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EDITED BY MICHEL TISON, HANS DE WULF, CHRISTOPH VAN DER ELST AND REINHARD STEENNOT

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Market transparency and best execution: bond trading under MiFID

GUIDO FERRARINI

The relationship between best execution and market transparency deserves careful consideration in an analysis of MiFID.[1] Best execution has mainly been studied with respect to equity trading, which is generally exchange based and widely regulated also with respect to market transparency.[2] In this chapter, however, I focus on bond trading, which takes place predominantly over-the-counter (OTC) and is not subject to MiFID's transparency provisions. After introducing the topic (Section I), I offer a critical view of the transparency requirements applicable to equity trades and their formation (Section II). I then examine the recent policy discussion on non-equities market transparency, as reflected in the Report issued by the European Commission under Article 65 (1) of the MiFID,[3] examining whether the requirements for pre-trade and post-trade information should be extended to non-equities markets (Section III). I finally consider the role of best execution in bond markets, focussing on the impact of transparency on order execution for retail investors (Section IV). In Section V, I draw some conclusions.

[1] See Directive 2004/39/EC of the European Parliament and of the Council on markets in financial instruments (MiFID) [2004] OJ L 145.

[2] See R. Davies, A. Dufour and B. Scott-Quinn 'The MiFID: Competition in a New European Equity Market Regulatory Structure', in G. Ferrarini and E. Wymeersch (eds.), *Investor Protection in Europe: Corporate Law Making, the MiFID and Beyond*, (Oxford University Press, 2006), 163–97; G. Ferrarini, 'Best Execution and Competition between Trading Venues – MiFID's Likely Impact', *Capital Markets Law Journal*, 2 (2007), 404–13; C. Gortsos, MiFID's Investor Protection Regime: Best Execution of Client Orders and Related Conduct of Business Rules, in E. Avgouleas (ed.), *The Regulation of Investment Services in Europe under MiFID: Implementation and Practice* (Haywards Heath, West Sussex: Tottel Publishing, 2007), 101–37; for the US, J. Macey and M. O'Hara, 'The Law and Economics of Best Execution', *Journal of Financial Intermediation*, 6 (1997), 188–233.

[3] DG Internal Market and Services, Working Document, *Report on non-equities market transparency pursuant to Article 65 (1) of Directive 2004/39/EC on Markets in Financial Instruments (MiFID)* (3 April 2008).

I. Introduction

A few introductory remarks may help to set this study in context. First of all, the type of instrument traded and the structure of the relevant market have an impact on best execution, as also recognized by the MiFID and its implementing Directive.[4] Shares, to start with, are generally traded in order-driven and centralized markets, such as stock exchanges (and, to a lesser extent, MTFs).[5] Only a fraction of listed shares are traded frequently, mainly in small sizes.[6] Liquidity is high and continuous for the most traded shares, while price formation is based around a dominant trading venue (usually an exchange).[7] Bonds, on the contrary, are mainly traded off-exchange, in quote-driven and decentralized markets.[8] Only a minority of bonds are traded frequently, while trading sizes are large in a majority of cases.[9] Liquidity depends on issuer, size of issue, rating, etc., while price formation occurs through competitive 'requests for quotes' (RFQs) in OTC markets, which are closely correlated with credit derivatives markets.[10] Therefore, best execution criteria shall be implemented differently for shares and bonds, to the extent that, for instance,

[4] See Article 21 of Directive 2004/39/EC on markets in financial instruments (MiFID) and in particular its para. 1, which defines the best execution obligation as requiring that 'investment firms take all reasonable steps to obtain, when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order'. See also the 70th *considerandum* of Commission Directive 2006/73/EC of 10 August 2006, implementing Directive 2004/39/EC of the European Parliament and of the Council as regards organizational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (the MiFID's Implementing Directive), which states: 'The obligation to deliver the best possible result when executing client orders applies in relation to all types of financial instruments. However, given the differences in market structures or the structure of financial instruments, it may be difficult to identify and apply a uniform standard of and procedure for best execution that would be valid and effective for all classes of instrument.'

[5] See CESR, *Response to the Commission on non-equities transparency* (June 2007), 4; L. Harris, *Trading and Exchanges. Market Microstructures for Practitioners* (Oxford University Press, 2003), 32 *et seq.*

[6] See Harris, *Trading and Exchanges,* (note 5, above), 45.

[7] See CESR, *Response to the Commission on non-equities transparency*, (note 5, above), 4.

[8] See the Report of the Technical Committee of IOSCO, *Transparency of Corporate Bond Markets* (May 2004), 3: 'Trading in many corporate bond issues has tended to remain predominantly bilateral between dealers and their clients. Even when bonds are listed, the majority of trading frequently occurs off-market'; CEPR, *European Corporate Bond Markets: Transparency, Liquidity, Efficiency*, report by B. Biais, F. Declerk, J. Dow, R. Portes and E. von Thadden (City of London, May 2006), 28 *et seq.*

[9] CESR, *Response to the Commission on non-equities transparency*, (note 5, above), 4.

[10] Ibid.

most shares have a dominant trading venue, whereas bonds are traded exclusively or predominantly OTC.[11]

Furthermore, market transparency has an impact on best execution. Firstly, transparency contributes to price discovery making markets more efficient, to the extent that prices fully reflect the information available.[12] As argued with respect to equity markets, transparency enhances liquidity: the more price setters know about the order flow, the better they can protect themselves against losses to insiders, so allowing them to narrow their spreads.[13] The role of informed traders, however, is less important in bond markets.[14] Moreover, there are situations in which transparency may have a negative impact on liquidity. For instance, in the case of a block trading of securities, immediate publication of the relevant data may expose the dealer to an adverse market movement, as other market participants will try to exploit the relevant information.[15]

Secondly, transparency can improve liquidity if customers have to search for the best quotes:[16] since it is costly to search for quotes, in opaque

[11] See again the 70th *considerandum* of the MiFID's Implementing Directive, which specifies: 'Best execution obligations should therefore be applied in a manner that takes into account the different circumstances associated with the execution of orders related to particular types of financial instruments. For example, transactions involving a customized OTC financial instrument that involve a unique contractual relationship tailored to the circumstances of the client and the investment firm may not be comparable for best execution purposes with transactions involving shares traded on centralized execution venues'.

