

## The MiFID Metamorphosis

Karel Lannoo and Diego Valiante

The Markets in Financial Instruments Directive (MiFID), adopted by the EU in April 2004 and implemented at Member State level by the end of 2007, has begun to achieve real success in transforming the EU's securities markets landscape. Judging from market data and sector publications, the Directive contributed to a revolution in trading methods and huge investments in technology, which have brought the EU and US markets closer together. Technology-driven systems, such as algorithmic trading and smart-order routing, have become the mainstream in trading process, with speed of trading and reduction of 'latency' being the key objectives. Large investments in market infrastructures are trying to strike the right balance between high capacity and speed, and low operational and technological risks that represent a future threat for these platforms, even in the post-trading space.

Work remains to be done, however, on the 'conduct of business' side of the Directive, which is especially appropriate in a post-crisis context, but requires better enforcement. EU policy-makers should assess how the benefits of increased competition are passed on to end-users and how increased transparency has improved the quality of the price formation process. These elements could be the starting point of the MiFID Review, on which the European Commission will embark in the course of 2010.

### The origins and (r)evolution of the trading landscape

It is worth recalling that MiFID's 'birth' was not particularly well received. A long debate ensued over whether there was a need for a radical overhaul, or whether limited amendments to the 1993 Investment Services Directive (ISD) would be sufficient. The adoption of the proposal by the European Commission in 2002 was overshadowed by a last minute 'Prodi amendment' on pre-trade transparency, which was also the main focus of the discussions in the European Parliament. The implementation of the Directive was seen to be painful,

costly and complex – “Most Institutions Find It Difficult” – and the starting date was formally postponed. Many firms were not prepared for the directive on the already belated implementation date of November 2007, but also many member states seriously delayed transposing the EU Directive into national law.<sup>1</sup>

The tide started to turn in 2007, when at least some started to see MiFID as an opportunity as well. The UK's Financial Services Authority (FSA) worked hard to make sure that the City would be ready and well prepared for the MiFID deadline. However, that date fell directly in the first months of the financial crisis, and the first 18-month period following the start date was entirely overshadowed by the problems in the banking sector. MiFID was a non-event, even if many of the conduct-of-business provisions of the Directive were well adapted in the post-crisis context.

Important changes in market structure occurred in the course of 2009. MTFs – with their pan-European trading venues – began to gain an increasing market share to the detriment of the exchanges. Before MiFID, fragmentation was mainly driven by geographical and behavioural factors (e.g. home bias), even where the concentration rule did not apply. Under the new regime, new entrants managed to get a market share of about 20% of total trading in Europe by the end of 2009, from almost nothing the year before. Chi-X, the most successful new entrant, managed to become the 4<sup>th</sup> most important operator in the European trading landscape in 2009, just behind Deutsche Börse. The market share of the largest regulated market in the EU, the London Stock Exchange (LSE), shrank from 35% to 24% from 2008 to 2009 (see Figure 1).

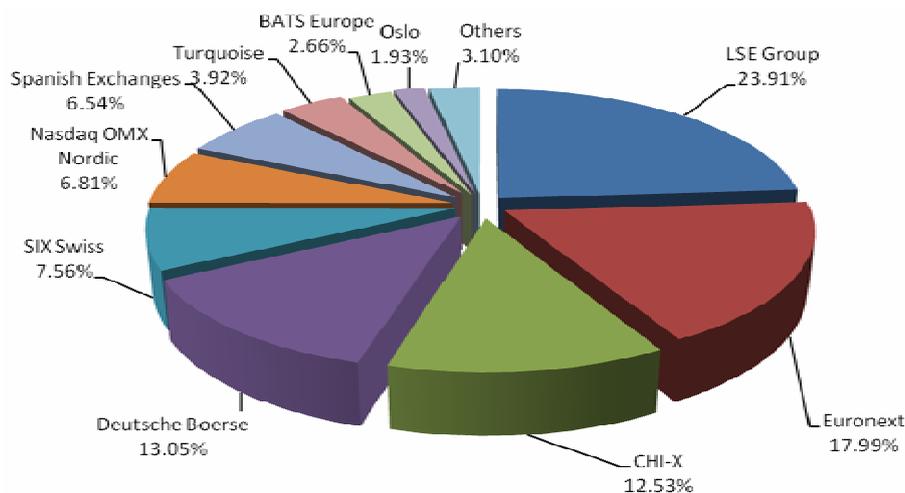
<sup>1</sup> See Casey & Lannoo (2009, pp. 12-13) for an overview of the costs estimates of implementing MiFID and Lannoo (2007) for an overview of the state of preparedness for implementation in 2007 (text available on [www.eurocapitalmarkets.org](http://www.eurocapitalmarkets.org) and [www.ceps.eu](http://www.ceps.eu)).

\* Karel Lannoo is Chief Executive Officer at CEPS, where he also heads the Financial Markets and Institutions research unit and serves as Secretary-General of ECMI. Diego Valiante is a Research Fellow at ECMI and CEPS. An earlier version of the paper was presented at the 2010 Tradetech Conference in London, 21 April 2010.



