting to multiple venues for price information) may prevent brokers from participating on markets, affecting prices (due to the presence of fewer market participants to determine price formation efficiently).

Trading venue views

Representatives of trading venues provided limited opinions as regards the price impacts of pre-trade transparency, noting that it may have had positive impacts due to increased information availability and accuracy.

2.3 Liquidity impacts

This section considers the liquidity impacts of pre-trade transparency requirements, with subsection 2.3.1 summarising the findings of the consultation with UK and non-UK EU stakeholders and subsection 2.3.2 describing the findings of the present consultation in greater detail.

2.3.1 Key findings

The main finding of *Understanding the Future Impacts of MiFID* (London Economics, 2010) on the liquidity impacts of the MiFID pre-trade transparency regime related to high frequency traders. Essentially, market perceptions suggested that trading activity of high frequency traders drove other liquidity providers out of the market.

Stakeholders participating in the present consultation corroborated this point. Nominally, pre-trade transparency allows for the identification of liquidity posted by high frequency traders. However, in practice, it was felt that this was not accessible due to short periods of availability and technological barriers to access (i.e. costly trading tools required to track high frequency traders).

Additionally, stakeholders felt that liquidity fragmentation had occurred as other liquidity providers have migrated liquidity to dark markets due to the costs of compliance with pre-trade transparency requirements (e.g. exposure risk).

2.3.2 Details of stakeholder perceptions

Broker views

Overall, brokers were neutral as regards the impact of pre-trade transparency requirements on liquidity. However, two brokers provided comments.

A small and specialised broker noted that pre-trade transparency has led to liquidity to migrate to dark markets, which this broker does not have access to.

In contrast, a global broker was of the view that pre-trade transparency requirements had little impact on liquidity because they apply to lit venues, which were already transparent; and waivers apply to dark venues, which were already opaque. This broker felt that liquidity growth has been driven to a greater extent by technology and automated trading and, in regulatory terms, the removal of the concentration rule¹³ prior to the introduction of MiFID.

Buy-side firm views

It was suggested that exemptions from pre-trade transparency had not changed non-retail trading but had increased liquidity levels in retail trading.

However, it was stated that the pre-trade transparency regime does not create a level playing field between lit and dark venues. Due to higher compliance costs faced by market participants on lit venues, there may be a withdrawal of liquidity from the system (as it may not be able to migrate to dark venues).

Trading venue views

Trading venues suggested that market integrity had risen due to pre-trade transparency and this had increased liquidity.

Perceptions of the impact on liquidity were not unanimously positive. Firstly, while liquidity is available on dark markets, these are not accessible to a large proportion of market participants.

Secondly, in relation to smaller trading venues, it was felt that the liquidity data observed on order books, due to reduced time spans for which it is available, did not truly reflect a positive liquidity impact.

¹³ The concentration rule required investment firms to route client orders through regulated markets

3 Consultation results on post-trade transparency

3.1 Impact of a lack of price consolidation on best-price execution

3.1.1 Key findings

The findings of the present consultation among non-UK EU stakeholders were similar to the findings of the previous consultation of UK stakeholders.

Price consolidation was considered to be important for achieving best-price execution. Moreover, several barriers to establishing price consolidation were identified:

- the reliance on commercial data vendors to provide aggregate data solutions;
- the cost of acquiring post-trade information; and
- poor data quality, especially for OTC trades.

Additionally, stakeholders provided the following recommendations during this consultation:

- poor data quality and high data costs could be addressed by having market participants (e.g. trading venues) compete with data vendors over data provision; and
- data quality could be improved by clarifying precisely what information needs to be provided and when, which may include providing specific best execution standards for different categories of business.

These stakeholder views are provided in greater depth below.

3.1.2 Detailed stakeholder perceptions on achieving best-price execution

The majority of stakeholders held the view that a lack of consolidated price information posed a challenge to achieving best-price execution, although a range of perspectives were provided.