[12] See the report by the Division of Market Regulation of the SEC, *Market 2000: An Examination of Current Equity Market Developments* (Jan. 1994), IV-17, also highlighting that transparency contributes to the fairness of markets, as all investors have access to information.

[13] See M. Pagano and A. Röell, 'Transparency and Liquidity: A Comparison of Auction and Dealer Markets with Informed Trading', *Journal of Finance,* 51 (1996), 579–611. These authors argue that transparency also depends on market microstructure, to the extent that order-driven markets are 'inherently' more transparent than quote-driven ones. Requiring transparency from the latter markets may force changes to their microstructure, as was sometimes argued in the discussion which finally led to the regulation of equity market transparency in the Investment Services Directive: see G. Ferrarini, 'The European Regulation of Stock Exchanges: new Perspectives', *Common Market Law Review,* 36 (1999), 569–98, 580.

[14] See CEPR, *European Corporate Bond Markets*, (note 8, above), 9, arguing that the optimal financial contracting literature has shown that corporate bonds are designed to minimize adverse selection, relative to stock.

[15] Ibid., 7, noting that an argument used against transparency is that it could deter liquidity. In transparent markets, once a trader has purchased shares, his competitors may opportunistically quote a high price for liquidity, making it difficult for the trader to unwind its inventory.

[16] See the 76th *considerandum* of the MiFID's Implementing Directive, stating *inter alia*: 'Availability, comparability and consolidation of data related to execution quality

markets customers may end up choosing to trade with a dealer even if it does not have the best quotes.[17] Competition between dealers is reduced as a result. Recent empirical research[18] concerning TRACE[19] finds that transparent bonds have lower transaction costs than non-transparent bonds and that transaction costs decrease when bonds become price transparent.[20] One of these studies suggests that in 2003, when $2 trillion in bond issues were traded for which prices were not published on a contemporaneous basis, investors would have saved a minimum of $1 billion per year had the relevant prices been TRACE-transparent.[21]

Thirdly, if significant post-trade information is not readily available, investors have difficulties in assessing best execution by their brokers.[22]

provided by the various execution venues is crucial in enabling investment firms and investors to identify those execution venues that deliver the highest quality of execution for their clients.'

[17] See X. Yin, 'A Comparison of Centralized and Fragmented Markets with Costly Search', *Journal of Finance,* 60 (2005), 1567–90.

[18] See A. Edwards, L. Harris and M. Piwowar, 'Corporate Bond Market Transaction Costs and Transparency', *Journal of Finance,* 67 (2007), 1421–51; H. Bessembinder, W. Maxwell and K. Venkataraman, 'Market Transparency, Liquidity Externalities, and Institutional Trading Costs in Corporale Bonds', *Journal of Financial Economics*, 82 (2006), 251–88; M. Goldstein, E. Hotchkiss and E. Sirri, 'Transparency and Liquidity: A Controlled Experiment on Corporate Bonds', *Review of Financial Studies*, 20 (2007), 235–73.

[19] TRACE (Trade Reporting and Compliance Engine) was created in 2002 by the National Association of Securities Dealers (NASD), under pressure from Congress, buy-side traders, and the SEC by requiring dealers to report all OTC bond transactions through it. As a result, within two and a half years after the start of TRACE operations, prices from about 99 per cent of all trades representing about 95 per cent of the dollar value traded were disseminated within 15 minutes: see A. Edwards, L. Harris and M. Piwowar, 'Corporate Bond Market Transaction Costs and Transparency', (note 18, above), at 1422, citing SEC Release No. 34–49920 and File No. SR-NASD-2004–094, with the specification that this figure does not include the trades of the Rule 144a market, which is still opaque.

[20] See Edwards, Harris and Piwowar, 'Corporate Bond Market Transaction Costs and Transparency', (note 18, above), at 1425, stating that their study complements the results of at least three other studies: G. Alexander, A. Edwards and M. Ferri, 'The Determinants of Trading Volume of High-yield Corporate Bonds', *Journal of Financial Markets*, 3 (2000), 177–204 (transparent high-yield bonds can be fairly liquid); Bessembinder, Maxwell and Venkataraman, 'Market Transparency, Liquidity Externalities, and Institutional Trading Costs in Corporale Bonds', (note 18, above) (declines in transaction costs for insurance company trades in corporate bonds after the introduction of TRACE); Goldstein, Hotchkiss and Sirri, 'Transparency and Liquidity', (note 18, above) (declines in transaction costs due to transparency for all but the smallest trade size groups in a matched-pair analysis of BBB bonds).

[21] See Edwards, Harris and Piwowar, 'Corporate Bond Market Transaction Costs and Transparency', (note 18, above), 1423.

[22] Ibid.

I will develop this intuition in Sections IV and V, arguing that market transparency is also needed for best execution and its enforcement, particularly with respect to retail investors, whose presence is substantial in some countries and could be enhanced in others by EU-wide post-trade transparency.[23]

II. MiFID'S equity market transparency

Market transparency was regulated for the first time at EC level with the ISD,[24] which included minimum standards for post-trade transparency in regulated markets and provided considerable latitude for Member States in the implementation of those standards, particularly with respect to bonds and other debt instruments.[25] Moreover, the Directive allowed Member States to require transactions in equity securities to be carried out on a regulated market.[26] As a result, some Member States, such as France, Italy and Spain, maintained 'concentration rules', i.e. rules mandating exchange execution of listed securities trades as a requirement for the best execution of transactions by investment intermediaries.[27] However, these domestic provisions were frequently criticized as anticompetitive by market participants and policy makers, whilst stock

[23] On the retail market for corporate bonds in Europe, see CEPR, *European Corporate Bond Markets*, (note 8, above), 32, stating that direct holdings of fixed income securities by households vary a lot across countries in Europe: 'While in Italy they can be as high as 20% of total financial holdings or even higher, in Germany they are between 10% and 15%, and in other countries they will typically be lower than 5%.' In the latter countries, investments in fixed income securities take place primarily through funds. See FSA, 'Trading Transparency in the UK Secondary Bond Markets', Discussion Paper 05/5 (September 2005), 9 *et seq.*

[24] Directive 93/22/EEC of 10 May 1993, on investment services in the securities field [1993], OJ L 141. See, for diffuse analysis, N. Moloney, *EC Securities Regulation,* (Oxford University Press, 2002), 295 *et seq.*

[25] See Article 21 (2) ISD, providing *inter alia:* 'The competent authorities may also apply more flexible provisions, particularly as regards publication deadlines, for transactions concerning bonds and other forms of securitized debt.' On the ISD implementation, E. Wymeersch, 'The Implementation of the ISD and CAD in National Legal Systems', in G. Ferrarini (ed.), *European Securities Markets: The Investment Services and Beyond* (London: Kluwer, 1998), 3–44.

