Financial Market Data and MiFID

Karel Lannoo*

The opening-up of the market for equity market data raises the question of whether data will be sufficiently consolidated and of high enough quality post-MiFID, or whether it will become too fragmented, thereby hindering price transparency and the implementation of best execution policies. This policy brief outlines the market for financial market data, the provisions of MiFID and the implementing measures regarding financial data and data consolidation. It also looks at the approaches taken by CESR, the FSA and the US authorities. It concludes that markets should be capable of adapting and that additional licensing requirements, such as those proposed by the FSA, are in fact premature and act as a barrier to the single market. Neither would a US-style monopoly consolidator be needed in this case.

One aspect of the MiFID directive which is rarely discussed is its impact on the financial market data business. MiFID not only abolishes the concentration rule for trading of equity securities, but also for market data generated from these trades. Whereas today market data on equity transactions is primarily controlled by the exchanges, MiFID leaves open how and by whom this information will be consolidated in the future. It only says that it should be done on a reasonable commercial basis, and as close to real time as possible. This raises the question of whether the market will provide sufficiently consolidated market data by itself or whether it will become too fragmented, perhaps requiring an initiative by the authorities to create a single consolidated tape along the lines of the US NMS model.

Data consolidation is an essential pre-requisite for the emergence of a single market in equity trading, because it ensures that: 1) the law of one price holds across trading venues (i.e. the same security is traded at the same price), is a precondition for market efficiency; 2) market participants have equal access to price discovery, so that there is a level playing field as regards access to market information; 3) best execution can more readily be verified. Given that business decisions are driven by private returns rather than considerations of public good, it remains to be seen whether the industry will be able to come up with credible solutions to overcome coordination failures in achieving consolidation within an acceptable time frame, without regulatory intervention. Yet what is the optimal role for the regulator to play to this end, and what precisely is the scope and degree of desirable regulatory intervention in the field of data consolidation? These questions remain unanswered.

1. The financial market data business

The demand for market data is dominated by a few global data-providers such as Bloomberg, Thomson Financial and Reuters, and a multitude of specialist providers, amongst which are the exchanges for equity and derivatives data and other trading platforms and trade associations. But the market is extremely competitive, which is reflected in the relatively low valuation of the incumbents, and is undergoing rapid change as a result of technological progress and regulatory developments. In addition to the IT companies, ratings agencies and financial media which are striving for a higher share of the data vending business, firms like Google have also indicated their interest in providing financial information for free. The competitive strength of these firms is to amalgamate financial information from different venues as rapidly and accurately as possible and to disseminate it to a wide range of subscribers simultaneously.

The large data vendors generate revenues of about €2 bn from data vending. Reuters generated income of about €2.8 from data vending (including for research), of which about 55% comes from Europe. Thomson Financial generated €1.9 bn from data vending, predominantly in the US. Bloomberg, which is not listed but incorporated as a partnership (LP), provides no financial data about itself at all on its website, which is surprising for a firm which lives off selling financial information about others.

By comparison, the total revenue from data vending reported by the six largest EU exchanges was €458 million (2005), which is 12% of their total revenues. The most important are the Deutsche Börse and the London Stock Exchange, with about €130 million revenues each. Over time, this source of revenue stayed grosso modo within the same proportions for exchanges, but moves according to market activity. The overall ratio is, however, widely differing, with some exchanges being much more dependent on trade data revenues than others (see Table 2). In the US, (equity) market data revenues totalled $434 million (2004), 90% of which was shared by the self regulatory organisations (SROs) which are connected to the exchanges.1

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Investment banks have not stayed on the sidelines either, and see a possibility in MiFID to ‘internalise’ market data revenues, rather than pay others for data which they generate themselves. In September 2007, a consortium of nine investment banks launched the Project Boat, a venue for trade-data reporting. The nine investment banks behind the project are ABN Amro, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, Merrill Lynch, Morgan Stanley and UBS, which have about a 50% market share in equity trading in Europe. Under existing rules, intermediaries must report equity trades made off-exchange to a recognised trading venue, i.e. the main regulated market in every member state. Under Project Boat, exploiting the opportunities created by MiFID, exchanges will consolidate equity trade data information pre- and post-trade, pre-trade to coordinate prices for shares which they offer in systematic internalisation, and post-trade to commercialise their trade information.

Table 1. Revenues of the 3 largest data vendors versus 3 stock exchanges’ information division

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Three Data Vendors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reuters Group PLC</td>
<td>2,284</td>
<td>2,372</td>
<td>2,485</td>
</tr>
<tr>
<td>Bloomberg</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Thomson Financial</td>
<td>1,738</td>
<td>1,897</td>
<td>2,000</td>
</tr>
<tr>
<td>Big Three Stock Exchange Information Division</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deutsche Börse</td>
<td>122</td>
<td>130</td>
<td>n/a</td>
</tr>
<tr>
<td>Euronext</td>
<td>87</td>
<td>94</td>
<td>n/a</td>
</tr>
<tr>
<td>LSE</td>
<td>118</td>
<td>128</td>
<td>138</td>
</tr>
</tbody>
</table>

Source: Annual reports.