Broker views

Brokers highlighted that a lack of consolidated price information is a significant barrier to achieving best-price execution, especially among retail segments that cannot absorb search and processing costs as easily as institutional segments can.

Some brokers suggested that an industry-funded not-for-profit organisation should be established for the purposes of consolidating price information and distributing it to market participants.

Buy-side firm views

Buy-side firms echoed the views of brokers. Data quality is perceived to be low due to reporting delays and inaccuracies such as double counting, which creates difficulties in achieving best-price execution. Buy-side firms felt that a

consolidated tape of standardised price information would resolve these issues.

Trading venue views

Representatives of trading venues suggested that clarity should be provided in regard to the criteria for assessing best execution for different buy-side firm types (e.g. price for retail investors, speed for high frequency investors, etc.).

3.1.3 Detailed stakeholder perceptions on monitoring best-price execution

The majority of stakeholders, particularly buy-side firms, viewed a lack of consolidated price information as a problem for monitoring best-price execution, with a small minority viewing it as a non-issue.

Buy-side firms see a lack of consolidated price information as most important, followed by brokers and representatives of trading venues.

Broker views

In general, brokers commented on the impossibility of monitoring best-price execution without consolidated price information.

Brokers also described practices that limited market participants' ability to monitor best-price execution. For example, it was stated that some organisations systematically postpone trade reporting, hindering monitoring of best-price execution.

Finally, some policy options were put forward for improving best execution monitoring. Firstly, it was recommended that financial regulators should take up an enforcement role by obliging brokers to report to clients on best execution. Secondly, it was felt that retail investors should be provided with financial education on brokers' best execution obligations.

Buy-side firm views

Buy-side views were consistent with those of other stakeholders on the difficulty of monitoring best-price execution.

Firstly, data problems were highlighted in regard to the timeliness and quality (e.g. double counting of trades) of information available.

Secondly, a buy-side firm suggested that an independent source of information for monitoring best execution would be beneficial to outcomes.

Trading venue views

It was felt that price consolidation would require coordination among trading venues.

It was noted that in order to facilitate price consolidation, either through a public or private channel, information would need to be standardised. In considering a private-sector solution specifically, some market participants may not be able to afford the costs, given, for instance, the present high cost of accessing OTC data.

4 Conclusions

The objective of this study was to establish whether the findings concerning the impact of MiFID pre- and post-trade transparency requirements reported in *Understanding the Impact of MiFID* (London Economics, 2010) apply generally across the EU or are UK-specific.

To this end, consultations with non-UK EU stakeholders were undertaken and the findings compared to those from the consultation undertaken previously with UK stakeholders.

Both UK and non-UK EU stakeholders put forward similar views on the liquidity impacts of pre-trade transparency and the impact of a lack of consolidated price information on achieving/monitoring best-price execution.

UK and non-UK EU stakeholders identified reasons why a reduction in liquidity may be observed as a result of pre-trade transparency. UK stakeholders felt that high frequency traders displaced other liquidity providers from lit markets. Non-UK EU stakeholders perceived high frequency trading to be costly to the overall level of liquidity in the system because the liquidity provided may not be accessible to all (i.e. it may only be available for short periods of time and require costly technology to reach).

UK and non-UK EU stakeholders also agreed on the importance of consolidated price information to achieving best-price execution. Moreover, both groups felt that problems of data quality, cost and current commercial solutions to be key barriers to obtaining consistent post-trade information.

More diverse views were expressed on the price impacts of pre-trade transparency and the pre-trade transparency waiver regime.

In regard to price impacts, differences may have been attributable to the financial crisis coinciding with the implementation of MiFID. Indeed, many stakeholders commented on the difficulty of being able to identify the causes for changes in price quality and volatility.

In regard to waivers, there were differences in perceptions between UK, and other European, stakeholders. UK stakeholders perceived waivers to be important to protecting trading strategies. However, non-UK EU stakeholders provided mixed views, with some having considered uncertainty in the use of waivers to have undermined pre-trade transparency.