[26] See Article 14 (3) ISD.

[27] See Ferrarini, 'The European Regulation of Stock Exchanges: new Perspectives', (note 13, above), 583, noting that other Member States, such as the UK, did not provide for the mandatory concentration of transactions on exchanges, leaving the investors and their intermediaries free to transact off-board.

exchanges took advantage of the same to consolidate their market power in domestic equities trading.

Throughout the MiFID's formation political agreement was reached, despite strong opposition from some exchanges and banking circles in the Continent, to dismantle national barriers and promote competition in the offer of trading services between regulated markets, MTFs and intermediaries internalizing trades of listed securities.[28] As a result, the new Directive allows internalization of orders and, at the same time, regulates this practice with provisions concerning transparency, order handling, conflicts of interest and best execution.[29] Transparency obligations, in particular, are aimed at remedying the fragmentation of markets which derives from competition in the offer of trading services.[30] As listed shares can now be traded through multiple venues (or entities), information concerning both on- and off-exchange transactions must be published by the relevant venue (or entity) under MiFID's post-trade transparency requirements. These requirements are similar for regulated markets,[31] MTFs[32] and investment firms that execute transactions in shares admitted to trading on

[28] See G. Ferrarini and F. Recine, 'The MiFID and Internalisation', in Ferrarini and Wymeersch (eds.), (note 2, above), 117, 120 *et seq.*, analysing the MiFID's formation and the interplay of interest groups either favouring concentration of trades or opposing the same as anticompetitive.

[29] See Ferrarini and Recine, 'The MiFID and Internalisation', (note 28, above), 139 *et seq.*; J. Köndgen and E. Thyssen, 'Internalisation under MiFID: Regulatory Overreaching or Landmark in Investor Protection?', in Ferrarini and Wymeersch (eds.), *Investor Protection in Europe,* (note 2, above), 271–96; N. Moloney, 'Effective Policy Design for the Retail Investment Services Market: Challenges and Choice Post FSAP', in Ferrarini and Wymeersch (eds.) (note 2, above), 381–442.

[30] On post-trade transparency as a remedy to market fragmentation, see the Report from the Technical Committee of IOSCO, *Transparency and Market Fragmentation* (November 2001).

[31] See Article 45 (1) MiFID stating that Member States shall, at least, require regulated markets to make public the price, volume and time of the transactions executed in respect of shares admitted to trading. Article 45 (2) specifies that the competent authority may authorize regulated markets to provide for deferred publication of the details of transactions based on their type or size, in particular of those that are large in scale compared with the normal market size.

[32] See Article 30 (1) MiFID stating that Member States shall, at least, require that investment firms and market operators operating an MTF make public the price, volume and time of the transactions executed under its systems in respect of shares which are admitted to trading on a regulated market. Article 30 (2) specifies that the competent authority may authorize investment firms or market operators operating an MTF to provide for deferred publication of the details of transactions based on their type or size, in particular of those that are large in scale compared with the normal market size.

a regulated market outside a regulated market or MTF.[33] Common requirements as to post-trade transparency are also foreseen by the Commission Regulation implementing the MiFID.[34]

Pre-trade transparency proved to be a much more controversial subject, as already seen for the ISD.[35] However, political agreement was not too difficult to reach for MiFID concerning regulated markets and MTFs,[36] probably reflecting increased consensus on the merits of organized markets' transparency and also the fact that market micro-structures are today mainly order-driven. The real controversy centred around whether pre-trade transparency should be imposed upon internalizers. Answers to this question largely depended on attitudes taken towards national concentration rules and their impact on competition. Those supporting similar rules (including Continental exchanges and banking associations) advocated that internalization should in any case be subject to rigorous pre-trade transparency requirements. Those objecting to trading concentration also objected to the introduction of pre-trade information requirements as unduly interfering with markets.[37]

[33] See Article 28 stating that Member States shall, at least, require investment firms which, either on own account or on behalf of clients, conclude transactions in shares admitted to trading on a regulated market outside a regulated market or MTF, to make public the volume and price of those transactions and the time at which they were concluded.

[34] See Article 27 (Post-trade transparency obligation), Commission Regulation (EC) No 1287/2006 of 10 August 2006, implementing Directive 2004/39/EC of the European Parliament and of the Council as regards record-keeping obligations for investment firms, transaction reporting, market transparency, admission of financial instruments to trading, and defined terms for the purpose of this Directive [2006], OJ L 241/7 (MiFID's Implementing Regulation), which applies to investment firms, regulated markets, and investment firms and market operators operating an MTF. See also Article 28 (Deferred publication of large transactions) of the same Regulation.

[35] The following text reflects Ferrarini and Recine, 'The MiFID and Internalisation', (note 28, above), 246 *et seq*.

[36] See Articles 29 and 44 of the MiFID, concerning pre-trade transparency requirements respectively for MTFs and regulated markets.

[37] See Ferrarini and Recine, 'The MiFID and Internalisation', (note 28, above), 240, describing the MiFID's 'political economy' as follows: 'On the one hand, stock exchanges (particularly those operating in Continental Europe) fight to defend their national franchises, which are in some Member States protected by concentration rules. On the other, investment banks (often belonging to American groups or European financial conglomerates) seek wider territories of action. The business model is that of the City of London, where the Stock Exchange, ATS and internalising firms offer different trading functionalities to institutional and retail investors. On the whole, investment banks defend the rents generated by internalised trades against the stock exchanges protecting their quasi-monopolies in the trade of domestic equities.'