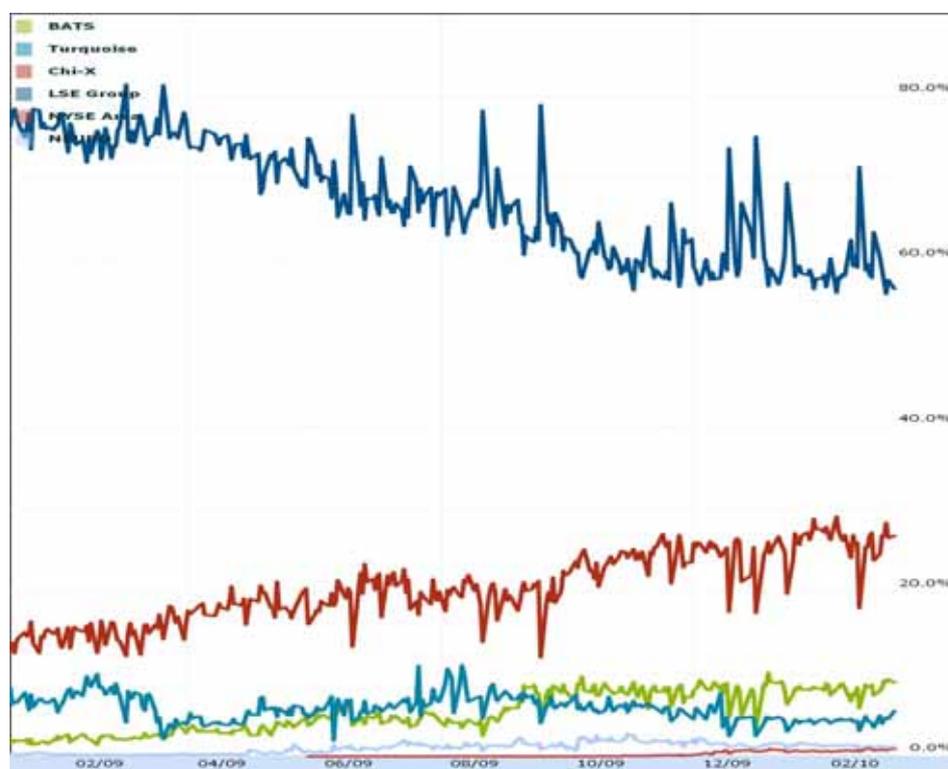
Papers in the ECMI Policy Brief series provide insights into regulatory initiatives that affect the European financial landscape. They are produced by specialists associated with the European Capital Markets Institute, which is managed and staffed by the Centre for European Policy Studies (CEPS) in Brussels. Unless otherwise indicated, the views expressed are attributable only to the authors in a personal capacity and not to any institution with which they are associated.

Figure 1. EU equity markets – 2009 market shares



Source: Thomson Reuters, FESE (December 2009; % total turnover).

Figure 2. Market Share of trading venues on the FTSE 100



Source: BATS Europe.

Within the local stock market indexes, for instance on the FTSE 100, the LSE currently has a market share of about 60%, down from over 80% a year ago (see Figure 2). Estimates reduce this market share to 40% by 2012.<sup>2</sup>

This revolutionary change happened in a context of sharp declines on Europe's stock markets and the consequent dramatic reduction in the turnover of Europe's trading venues, and thus also exchange revenues. Sudden losses have hit exchanges' balance sheets, forcing them to rethink their business models and to diversify into other revenue

streams. Specialised services in the realm of market data and new infrastructures run as MTF platforms with dark and lit pools of liquidity are the main targets of this diversification process.<sup>3</sup> Hence, on the one side, as a result of fierce competition, exchanges are building their own dark and lit pan-European platforms that are progressively competing with newcomers on a cross-border level. On the other hand, however, the market for data remains costly and highly segmented by incumbents and data vendors, which

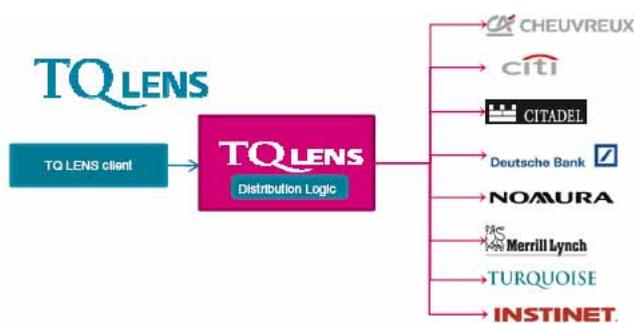
<sup>2</sup> See Bruce Hamilton, presentation at ECMI Conference on "MiFID & EU Markets: What is next?" (<http://www.eurocapitalmarkets.org/system/files/Bruce+Hamilton.pdf>).

<sup>3</sup> LSE Group has just completed the acquisition of Turquoise (18 February 2010) and it will merge its MTF Baikal with the purchased trading venue. Euronext created Smartpool and purchased NYFIX technologies with Euro-Millennium dark pool, which has been shut down. Deutsche Börse is running its own dark and lit MTF platforms.

are benefiting from the lack of standardisation for data formats. Without a harmonised framework of formats and pro-competitive practices, final products (market data) are not homogeneous and competition cannot really be unleashed into the market. More should be done to disclose market data “in a manner which is easily accessible [and readable] to other market participants” (Art. 28 MiFID).

On the competition policy side, in effect, widespread bundling practices may create unfair advantages for large market players and final users. The obligation to purchase bundled services or data products without the possibility to buy the product separately favours incumbents and maintains market segmentation. A clear-cut example is the practice to bundle broker, execution and other trading and (potentially) post-trading services. The Turquoise project (see figure below) represents an example of bundling that will, thanks to the merger with the LSE, potentially allow this market participant to offer all services related to a transaction in equity markets, especially if the LSE decides to enter the market also for post-trading services in the UK through its Italian subsidiaries, Monte Titoli and CC&G.