In addition to the above, non-UK EU stakeholders outlined some additional views that may reflect experiences and policy developments that have taken place since our consultation with UK stakeholders a year ago.

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Annex 1 Consultation approach

A1.1 Overview

The consultation sought to elicit the views of non-UK EU market participants¹⁴ on experiences with MiFID pre- and post-trade transparency requirements within European financial centres.

Based on the City of London report *Global Financial Centres 7* of March 2010, the annual turnover in equity trading on incumbent trading venues and a random sampling procedure, the following trading venues were selected for inclusion in the consultation: NYSE Euronext; Deutsche Börse; BME Spanish Exchanges; NASDAQ OMX Nordic; CEESEG Vienna; Irish Stock Exchange; and Luxembourg Stock Exchange.

Brokers and buy-side firms were chosen from these financial centres to match the trading venues selected in order to collect perspectives from all types of market participants.

The consultation guide used posed the same questions as the consultation guide used in *Understanding the Future Impacts of MiFID* (London Economics, 2010). However, in addition to the open-response questions posed, closed-ended questions were included in order to gain an overview of European perspectives – in aggregate and by type of market participant.

The consultation guide covered pre- and post-trade transparency and also provided stakeholders with the opportunity to elaborate on aspects of pre- and post-trade transparency, and MiFID more generally, that are not explicitly covered through the consultation guide.

The complete consultation guide can be found in Annex 2. In summary, questions on pre-trade transparency were used to understand stakeholder perceptions of the implementation of pre-trade transparency requirements and the impact of pre-trade transparency on prices, liquidity and the behaviour of market participants. Questions relating to post-trade transparency focused on issues surrounding a lack of consolidated price information and the impacts this has had on achieving and monitoring whether best-price execution has taken place.

Stakeholders were provided with a variety of media through which they could participate in the consultation, e-mail, online and telephone, over a ten-week period between December 2010 and February 2011.

¹⁴ Market participants from the UK were consulted through the study *Understanding the Future Impacts of MiFID* (London Economics, 2010) and the aim of this consultation is to compare UK views with views from other Member States.

A1.2 Response rate

In total, 207 stakeholders were surveyed, of which 31 participated in the consultation, which is equivalent to a 15% response rate, as shown in Table A.1.

Table A.1 Stakeholder participation rate, by market participant

	Surveyed	Participated	
	N	N	%
Trading venues	7	5	71
Brokers	96	10	10
<i>Amsterdam</i>	<i>6</i>	<i>1</i>	<i>17</i>
<i>Dublin</i>	<i>5</i>	<i>1</i>	<i>20</i>
<i>Brussels</i>	<i>11</i>	<i>1</i>	<i>9</i>
<i>Copenhagen</i>	<i>6</i>	<i>1</i>	<i>17</i>
<i>Frankfurt</i>	<i>8</i>	<i>3</i>	<i>38</i>
<i>Luxembourg</i>	<i>9</i>	<i>1</i>	<i>11</i>
<i>Madrid</i>	<i>18</i>	<i>2</i>	<i>11</i>
<i>Paris</i>	<i>8</i>	<i>0</i>	<i>0</i>
<i>Stockholm</i>	<i>12</i>	<i>0</i>	<i>0</i>
<i>Vienna</i>	<i>13</i>	<i>0</i>	<i>0</i>
Buy-side firms	104	16	31
<i>Amsterdam</i>	<i>16</i>	<i>2</i>	<i>13</i>
<i>Brussels</i>	<i>12</i>	<i>2</i>	<i>17</i>
<i>Copenhagen</i>	<i>8</i>	<i>1</i>	<i>13</i>
<i>Dublin</i>	<i>11</i>	<i>2</i>	<i>18</i>
<i>Frankfurt</i>	<i>13</i>	<i>1</i>	<i>8</i>
<i>Luxembourg</i>	<i>6</i>	<i>0</i>	<i>0</i>
<i>Madrid</i>	<i>14</i>	<i>0</i>	<i>0</i>
<i>Paris</i>	<i>11</i>	<i>1</i>	<i>9</i>
<i>Stockholm</i>	<i>8</i>	<i>3</i>	<i>38</i>
<i>Vienna</i>	<i>5</i>	<i>4</i>	<i>80</i>
TOTAL	207	31	15