The European Commission, in its 2002 consultation document on the ISD revision, suggested that internalized market orders and limit orders left unexecuted by internalizers should not be reported.[38] However, in its proposal for a directive published later that year,[39] the Commission accepted, through a last-minute *coup de scène*, the opposite view and included provisions mimicking the US pre-trade transparency rules.[40] The 'quote rule', in particular, was adopted by the SEC in 1978 requiring broker-dealers who maintain quotes for a security to promptly disseminate and honour the same; in 1996, the SEC extended this rule to apply to Nasdaq market makers who posted quotes in ECN.[41] The 'limit order display rule' was adopted in 1996 with the Order Handling Rules[42] and requires dealers who accept limit orders and specialists to display these orders, including their full size, when the order is placed at a price

[38] See European Commission, 'Revision of Investment Services Directive (93/22/EEC), Second Consultation'; for an analysis of this document, E. Wymeersch, 'Revision of the ISD', *Financial Law Institute, Ghent University, Working Paper 2002–11* (August 2002).

[39] See the Proposal for a Directive of the European Parliament and of the Council on Investment Services and Regulated Markets, and amending Council Directive 85/611/EEC, Council Directive 93/6/EEC and European Parliament and Council Directive 2000/12/EC, 19 November 2002, COM(2002) 625, 8.

[40] According to the press, the change was due to the personal intervention of Mr. Prodi, president of the European Commission: Lex Column 'The Prodi Plot', *Financial Times* (19 November 2002). Indeed a Commission informal draft widely circulated on 3 September 2002 did not envisage any pre-trade transparency obligation for investment firms.

[41] SEC Rule 11Ac1–1. Prior to 1978, the quotes disseminated on Nasdaq by market makers did not specify the number of shares to which the quote applied. In addition, market makers did not always honour their quotes, refusing to trade at the specified price. See J. Coffee and J. Seligman, *Securities Regulation,* 9th edn. (New York: Foundation Press, 2003), 652–3.

[42] The Order Handling Rules were an important step in the development of the National Market System (NMS), envisioned by the 1975 Securities Acts Amendments (which also contemplated the abolition of fixed commission rates), that would ensure investors competitive markets and best execution of their trades: see Coffee and Seligman, *Securities Regulation,* (note 41, above), 650–653; for early analysis of the NMS from a European perspective, E. Wymeersch, *Le contrôle des marches de valeurs mobilières dans les États members de la Communauté européenne. Rapports sur les systèmes de contrôle nationaux. Partie II,* (Commission des Communautés Européennes, Série concurrence – Rapprochement des legislations, 1981), 219–308. The Amendments fixed five basic goals for the SEC to pursue in implementing the national market system: (i) economically efficient execution of transactions; (ii) fair competition among broker-dealers, among exchanges and between exchanges and other markets; (iii) ready availability of quotation and transaction information to broker-dealers and investors; (iv) ability of broker-dealers to execute orders in the best market; (v) opportunity for investors to execute orders without the participation of a dealer (Section 11A).

superior to the market maker or specialist's own quotations.[43] Therefore, if the prices quoted by market makers left an artificially wide spread, a new source of competition would be introduced by allowing customers to introduce a price quotation that would narrow the bid/ask spread. As a result, brokers holding market orders from their clients would be required by their duty of best execution to execute their trades against these limit orders.[44]

The Commission's proposal of rules similar to the American provisions just cited generated an intense political debate. Investment intermediaries, often based in the City of London, insisted that the abolition of concentration rules could be effective only in the absence of other hindrances to off-exchange trading. On the contrary, banks in the Continent supported the imposition of pre-trade transparency obligations on dealers in order to create a level playing field between trading venues or entities. The stock exchanges hit by the abolition of concentration rules defended pre-trade transparency requirements as a means to achieve efficient price discovery in fragmented markets. A compromise solution was found, at last, in the European Parliament. The proposed European 'limit order display rule' was limited to share trading. The 'quote rule' was restricted to cases of 'systematic internalization' and to transactions of a 'standard market size', while the duty to quote was referred only to the internalizing firm's clients.

As a result, Article 22 (2) MiFID requires investment firms to make public, in a manner that is easily accessible to other market participants, limit orders concerning shares admitted to trading on a regulated market, which are not immediately executed under prevailing market

[43] Coffee and Seligman, *Securities Regulation,* (note 41, above), 653, make the following example: if the market maker's quotation were \$18 bid and \$19 asked, and a customer placed a limit order with him to buy at \$18.50, the market maker's bid quotation would become \$18.50 bid and \$19 asked. If \$18.50 were the highest bid price submitted to Nasdaq and \$18.75 the lowest asked quotation, then the NBBO (National Best Bid and Offer) would become \$18.50 and \$18.75, and all transactions would be done at this price until the orders were exhausted or a still superior price were quoted.

[44] Ibid. The Order Handling Rules were introduced after a pricing collusion was discovered amongst Nasdaq's market makers, under which they avoided odd-eighths quotes. An empirical study by W. Christie and P. Schultz, 'Why Do Nasdaq Market Makers Avoid Odd-Eighth Quotes', *Journal of Finance,* 49 (1994), 1813, examined an extensive sample of bid-ask spreads for 100 of the most active Nasdaq stocks in 1991 and found that spreads of one-eighth were virtually non-existent for a majority of this sample. In the authors' opinion, the fact that market makers enforced a minimum spread of \$0.25 for a majority of large stocks could partially explain why previous research had found trading costs to be higher for Nasdaq than for the New York Stock Exchange.

conditions. As CESR explained, this provision should facilitate and accelerate the execution of client limit orders, whilst contributing to price discovery.[45]