Figure 3. Turquoise's TQ Lens



Source: Turquoise trading.

This project is an interesting innovation that may reduce costs of access and intermediation while increasing the quality of the transaction at the same time. In effect, bundling of services can create high economies of scale and scope. From a competition policy point of view, this bundling solution does not necessarily harm final investors if investors are free to choose single services from the bundle with no lock-in effects for final users and the bundle does not foreclose new entrants. If the market participant that offers the bundle is not dominant and if the bundle is potentially replicable and the offer does not involve loyalty rebates, foreclosure effects are generally low.<sup>4</sup>

A similar and even more pronounced market trend can be observed in the US, where the abolishment of order protection for manual quotations in Reg NMS (Regulation National Market System) and the rule against trade-throughs<sup>5</sup> have led to a dramatic reduction in the market

share of the New York Stock Exchange. In January 2005, NYSE executed 79.1% of the consolidated share volume in its listed stocks, compared to 27.4% in December 2009 (see SEC, 2010 and Figure 4). But so far, the increased fragmentation of trading venues has not deteriorated orderly price formation. Spreads at the larger European and US exchanges have further narrowed in the course of 2009.

Securities markets in the EU and the US have thus started to move in parallel. Whereas the main European exchanges have had automated trade matching in place since the early 1990s, the US continued to protect manual quotations until the entry into force of Reg NMS. The EU, on the other hand, still maintained the monopoly of exchanges until the entry into force of MiFID in November 2007, whereas in the US Automated Trading Systems (ATS) have been competing with the main markets since the mid-1990s. Both regulations – Reg NMS and MiFID – aim at increasing market efficiency and reducing trading costs through creating fiercer competition between trading venues. An exact comparison between Europe and the US is difficult because of poor data quality, however.

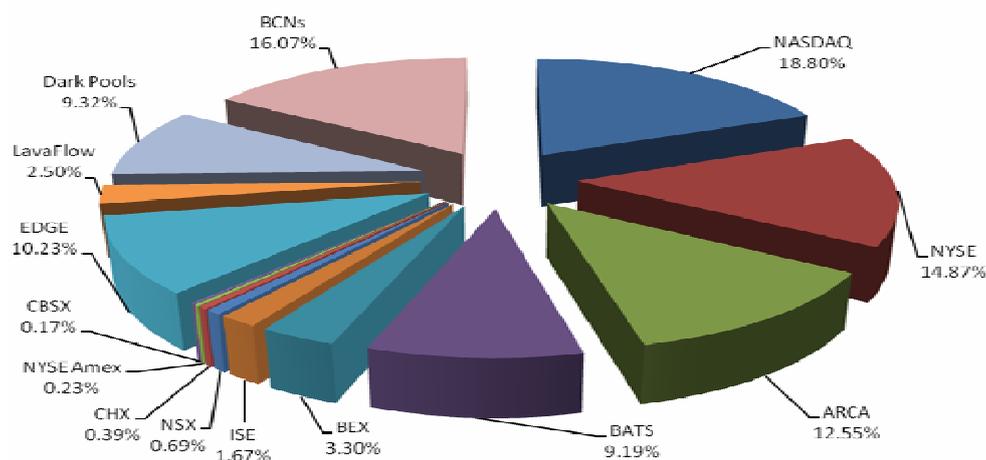
Within Europe, an intense debate is on between the European exchanges (FESE) and investment banks concerning the size of over-the-counter broker-dealer networks (or ‘crossing engines’). In effect, the MiFID revolution, especially with the introduction of new technologies, has caused the emergence of trading venues as a result of new pre-trade transparency requirements and their missing classification under the Directive. Crossing engines apply discretionary rules in the selection of liquidity (as systematic internalisers), but they do not apply pre-trade transparency, as they deal with liquidity that may have market impact. Until now, there is no evidence that these pools of liquidity have negatively impacted price formation (see for example CFA, 2009). Besides, they are systemically irrelevant.<sup>6</sup> However, in a recent consultation paper, CESR has proposed a legal classification for broker-dealer crossing networks and detailed post-trade reporting to authorities, plus the requirement of becoming MTF if the amount of client business exceeds a certain threshold (CESR, 2010b). We agree on the need to give a legal classification and proper post-trade data requirements to these venues, but we do not concur with the solution of setting a threshold, at least as long as we do not have empirical evidence of the optimal size or the level of over-the-counter trading that affects price formation. The discussion should be guided by other priorities, as we explain below.

<sup>4</sup> See, in general, CEPS and Van Djik Consultants (2009) at [http://ec.europa.eu/internal\\_market/consultations/docs/2010/tying/report\\_en.pdf](http://ec.europa.eu/internal_market/consultations/docs/2010/tying/report_en.pdf).

<sup>5</sup> “A trade-through occurs when one trading center executes an order at a price that is inferior to the price of a protected quotation, often representing an investor limit order, displayed by another trading center.” SEC, “Regulation NMS”, Release No. 34-51808; File No. S7-10-04, p. 22.