Annex 2 Consultation guide

Section A. Pre-trade transparency

In this section we would like you to consider the impacts of pre-trade transparency provisions within MiFID against its objectives to improve the "efficiency of the overall price formation process for equity instruments" and assist in "the effective operation of best execution obligations".

- 1. Please describe your view of how pre-trade transparency requirements have been implemented by market participants in secondary markets for equities.**

OPEN RESPONSE

- 2. Overall, how successfully do you believe these requirements have been implemented?**

Very successfully 5
 Fairly successfully..... 4
 Neither successfully nor unsuccessfully..... 3
 Fairly unsuccessfully 2
 Very unsuccessfully 1
 Don't know 0

- 3. Have pre-trade transparency requirements resulted in any noteworthy changes to the behaviour of market participants which had not been anticipated at the time MiFID was implemented?**

Yes 2
 No 1
 Don't know 0

IF ANSWERED "YES" TO QUESTION 3

- 4. Please describe these changes below.**

OPEN RESPONSE

5. To what extent do you feel there have been changes to the behaviour of prices resulting from MiFID's pre-trade transparency requirements?

Please identify the extent to which you feel the price aspects below have changed on a scale of 1-5 where 1 is "to no extent", and 5 is "to a critical extent".

N.B. Price quality is defined as the accuracy with which prices reflect fundamental values and is sometimes measured as the ratio of short-term to long-term return variances.

Aspect of price	Extent (1-5 or DK)
Price volatility	-
Price quality	-

6. What has changed?

OPEN RESPONSE

7. Has the implementation of pre-trade transparency requirements affected the provision of liquidity in the system as a whole?

Liquidity provision has...

Grown substantially	5
Grown moderately	4
Neither grown nor reduced	3
Reduced moderately.....	2
Reduced substantially.....	1
Don't know	0

8. Please provide details below.

OPEN RESPONSE

9. What other effects have MiFID's pre-trade transparency requirements had?

OPEN RESPONSE

Section B. Post-trade transparency

In this section we would like you to consider the impacts of post-trade transparency provisions within MiFID against its objectives to improve the "efficiency of the overall price formation process for equity instruments" and assist in "the effective operation of best execution obligations".

10. Does a lack of consolidated price information under MiFID's post-trade transparency requirements pose a challenge to achieving best execution?

In your response, please consider search costs that may be associated with collecting and processing information required to achieve best execution.

- Yes 2
- No 1
- Don't know..... 0

IF ANSWERED "YES" TO QUESTION 10

11. And, to what extent do you feel that this is the case? Please respond on a scale of 1-5 where 1 is "to no extent", and 5 is "to a very large extent".

___ (Extent, 1-5 or DK)

12. Please provide details of your view below.

OPEN RESPONSE

13. Does a lack of consolidated price information under MiFID's post-trade transparency requirements pose a problem to monitoring whether or not best execution has taken place?

- Yes..... 2
- No 1
- Don't know.... 0

IF ANSWERED "YES" TO QUESTION 13

14. And, to what extent do you feel that this is the case? Please respond on a scale of 1-5 where 1 is "to no extent", and 5 is "to a very large extent".

___ (Extent, 1-5 or DK)

15. Please provide details of your view below.

OPEN RESPONSE

16. What other effects do you feel MiFID's post-trade transparency requirements have had?

OPEN RESPONSE

Section C. Additional comments

17.If, in addition to all the previously addressed points, there are any additional issues you feel should be considered during this research, please provide comment below.

OPEN RESPONSE