Concerning the 'quote rule', Article 27 MiFID requires internalizers to publish firm quotes only if a number of conditions are met. Firstly, the relevant instruments must be shares admitted to trading on a regulated market and for which there is a liquid market. Secondly, the internalizing firm must be a systematic internalizer for shares, i.e. 'an investment firm which, on an organized, frequent and systematic basis, deals on own account by executing orders outside a regulated market or an MTF'. Thirdly, the transaction size must be up to standard market size. Moreover, Article 27 (3) requires systematic internalizers to execute their clients' orders at the price quoted when receiving the order. However, in the case of orders from professional clients, systematic internalizers may execute those orders at a better price, provided that such price falls within a range close to market conditions and the orders are of a size bigger than that customarily undertaken by a retail investor. One of the main criticisms of the quote rule throughout the MiFID's preparatory works was the potential exposure of investment firms to credit risks towards unknown counterparties. Article 27 (5) aims to avoid this occurrence by allowing systematic internalizers to choose 'on the basis of their commercial policy' which investors should have access to their quotes, provided that they proceed 'in an objective non-discriminatory way'. In essence, systematic internalizers are charged with a duty to deal

[45] See CESR, *Technical Advice on Possible Implementing Measures of the Directive 2004/39/EC on Markets in Financial Instruments* (April 2005), 72. However, the European context is profoundly different from that in the US, where following the 1975 Securities Acts Amendments transaction and quotation information from different markets was consolidated into a single stream of data available to all market participants and investors. In Europe, a similar consolidated information system is lacking, whilst stock exchanges often perform a similar function at national level. Under MiFID, also trade information and execution systems other than regulated markets and MTF could be used by internalizers: for example, a bilateral system operated by the same internalizing firm or a trade execution system operated by an information provider. See Article 31 of the MiFID's Implementing Regulation, stating that an investment firm shall be considered to disclose client limit orders that are not immediately executable if it transmits the order to a regulated market or MTF that operates an order book trading system, or ensures that the order is made public and can be easily executed as soon that market conditions allow. This would make it often difficult for investors to find the relevant information, save that efficient consolidation systems would develop at the initiative of information vendors. See Article 32 of the MiFID's Implementing Regulation, stating amongst others that any arrangement to make information public must facilitate the consolidation of the data with similar data from other sources.

with all market participants and can derogate from this duty only for reasons concerning the credit and counterparty risks deriving from their internalization activities. Therefore, systematic internalizers are placed in a position similar to other 'trading venues' such as regulated markets and MTFs, which are also subject to principles of non-discrimination with respect to investment intermediaries.[46]

The reasons for a similar treatment of internalization are made clear by the formation process of the MiFID: on the one side, the rules just examined (including those on transparency) have satisfied the incumbent exchanges' request for a level playing field; on the other, the internalizers' duty to deal with all investment intermediaries in a non-discriminatory fashion has reduced the fear (typical of small- and medium-sized intermediaries in Latin countries) that internalization by large investment banks may subtract liquidity from the stock exchanges thereby forcing local intermediaries out of their traditional markets. However, the limits of the MiFID's response to internalization are apparent: first, the relevant duties are subject to restrictive conditions, such as the requirement for internalization to be 'systematic' and for shares to be 'liquid'; second, the content of these duties has been diluted through the MiFID's negotiation to the point that their regulatory bite is relatively modest (even the 'antidiscrimination' rule admits for exceptions which can be not too difficult to invoke in practice).

III. Should MiFID's transparency requirements be extended to bond markets?

The MiFID's transparency rules examined in the preceding paragraph do not include debt instruments in their scope; also the policy debate which led to the transplant of the US 'quote rule' and 'limit order rule' into European law was limited to share trading. No doubt, the interest groups involved in the discussion were different for bonds, which are predominantly traded OTC, with transactions on listed instruments mainly occurring off-exchange.[47] The stock exchanges, therefore, had small interests at stake with respect to bond trading, whilst investment and commercial banks joined forces to defend

[46] See Ferrarini and Recine, 'The MiFID and Internalisation', (note 28, above), 263.

[47] See IOSCO, 'Transparency of Corporate Bond Markets', (note 8, above), 4–6, specifying that in Europe the majority of corporate bonds are listed on exchange and yet are traded off-exchange to a significant proportion.

the rents that opaque trading allows them to extract.[48] As a result, the question whether transparency requirements should also apply to bond markets was set aside under Article 65 (1) MiFID, which provides that 'the Commission shall, on the basis of public consultation and in the light of discussions with competent authorities, report to the European Parliament and Council on the possible extension of the scope of provisions of the Directive concerning pre- and post-trade transparency obligations to transactions in classes of financial instruments other than shares'.[49] In order to comply with this provision the Commission published, in June 2006, a call for evidence that posed a range of questions relating to possible policy rationales for mandating transparency.[50] In August 2006, the Commission requested CESR to provide initial assistance by conducting a fact-finding exercise in relation to cash bond markets. Having been requested for further assistance,[51] CESR conducted a public consultation which led the same to issue, in June 2007, an advice reflecting the comments received.[52]

The core question dealt with by CESR in its advice, also in light of the consultations conducted by the same Committee and the Commission, was whether there would be 'convincing evidence of a market failure with respect to market transparency in any of the instrument markets under

[48] On rents for dealers see CEPR, *European Corporate Bond Markets*, (note 8, above), 20, assuming that bond dealers privately acquire information, which results in differences of information as 'some dealers end up with better signals than the others. This creates a winner's course problem for the latter. They risk getting a better fill rate for less profitable trades. To make up for these losses, relatively uninformed dealers will widen their spreads. This, in turn, reduces the competitive pressure faced by the better informed dealers, who also widen their spreads. Such wide spreads generate rents for the dealers'. For a similar analysis, see R. Bloomfield and M. O'Hara, 'Can Transparent Markets Survive?', *Journal of Financial Economics,* 55 (2000), 425–59.

[49] See also the 46th *considerandum* of MiFID's Preamble stating: 'A Member State may decide to apply the pre- and post-trade transparency requirements laid down in this Directive to financial instruments other than shares …'.

[50] European Commission, *Call for Evidence: Pre- and Post-trade Transparency Provisions of the Markets in Financial Instruments Directive (MiFID) in Relation to Transactions in Classes of Financial Instruments Other than Shares* (12 June 2006). See also the DG Internal Market and Services working paper including the Feedback statement concerning this consultation (13 November 2006).