<sup>6</sup> The FSA calculates that broker dealer crossing networks account for 1.25% of the total trading (see Jeremy Grant, “Bank dark pools only 1.25% of Europe trading”, FT.com, 16 December 2009 at <http://www.ft.com/cms/s/0/57423724-ea6d-11de-a9f5-0144feab49a.html>). CESR (2010) has recently calculated the size of these crossing networks as 1.4% of the total EEA trading.

Figure 4. US equity markets – 2009 market shares



Source: TABB Group (December 2009).

In conclusion, a similar trend can be observed in the EU and the US towards fragmentation driven by competition, even though market integration in Europe still has some way to go. Legal, fiscal and behavioural barriers prevent greater and more cost-effective competition at European level.

### New technologies: Impact on execution services and market structure

With the liberalisation of market access and an improvement in service choice, trading venues and broker-dealers have invested massively in technology to accelerate trade execution and improve capacity. The NYSE's speed of execution for small, immediately executable orders was 10.1 seconds in January 2005, compared to 0.7 seconds in October 2009. NYSE Euronext Paris will move its servers to London to reduce latency and to be closer to the main trading community in Europe, while the LSE Group – after the acquisition of the IT firm Millennium – is launching a new infrastructure called 'Millennium Exchange', to which Oslo Bors is also going to migrate in April 2010.<sup>7</sup> Banks are continuously developing and fine-tuning their order-routing systems to be ahead of the competition. Quantitative automated trading strategies, such as smart order routing and algorithmic trading, have become mainstream in trade execution. Among these quantitative strategies, high frequency trading has become a more significant component of the market, and the success of this strategy has encouraged more entrants.

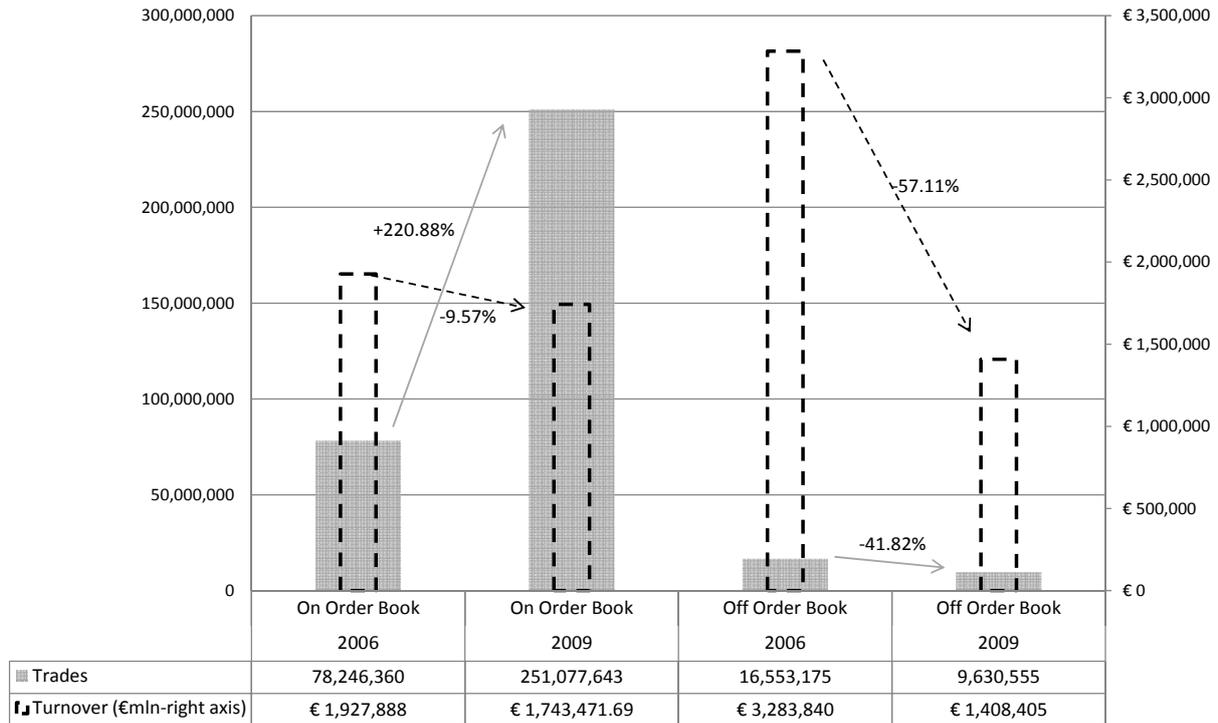
The impact of new technologies has benefited displayed order books (hereinafter, 'lit order books') and dark order books, and their mechanisms of price formation. As we can see from Figure 5, the comparison of pre- and post-MiFID scenarios in the UK FTSE 100 – which applied OTC reporting even before MiFID – shows a dramatic fall in the turnover and number of OTC trades (off-order book) and a big rise in the number of on-order book trades, while the turnover is more or less the same. On-order books, in effect

– despite the terrible course of the financial crisis – the normalised turnover is slightly declining while the number of trades soared, also taking into account a normal drop in liquidity and investments due to the crisis. In our view, this result can be ascribed as an important positive result achieved by MiFID because on order books – where prices are formed – have largely benefited from the new trading environment.

This structural shift is due to the introduction of electronic trading (such as algorithmic trading), which reduces market impact. Market impact itself has become a more significant variable in investment decisions with the use of new trading technologies that permit one to more easily sniff out new sources of liquidity. These new systems of trading execution slice big orders into many small orders, designing a trajectory for the orders that will be executed at different points during the trading day. In effect, the average size of orders went down drastically in Europe, for instance on the LSE FTSE 100 from £21,000 in 2003 to almost £10,000 in 2008 (CESR, 2009).