[51] See the Commission's Mandate to CESR for technical advice on possible extension of the scope of the provisions of Directive 2004/39/EC concerning pre- and post-trade transparency obligations to transactions in classes of financial instruments other than shares (27 November 2006). A similar mandate was given to the European Securities Markets Expert Group (ESME) on the same date.

[52] CESR, *Response to the Commission on non-equities transparency*, (note 5, above). A similar report was published by ESME, *Non-equity Market Transparency* (June 2007).

review'.[53] The vast majority of the respondents in the consultations felt that there was no market failure affecting wholesale participants in the secondary bond markets that could be attributed to transparency levels. However, a number of respondents, particularly the private investors group, noted that bond markets might be a difficult environment for direct retail investors, who have no access to transparency information on the same basis as other participants: 'They might receive less data, or the data they did obtain might be more delayed, meaning they would be a step behind other participants.'[54] The low level of transparency might indeed be the cause of the low level of direct retail involvement in bonds. CESR further specified that the extent of information asymmetry may differ depending on the instruments traded. For more liquid bonds (such as government bonds, supranational and large corporate issues) the ability to access trading information tends to be greater.[55] As transparency levels reduce, market failures may become more likely: 'Price discovery, and thus the ability to assess prices for best execution purposes, will tend to become more difficult, particularly for smaller players.'[56] CESR's general answer to the core question at issue was that there is no evident market failure in respect of market transparency in bond markets. Yet, smaller participants, including retail investors, might benefit from receiving access to greater trading transparency, which could also encourage higher levels of retail participation in the markets.[57] Nonetheless, 'any increase in transparency would need to be carefully tailored to ensure that liquidity provision and levels of competition were not damaged as a result of dealers reducing or withdrawing their commitment to the markets'.[58]

The Commission's Report, which was subsequently published under Article 65 (1) MiFID, reached similar conclusions.[59] With respect to

[53] CESR, *Response to the Commission on non-equities transparency*, (note 5, above), 6, where possible market failures (such as information asymmetry and market power) are considered. See also, for an analysis of possible market failures, the ESME's Report to the European Commission, (note 52, above).

[54] CESR, *Response to the Commission on non-equities transparency*, (note 5, above), 8.

[55] Ibid., this being due to higher levels of multilateral trading and the greater number of two-way quotes made available by dealers.

[56] Ibid.

[57] Ibid., 9. See, for a similar conclusion, ESME, *Non-equity Market Transparency*, (note 52, above), 13, identifying some evidence of sub-optimality with respect to market transparency in retail bond markets.

[58] Ibid., also noting (at 11) that the perspective of mandated pre-trade transparency caused concern for the risk of a negative impact on dealers' willingness to provide the markets with liquidity.

[59] DG Internal Market and Services, Working Document, *Report on non-equities market transparency pursuant to Article 65 (1) of Directive 2004/39/EC on Markets in Financial Instruments (MiFID)* (3 April 2008).

the retail bond markets, the Commission services accepted CESR's and ESME's view that investors have 'sub-optimal' access to price information: 'Clearly, without ready access to bond market prices retail clients are in no position to check the quality of execution they receive from their intermediaries, including the competitiveness of the prices they are quoted.'[60] With respect to wholesale markets, the Commission services similarly accepted the argument that no convincing case of a market failure has been made out.[61] As a general conclusion, the Commission argued that there does not seem to be, at this time, a need for expanding the MiFID's transparency requirements to financial instruments other than shares.[62] Assuming, however, that there is an issue with respect to retail access to bond market prices, the Commission services accepted that market participants appear to be well-placed to address the same through self-regulatory initiatives. Moreover, the Commission encouraged 'all designers and implementers of self-regulatory solutions, including ICMA and SIFMA, to consider carefully the design parameters so that retail access to realistic and up-to-date prices is broadened and deepened to the fullest extent possible consistent with ensuring that liquidity is not impaired'.[63]

A few comments may help to better understand the consultations' outcome. Firstly, a majority of interventions came from trade associations of banks, securities firms and other professionals.[64] This suggests some degree of caution in assessing the view that wholesale bond markets would be immune from market failures. No doubt, also buy-side participants, such as investment fund managers, often concurred in this view.[65] However, they may have acted strategically, fearing that the costs of regulation, including the potential loss of liquidity from dealers, could be higher than the benefits deriving from increased market transparency. Secondly, almost all participants shared the view that retail investors might suffer from information asymmetry, even though the concept of 'sub-optimality' seemed more appropriate than that of market failure. Broad consensus emerged, however, on the need for remedying this asymmetry through a market-led disclosure mechanism similar to TRACE. The Commission's final recommendation was in the

[60] Ibid., 10, also specifying that 'for many retail customers it would be totally impractical in terms of transaction costs to engage multiple intermediaries and secure competing quotes prior to each transaction, as institutional investors tend to do'.

[61] Ibid., 10–11. [62] Ibid., 13. [63] Ibid.

[64] See CESR, *Response to the Commission on non-equities transparency*, (note 5, above), 7.

[65] See DG Internal Market and Services, (note 50, above), 2.

same direction, suggesting self-regulation of post-trade transparency. Pre-trade transparency did not appear fit for regulation, which would also require the introduction of an obligation to quote for price information to be meaningful. A similar obligation would create problems like those already seen for the MiFID's quote rule[66] and would adversely impact bond markets' microstructures. Thirdly, best execution emerged as one of the key arguments supporting enhanced market transparency, which would improve retail investors' ability to control order execution by their intermediaries, in addition to helping the latter to comply with best execution requirements. I will try to develop this argument in the rest of the chapter, by examining the interaction between transparency and best execution.

IV. Best execution in transparent bond markets

MiFID is aimed at enhancing competition between trading venues. As seen with respect to equity markets, the Directive's opposition to domestic concentration rules was motivated by competitive concerns. Moreover, mandatory transparency was introduced to remedy the negative impact of market fragmentation on price discovery;[67] also best execution was regulated in view of promoting competition between trading venues, in addition to protecting individual investors. However, as I tried to show in another paper, the principle of best execution was specified in ways which could make competition in share trading more difficult for new entrants and in the end protect the incumbent exchanges.[68] After summarizing the core arguments of my previous paper (a), I will analyse three examples of bond trading from a best execution and transparency perspective (b).

(a) MiFID offers a broad definition of best execution[69] which deserves approval, for it is often acknowledged that order execution should be

[66] See the preceding paragraph.

[67] See Section III.

[68] Ferrarini, 'Best Execution and Competition between Trading Venues – MiFID's Likely Impact', (note 2, above), 404–13.

[69] Under Article 21 (1) MiFID, investment firms are required to 'take all reasonable steps to obtain, when executing orders, the best possible result for their clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order'. This is a best endeavour obligation, which is met by complying with the provisions foreseen in the following paragraphs of Article 21. See the AMF, *Enforcing the Best-execution Principles in MiFID and its Implementing Directive* (25 July 2006), 7, speaking of a 'best efforts' obligation.

assessed also on the basis of criteria other than price.[70] A flexible concept of best execution makes competition between trading venues easier, to the extent that exchanges, MTFs, internalizing firms and other liquidity providers compete both as to price and other aspects of trading. As a result, new execution venues or entities will emerge and offer trading functionalities different from those already provided by exchanges. However, other provisions of the MiFID and the implementing Directive constrain the flexibility of best execution by making its requirements more specific.[71] Particularly in the case of execution of orders for retail clients, the best execution factors enumerated by Article 21 (1) of the MiFID are incorporated, at level 2, in the narrower criterion of 'total consideration'.[72] Reference to 'total consideration' is justified on two counts. First, it is an easy test to apply for retail clients wishing to monitor the quality of order execution by an investment firm. Second, retail orders are generally small and relatively easy to execute. Therefore, getting the best price for an instrument and the lowest costs for trading the same should suffice for best execution purposes. This approach has

[70] See FSA, *Best Execution,* Consultation Paper 154 (October 2002); J. Macey and M. O'Hara, 'The Law and Economics of Best Execution', *Journal of Financial Intermediation*, 6 (1997), 188.

[71] First, the order execution policy (offering information on execution venues and how to choose among them) 'shall at least include those venues that enable the investment firm to obtain on a consistent basis the best possible result for the execution of client orders' (Article 21 (3) MiFID). It is not enough for investment firms that, for example, internalize execution of orders to refer to the prices made in the exchange where the securities are listed. Their execution policy should also 'include' this exchange (assuming it assures 'on a consistent basis' the best possible result for the firm's clients). Therefore, the investment firm should be ready to trade on the relevant exchange and, in any case, should monitor the prices of internalized trades by periodically comparing the same with those made in the exchange at issue. Secondly, investment firms should obtain the 'prior consent' (which could also be tacit)[71] of their clients to their execution policy and inform the same about the possibility, when foreseen by this policy, to execute their orders outside a regulated market or MTF. Moreover, investment firms should obtain the 'prior express consent' of their clients before proceeding to execute their orders outside a regulated market or MTF. Similar requirements protect the incumbent exchanges by alerting clients against the risks of off-exchange transactions. At the same time, they underline that exchange markets offer liquidity and price efficiency. In brief, domestic concentration rules are replaced by 'consent' requirements and by the duty to include the best performing exchange in a firm's execution policy.

[72] Article 44 (3) of the Commission Directive requires, in similar cases, to determine the best possible result in terms of total consideration 'representing the price of the financial instrument and the costs related to execution, which shall include all expenses incurred by the client which are directly related to execution of the order, including execution venue fees, clearing and settlement fees and any other fees paid to third parties involved in the execution of the order'.

an impact on competition between trading venues, to the extent that reference to the traded instruments' price puts established and more liquid venues at a competitive advantage.[73]

The impact on competition of a narrow best execution concept, such as that embodied in the total consideration criterion, is manifest when considering the possibility of including a single execution venue in a firm's policy. As argued by CESR in a consultation document, 'there may be circumstances in which only one particular execution venue or entity will deliver the best possible result on a consistent basis for some instruments and orders'.[74] It may also be that for other instruments or orders there are other potential venues. However, the cost of accessing more than one execution venue directly, to the extent that it would be passed on to clients, 'may outweigh any price improvement an alternative venue might offer'.[75] CESR considered that, in similar circumstances, it may be 'reasonable' to decide not to connect to these other venues; nonetheless, the investment firm should always consider also the advantages of indirect access (i.e. transmitting its client orders to another execution intermediary rather than executing those orders itself).[76] In its final document CESR, whilst confirming that an investment firm may include a single entity in its policy, adopted a more general stance by asking the same 'to show that this allows it to satisfy the overarching best execution requirement'.[77]

(b) Three examples show the complexity of best execution analysis in bond trading. The first refers to bonds which are only traded OTC, with liquidity provided by one or more dealers. When the retail customer asks her broker to buy similar bonds, the latter will look for the best offer available and execute the transaction with the relevant dealer.[78] Given the transaction's likely small size, there will generally be no negotiation of the price with the dealer. If there is no pre-trade transparency, as presently is generally the case in OTC markets, the broker will ask the dealers for a quote and possibly compare the same with quotes from other

[73] No doubt, total consideration also includes transaction costs and, where there is more than one execution venue, the trading firm's commissions and costs for executing an order on each of the eligible venues shall be taken into account (Article 44 (3) Commission Directive).

[74] CESR, 'Best Execution under MiFID', Public Consultation (February 2007), 10.

[75] Ibid. [76] Ibid.

[77] CESR, 'Best Execution under MiFID', Questions and Answers (May 2007), 8.