<sup>7</sup> See <http://www.londonstockexchange.com/traders-and-brokers/products-services/millennium-exchange/millennium-exchange-migration/millennium-exchange-migration.htm> and <http://www.thetradejournal.com/trading-venues/exchanges/4192>.

Figure 5. London Stock Exchange – FTSE 100



Source: FESE, Thomson Reuters, Markit BOAT, Chi-X, BATS Europe (turnover normalised by drop in FTSE 100 index value from January 2006 to December 2009 [13%]).

### Best execution: Laying out the road for a consolidated EBBO

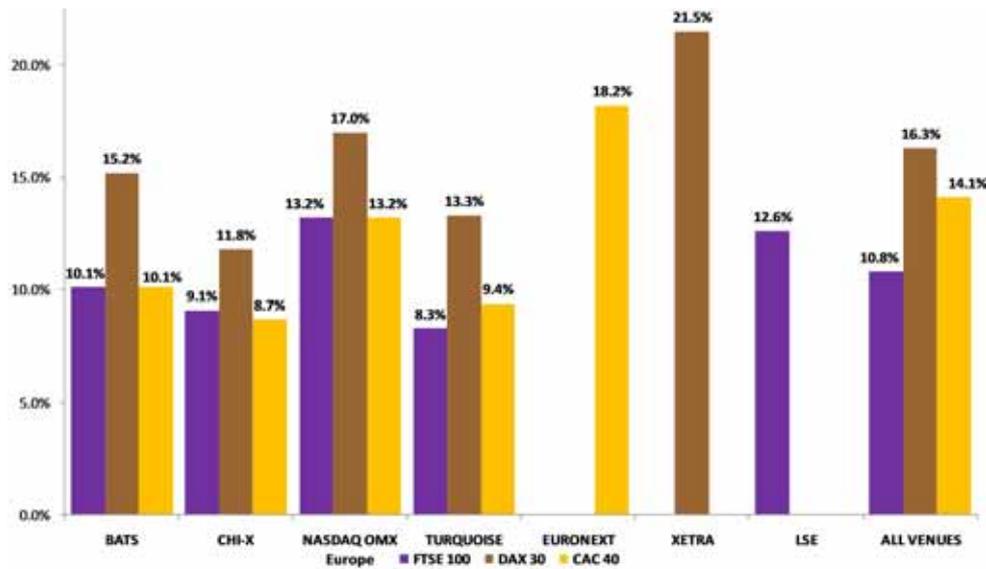
Automated trading strategies are specially driven by regulatory conduct of business requirements, such as best execution. Well-programmed systems will be more capable of delivering best execution than manual systems, provided the criteria are clearly set. On this account, the US Reg NMS is clearer than the EU's MiFID, as best execution is price only in the US, with a strict prohibition of trade-throughs, whereas the EU rule is more loosely defined, and may need tightening. Hence, narrowing of the rules in the EU for investor protection reasons will further automate trading, but not necessarily at the expense of the main markets if they adapt trading fees and costs for end-users.

The MiFID implementation has highlighted some further problems, related not only to a loose definition, but primarily to bad enforcement in particular for retail investors. In effect, while dark books – where big size orders are traded – have kept their size as before the crisis,

lit books of regulated markets and MTFs – where retail investors and funds represent a big part – have lost a relevant share of turnover in the last two years (CESR, 2010b). In addition, the automatic splitting of orders in smart order routing and matching on banks' own books often mean that certain criteria for systemic internalisation of MiFID are not met.

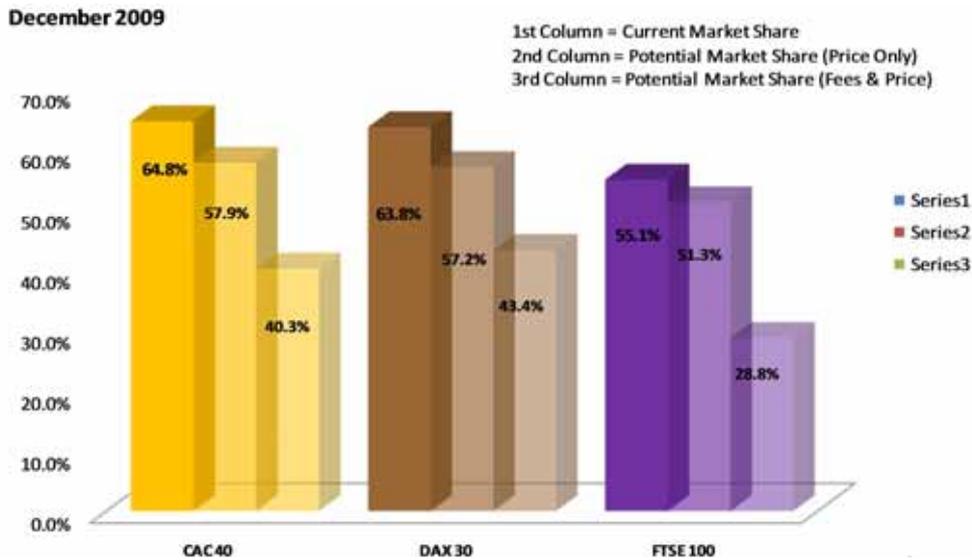
As shown in Figure 6, 12.6% of trades on FTSE 100 in December 2009 missed the best price on the incumbent exchange (this number becomes 18.2% for the CAC 40 and 21.5% for Xetra). If we consider that under MiFID best execution for retail investors is mainly price and cost, this number gives evidence of the bad quality of execution for retail investors who mainly invest through systems only linked with incumbents and do not access advanced technologies.

Figure 6. Proportion of trades that missed the best price – December 2009



Source: Orange LFA Viewer - Equiduct Systems.

Figure 7. Incumbent market's market share under best execution routing – December 2009



Source: Orange LFA Viewer - Equiduct Systems.

The cost opportunity for retail investors to invest in the most liquid shares through another trading venue, only in January, was more than €12 million (see Table 1). If we add fixed costs, the cost opportunity of the execution grows even more.

In effect, overall costs to access several trading venues and to provide a consolidated view are still prohibitive for the majority of investors (which are retail investors and funds). Access to new technologies allowing consolidated pan-European trading is only provided to a small part of the market, i.e. to some professional investors who are able to bear the high costs of access. Data costs and fragmented data markets do not support the development of these technologies at low costs. On the one side, data feed providers by regulation (exchanges) are trying to subsidise losses due to new acquisitions and competition by other trading venues. Therefore, sources of revenues – as data fees – are kept stable while demand for more specialised services is obviously increasing. In addition, the accuracy

of data is quite low, especially when transactions involve several players. On the other hand, however, the lack of standardisation (formats, identifiers, etc.) does allow data vendors and distributors to maintain market fragmentation through the use of different formats.

The use of bundled fees for data, in addition, helps to keep prices stable and markets segmented as long as different formats prevent the product from being homogeneous.<sup>8</sup> The artificial non-homogeneity of data allows the proliferation of bundled services on products that are technically homogeneous and highly complementary. In this regard, there is space for market competition in order to push down fees and costs for final users. Competition by newcomers is confined to new specialised services and for

<sup>8</sup> There is an important flow of literature assessing the potential risk to foreclose competition through bundling complementary services. For a review of the literature on bundling, see Centre for European Policy Studies (CEPS) and Van Dijk Consultants (2009).

a niche of the demand (providers of investment services with low-demand elasticity for trading data), since the costs are prohibitive for a large part of the demand (providers of

investment services with high-demand elasticity, such as the ones providing services for retail investors).

Table 1. Recent statistics (January 2010 on the 1,000 + most liquid stocks – Europe

	Most liquid stocks in Europe	FTSE 100	CAC 40	DAX 30
Traded volume	€341.22 Bn	€122.30 Bn	€77.26 Bn	€61.32 Bn
Number of trades	48.08 Mn	17.80 Mn	9.52 Mn	5.40 Mn
Volume missing the best available price	45.38 Bn <b>13.30%</b>	14.36 Bn <b>11.74%</b>	11.13 Bn <b>14.40%</b>	9.14 Bn <b>14.90%</b>
Number of trades missing the best available price	5.37 Mn <b>11.2%</b>	1.84 Mn <b>10.4%</b>	1.23 Mn <b>12.9%</b>	0.70 Mn <b>13.0%</b>
Opportunity costs	€12.38 Mn	€4.00 Mn	€2.5 Mn	€1.65 Mn
Potential average price improvement	3.3 Bps	3.5 Bps	2.5 Bps	2.4 Bps

Source: Orange LFA Viewer – Equiduct Systems.

As shown in Table 2, unbundling of services and fees supported by standardised data formats – thus opening market to competition – would sensibly reduce fees in order to make access to data cheaper and easier. In this competitive environment, market-led consolidated solutions may have easier access to data than policy-led solutions.

Table 2. Bundled v. unbundled fees

	Market share	€Bundled fee (per month/per user)	€Unbundled fee (per month/per user)
Chi-X	6%	0	0
Nasdaq OMX	5%	22	4
Spanish exchanges	5%	34	7
Markit BOAT	24%	40	8
LSE	21%	42	8
Deutsche Börse	8%	56	11
Euronext	21%	59	12
Other venues (estimation)	10%	250	50
<b>TOTAL</b>	<b>100%</b>	<b>503</b>	<b>100</b>

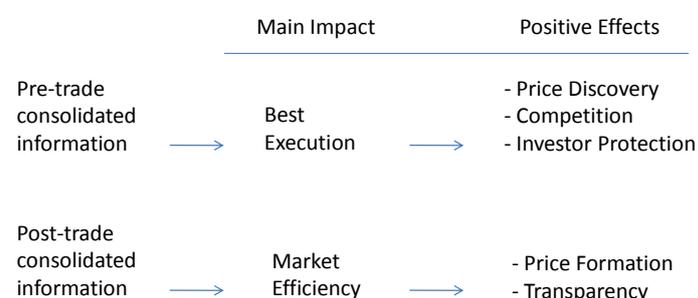
Source: Markit.

Unbundling and standardised data formats will allow consolidated post or pre-trade data solutions. A priority in the MiFID review is to bring back retail investors and funds to EU capital markets. Reinforcing investor protection through enforcing retail best execution on a pan-European basis can only be delivered through a market-led European Best Bid and Offer (EBBO). Despite the importance of having consolidated pre-trade data solutions more easily accessible, the debate, pushed by sell-side and big buy-side representatives, is turning once again towards market efficiency and leaving the question of how to restore retail investors' confidence on a cross-border level unanswered. Focusing on a more effective investor protection – through the real implementation of best execution duties – may put

MiFID ahead within the measures promoting recovery for European capital markets after the crisis.