[78] See, for more information on the microstructure of the European corporate bond market, CEPR, (note 14, above), 29.

dealers through an information provider (such as Bloomberg). If there is post-trade transparency, as is sometimes the case in domestic bond markets also for OTC transactions[79] and was suggested by the Commission, the broker will find his task easier and the customer will be able to exercise better monitoring on her order's execution by the broker. The situation gets more complex when either the broker is also a dealer for the security in question or the dealer and the broker belong to the same group of companies. In similar cases, the relevant provisions on conflict of interests will also have to be complied with.[80]

The second hypothetical case refers to bonds which are admitted to trading on a regulated market and are actually traded on the same market and on another venue (regulated market or MTF). Assuming that the broker has access to both venues and that they offer both pre-trade and post-trade transparency, as often happens with regulated markets and MTFs also for bond trading,[81] compliance with best execution will be relatively easy, with order execution taking place in the venue offering the best price. However, the broker might also choose to trade bonds on a single venue, in which case best execution is satisfied by trading on this venue, provided that the performance of the same is periodically compared with that of the other venue, so as to check the possibility for the broker to keep only one venue in his execution policy.[82]

The third hypothesis is a combination of the previous two. Assume that bonds are admitted to trading on a regulated market and are traded both on- or off-exchange. Further assume that the regulated market offers pre-trade and post-trade transparency, whilst off-exchange transactions are not published under the applicable rules. Briefly, this is a case of competition between a transparent and an opaque market. Economic theory predicts that the opaque market will prevail, as dealers in this market exploit their informational advantage to quote narrower spreads and earn more profits than their more transparent competitors. In addition, most dealers choose to be of lower transparency, if allowed to do

[79] See CESR, *Response to the Commission on non-equities transparency*, (note 5, above), Annex 'Existing trading transparency in Europe for listed bonds'.

[80] See Articles 13 (3) and 18 MiFID, and Ch. II, sec. 4, MiFID's Implementing Directive. For a critical view, see L. Enriques, 'Conflicts of Interest in Investment Services: The Price and Uncertain Impact of MiFID's Regulatory Framework', in Ferrarini and Wymeersch, *Investor protection in Europe,* (note 2, above), 321–338.

[81] See the Annex, 'Existing trading transparency in Europe for listed bonds', (note 79, above).

[82] See CESR's criteria, (notes 74 and 77, above), and accompanying text.

so.[83] From a best execution perspective, the broker in our example will choose the best offer from either market; assuming that opaque dealers quote the best prices, the broker will transact off-exchange. However, the broker is not bound to ask all dealers, if there are information costs. Moreover, the client will have difficulties in assessing the quality of order execution, if the off-exchange market is opaque and the exchange prices are often worse that those made for off-exchange transactions. If post-trade transparency were mandated for all transactions, the two markets would compete on a level playing field and the clients would better monitor the quality of their brokers' order execution.

V. Conclusion

The examples just analysed confirm that transparency is important for best execution in bond trading and that market-led solutions directed to enhance post-trade transparency deserve approval. In the case of regulated markets and MTFs, both pre-trade and post-trade transparency are often already available. For OTC transactions pre-trade transparency is more difficult to obtain, as changes to the market microstructure may be needed. Post-trade transparency, on the contrary, is feasible for OTC markets. However, a crucial question needs to be answered, concerning the time when the relevant information should be published.[84] In view of the Commission's consultation, the International Capital Markets Association (ICMA) sent a questionnaire to its members concerning possible market-led mechanisms for bond market transparency.[85] The questionnaire set out two non-mutually exclusive options, which were designed to help retail investors, while avoiding liquidity problems for firms: 'Option 1 is a Price Service, which would involve publishing, at the end of the day, an average of the closing bid and offer quotes for each reportable security and the high, low and average prices for each bond trade which has been reported to ICMA. Option 2 is a Single Trade Publication Service, which would involve publishing trades in large investment grade bonds above a specified minimum level and below a specified upper size limit.'[86]

These proposals show some of the core questions to be addressed when setting-up post-trade disclosure for debt securities. First, should

[83] See Bloomfield and O'Hara, 'Can Transparent Markets Survive?', (note 48, above).

[84] See, for an analysis, CEPR, *European Corporate Bond Markets*, (note 8, above), 68–69.

[85] 'The ICMA Bond Market Transparency Questionnaire: Assessment of Responses' (21 May 2007).

[86] See, for details of these options, Annex B of the Questionnaire.

real-time or end-of-day publication of data be chosen? No doubt, delayed publication is favoured by most dealers; however real-time (or close to real-time) information would be more helpful from a best execution perspective.[87] Second, should post-trade transparency only apply to liquid bonds or also to illiquid ones? Again, dealers tend to favour limiting transparency to markets which are already liquid; yet, from an investor's perspective, the benefits of transparency would emerge particularly in the case of illiquid markets.[88] Third, what size of transactions should be covered? If the principal aim is to protect retail investors, information should also be published for relatively small sizes, while trade information concerning blocks is less needed (and dealers would no doubt object to real time publication of the same). The Commission, despite being aware of the numerous trade-offs between transparency and liquidity, restrained from doing more than suggesting a 'careful' design for self-regulatory initiatives.[89] It remains to be seen, however, whether market participants will be able to solve their collective action problems and strike the right balance between transparency and liquidity, without regulators intervening either to 'inspire' self-regulation informally or to set a general framework for market-driven solutions.[90]

[87] See, however, ESME, *Non-equity Market Transparency*, (note 52, above), 16, stating that 'it does not appear that there would be significant additional benefit to retail investors from the provision of real-time publication'.

[88] See however CEPR, *European Corporate Bond Markets*, (note 8, above), 65, arguing that for less liquid bonds the impact of transparency on liquidity could be a real issue; ESME, *Non-equity Market Transparency*, (note 52, above), 16, stating that 'information is unlikely to be of much value [to retail investors] in illiquid markets where a bond may go for weeks or months without being traded'.

[89] See the text accompanying note 63, above.

[90] This is the case of Consob in Italy, which requires regulated market operators and MTFs to include in their market rules 'adequate' provisions on pre- and post-trade transparency for non-equity instruments (Article 32 of Consob's Markets Regulation), and systematic internalizers to similarly adopt transparency mechanisms differentiated depending on market microstructure, type of instrument and type of investor (Article 33). On the Italian approach to bond market regulation, see C. Salini, 'Bond Markets in Italy: Transparency and Regulatory Issues' (19 March 2007), available at www.consob.it.