In effect, the role of regulators should focus on restoring investors' confidence and the efficient market functioning, bringing back liquidity into the market in order to generate new investment opportunities and pushing economic growth. Therefore, after years of debate on market efficiency, the attention in our view should aim towards boosting liquidity and promoting a pan-European equity market. A more efficient price discovery can help to make links within the internal market stronger to achieve the above-mentioned targets. There is no evidence that price formation has been harmed by MiFID (or by the low quality of post-trade data) and the financial crisis, while investor protection duties, such as best execution and price discovery (but also conduct of business duties), are being poorly performed across Europe, fostering investors' distrust in a pan-European market.

Figure 8. The impact of pre-trade and post-trade consolidated solutions



Source: Authors' elaboration.

Turning to the post-trade information, the transparency and quality of data seem to constitute the major concerns. The accuracy, reliability and granularity of post-trade data are very low, even though MiFID introduced for the first time post-trade transparency for OTC trades in such countries as Germany. Action is needed to ameliorate the quality of post-trade information. Common symbols (identifiers, etc.), low

latency and a common message format are the priorities to be addressed by the uniform data format. Improving the quality of post-trade reporting is important in order to increase market efficiency and should be pushed by regulators in the short run; nevertheless, we do not think that post-trade consolidated solutions should be addressed through a regulatory action. Once the quality of data is improved, consolidating post-trade data will be a normal market outcome from competition in the market for post-trade data, which is already providing consolidated views. Instead, opening the market for data to competition and improving price discovery (delivering benefits of competition to final users through best execution and pre-trade consolidated solutions) shall be the priorities of the European Commission and CESR in the MiFID Review.

In conclusion, the Directive's know-your-customer rules (e.g. execution policies) and conflict of interest provisions seem to be applied in a 'static' way.<sup>9</sup> The recent proposals to transform CESR into a fully fledged European Security and Markets Authority (ESMA) will undoubtedly add a great deal to ensure that the rules are interpreted consistently and applied evenly across Europe. But it will also mean that new rules can be enacted much more rapidly.

### The review

The MiFID review should not modify the basic principles set out in the 2004 text but only clarify some definitions and analyse the possibility of extending pre- and post-trade transparency requirements to other venues and asset classes (Art. 65, MiFID). The issues to be addressed can be subdivided into two areas: regulation and market practices.

On the regulatory side, some issues for the review need an urgent answer.

1. A classification for broker-crossing networks is needed. Once it is recognised that these networks perform a different task from the other trading venues, they should be classified as a sort of systematic internaliser with pre-trade transparency waivers, since they deal with selected liquidity (applying discretionary rules). However, the benefit of applying discretionary rules and pre-trade transparency waivers should be offset with stricter economic and transparency/reporting requirements for such infrastructures.
2. The definition for certain waivers should be adapted (e.g. the large in scale order waiver) and the definition of standard market size needs to be updated. In effect, reducing the 'volatility' of definitions – due to the direct link with the average size of orders – may be an efficient method to preserve legal texts from cyclical effects.
3. There is a need for stricter best execution requirements and consolidated pre-trade transparency. The latter, in effect, is only accessed by professional investors able to pay the excessive costs of sophisticated technologies (e.g. smart order routing systems), while retail investors

receive a low quality execution in terms of price and costs. A push is needed to restore confidence in this side of the market, which represents a major source of liquidity in financial markets. A consolidated pre-trade solution – preferably industry-led but with a strong push from regulators – may also boost competition between market-makers in order to improve the quality of execution and reduce the costs for final users.

4. The quality of post-trade reporting should be improved. The granularity and reliability of post-trade data are still very low. This situation does not allow for an efficient definition of trading strategies and verification of best execution. However, this does not imply that a consolidated tape (post-trade data) should be addressed as the priority. The quality of post-trade reporting should be improved as such. Consolidated solutions will emerge by themselves when this target has been accomplished.

On market practices, European capital markets lack a competitive market for data and selling practices.

1. Unbundling data services and standardising formats are of paramount importance in order to remove market segmentation and reduce costs at data generation and distribution levels. In effect, data costs and formats at the source and their distribution make consolidated pre- and post-trade solutions extremely costly. Industry should take an initiative, but regulatory action is needed to promote unbundling of services and products.
2. Selling practices need to be addressed by competition authorities, as conduct of business rules are limited to the perimeter of the single transaction of the investment firm with its customer. These rules do not permit an assessment of whether the practice is competitive and enhances consumer welfare, in a market where high switching costs often lock customers into expensive transactions and market structure does not allow an easy entrance for newcomers.

### Conclusions

MiFID may have received rather perfunctory attention in the midst of the several reviews undertaken of the pre-crisis financial rules, but the analysis in this Policy Brief demonstrates that the Directive has been remarkably successful in terms of improving market structure and efficiency, although progress should be made on investor protection and conduct of business rules. Its initial objective has largely been met: to introduce more competition between trading venues, while maintaining an orderly price formation process. The upcoming MiFID review should therefore take a 'light touch', clarifying some definitions and extending price transparency to related segments of securities markets. The biggest priority is to improve pre- and post-trade transparency, but this should essentially be initiated by the industry, under pressure of regulators. More integrated price transparency solutions will also allow end-users to fully participate in the changes brought about by MiFID, restoring investors' trust and pushing more liquidity in equity markets. The start of ESMA then should allow for better enforcement of the conduct of business rules.

<sup>9</sup> See the forthcoming ECMI survey on MiFID 'real' implementation (preliminary results available at <http://www.eurocapitalmarkets.org/node/441>).

## Main references

- Casey, Jean Pierre and Karel Lannoo (2009), *The MiFID Revolution*, Cambridge: Cambridge University Press.
- CEPS and Van Dijk Consultants (2009), “Tying and other potentially unfair commercial practices in the retail financial service sector”, study submitted to the European Commission, 24 November (available at [http://ec.europa.eu/internal\\_market/consultations/docs/2010/tying/report\\_en.pdf](http://ec.europa.eu/internal_market/consultations/docs/2010/tying/report_en.pdf)).
- CESR (Commission of European Securities Regulators) (2009), *Impact of MiFID on equity secondary markets functioning*, Report 09/355, 10 June.
- (2010a), “CESR Technical Advice to the European Commission in the context of MiFID Review – Transaction Reporting”, Consultation Paper, Ref. CESR/10-292, April.
- (2010b), “CESR Technical Advice to the European Commission in the context of the MiFID Review – Equity Markets”, Consultation Paper, Ref. CESR/10-394, April.
- (2010c), “CESR Technical Advice to the European Commission in the context of the MiFID Review – Investor Protection and Intermediaries”, Consultation Paper, Ref. CESR/10-417, April.
- CFA Institute (Chartered Financial Analysts) (2009), *Market Microstructure: The Impact of Fragmentation under the Markets in Financial Instruments Directive*.
- CRA (Charles River Associates) International (2009), “Evaluation of the Economic Impacts of the FSAP”, study for the European Commission, 7 July.
- ECMI, Survey on MiFID “real” implementation (forthcoming), Preliminary results available at <http://www.eurocapitalmarkets.org/node/441>.
- ECMI, 2009 Statistical Package, available at [www.eurocapitalmarkets.org](http://www.eurocapitalmarkets.org).
- ESME (European Securities Markets Expert Group) (2009a), “Fact-finding regarding the availability of post-trade data in equities in the EU”, 19 March (available at [http://ec.europa.eu/internal\\_market/securities/docs/esme/report-data-availability\\_en.pdf](http://ec.europa.eu/internal_market/securities/docs/esme/report-data-availability_en.pdf)).
- (2009b), “Fact-finding regarding the developments of certain aspects of pre-trade transparency in equities under MiFID”, 27 July (available at [http://ec.europa.eu/internal\\_market/securities/docs/esme/report\\_pretrade\\_11\\_full\\_esme\\_20090727\\_en.pdf](http://ec.europa.eu/internal_market/securities/docs/esme/report_pretrade_11_full_esme_20090727_en.pdf)).
- Lannoo, Karel (2007), “MiFID Revolution or Delayed Execution”, ECMI Commentary No. 13, September (see [www.eurocapitalmarkets.org](http://www.eurocapitalmarkets.org)); also published in *The Euromoney MiFID Handbook*.
- SEC (Securities and Exchange Commission) (2010), “Concept release on Equity Market Structure”, *Release No. 34-61358; File No. S7-02-10*, January.
- TABB Group, “Liquidity Matrix” (<http://www.tabbgroup.com/Page.aspx?MenuID=47&ParentMenuID=2&PageID=46>).

## About ECMI

The European Capital Markets Institute (ECMI) was established as an independent non-profit organisation in October 1993, in a collaborative effort by the European Federation of Financial Analysts Societies (EFFAS), the Federation of European Securities Exchanges (FESE) and the International Securities Market Association (ISMA), now the International Capital Market Association (ICMA). ECMI is managed and staffed by the Centre for European Policy Studies (CEPS) in Brussels. Its membership is composed of private firms, regulatory authorities and university institutes.

European capital markets have experienced rapid growth in recent years, corresponding to the gradual shift away from relationship banking as a source of funding and at the same time, have had to absorb and implement the massive output of EU-level regulation required to create a single market for financial services. These developments, combined with the immense challenges presented European financial institutions by the globalisation of financial markets, highlight the importance of an independent entity to undertake and disseminate research on European capital markets.

The principal objective of ECMI is therefore to provide a forum in which market participants, policy-makers and academics alike can exchange ideas and opinions concerning the efficiency, stability, liquidity, integrity, fairness and competitiveness of European capital markets and discuss the latest market trends. These exchanges are fuelled by the publications ECMI regularly produces for its members: quarterly newsletters, annual reports, a statistical package, regular commentary and research papers, as well as occasional workshops and conferences. ECMI also advises European regulators on policy-related matters, acts as a focal point for interaction between academic research, market sentiment and the policy-making process, and promotes a multidisciplinary and multidimensional approach to the subject.



### **European Capital Markets Institute**

c/o Centre for European Policy Studies (<http://www.ceps.be>)

Place du Congrès 1 ▪ 1000 Brussels ▪ Tel: 32(0) 229.39.11 ▪ Fax: 32(0) 219.41.51

Website: <http://www.eurocapitalmarkets.org> ▪ E-mail: [info@eurocapitalmarkets.org](mailto:info@eurocapitalmarkets.org)