Table 2. Stock Exchange trading revenue relative to information revenue

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
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</thead>
<tbody>
<tr>
<td>LSE</td>
<td>0.56</td>
<td>0.74</td>
<td>0.75</td>
<td>0.97</td>
<td>1.04</td>
<td>1.18</td>
<td>1.16</td>
<td>1.33</td>
</tr>
<tr>
<td>Euronext</td>
<td>3.37</td>
<td>3.88</td>
<td>2.20</td>
<td>5.22</td>
<td>5.35</td>
<td>5.89</td>
<td>5.85</td>
<td></td>
</tr>
<tr>
<td>Deutsche Börse</td>
<td>4.48</td>
<td>5.31</td>
<td>4.66</td>
<td>4.46</td>
<td>5.10</td>
<td>5.12</td>
<td>5.78</td>
<td></td>
</tr>
<tr>
<td>Borsa Italianana</td>
<td>2.13</td>
<td>1.63</td>
<td>1.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OMX</td>
<td>4.98</td>
<td>3.98</td>
<td>3.25</td>
<td>3.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>BME</td>
<td>6.43</td>
<td>6.38</td>
<td>7.11</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Source: Annual reports.

2. The MiFID regime and its implementation

The concentration rule of the Investment Services Directive (ISD) not only gave the exchanges control over the market in trading of equity securities, but also over the market in trade data. With its abolition under MiFID, and the expected multiplication of trading venues, several questions arise. On the regulatory side, the issue is to what extent market data will remain sufficiently consolidated to allow the price discovery process to function efficiently. On the market structure side, the question is how the markets will adapt: how are the banks going to react, to what extent will the data vending activities of exchanges be affected, what will the big data vendors do, and what opportunities arise in markets where price transparency does not yet apply.

MiFID requires regulated markets (Art. 45), MTF’s (Art. 30) and systematic internalisers (Art. 28) “to make public the price, volume and time of the transactions” “as close to real time as possible” and “on a reasonable commercial basis”. For internalisers, the directive adds that this should also be “in a manner which is easily accessible to other market participants” (Art. 28.1). This only applies to equity transactions for the time being, as there is no pre- and post-trade transparency for other financial instruments. In addition, recital 34 of MiFID recommends that “Member States remove any obstacles which may prevent the consolidation at European level of the relevant information and its publication.”

A core issue in MiFID is thus that market data can be commercialised. MiFID recognises the proprietary nature of market data, which can lead to a fairly profound alternation in the structure we have in place today. Article 28.3 specifies that investment firms can publish post-trade information through three avenues: through exchanges or MTFs; through third-party distributors (data vendors); or through “proprietary arrangements”. Art. 44.1 for example specifies that the services of exchanges can be used: “Regulated markets may give access, on reasonable commercial terms and on a non-discriminatory basis, to the arrangements they employ for making public the information to investment firms”. Precise conditions were left to the implementing measures.

MiFID’s implementing regulation regime (Commission regulation 2004/39/EC) on the publishing of post-trade information of shares is essentially identical irrespective of the trading venue. These harmonised post-trade publication requirements were introduced to ensure that orders being routed through a particular trading venue enjoy the same level of transparency (at least in terms of price) as those being routed to other venues. Art. 27 harmonises the post-trade information, with publication delays applying for transactions, and Art. 30. defines that pre- and post-

Charles Gottlieb and an anonymous referee are gratefully acknowledged.

1 Data from Traders Magazine, 2006.

2 The information about Project Boat is based upon a presentation by Will Meldrum of Markit at a MiFID conference in Brussels on 9 March 2007.

3 The EU took a similar approach for the dissemination of price-sensitive information with the Transparency Directive (2004/109/EC), where it abolished national monopolies, and introduced a series of minimum criteria.

4 Art. 29 sets a maximum of three minutes for the publication of post-trade information, with publication delays applying for large transactions, and Art. 30. defines that pre- and post-
trade information can be judged to be publicly available if it is available through an exchange, an MTF, the facilities of a third party, or proprietary arrangements. The criteria for making this information public are set in Art. 32, which states that:
- the procedures must be in place to check that the information published is reliable and monitored continuously for errors;
- consolidation of data with similar data from other sources must be facilitated;
- information must be available to the public on a non-discriminatory basis at a reasonable cost.

Transparency measures aimed at overcoming market fragmentation rely on an efficient market-data infrastructure spanning across trading venues, and interlinking them in real time through regular, accurate, complete and simultaneous information flows. With the MiFID, European regulators decided that by dismantling the concentration rule, the benefits of a competitive information market outweighed the potential risks. Nevertheless, they hedged the risk of market fragmentation damaging those benefits by introducing a strict pre- and post-trade transparency regime for equity transactions, also for internalisers.

The means through which post-trade information should be published, how widely post-trade information should be disseminated, and to whom it should be accessible was left undefined. These are questions which the directive leaves unanswered, with the result that the optimal degree of regulatory intervention in the field of trade data transparency will be a difficult equilibrium to find. That a discussion has now arisen around a particular transparency issue – the required degree of market data consolidation – is therefore not in the least surprising.

Further to a consultation of market participants, CESR came to the conclusion, for the time being at least, that no binding measures were needed to ensure data quality, consolidation, and dissemination, but that a series of guidelines and recommendations would suffice (CESR, 2007). They comprise data quality, publication arrangements, availability of transparency information, and publication standards. To facilitate data consolidation, CESR proposed that investment firms that internalise trades or trade OTC use only one primary publication channel. In addition, CESR considered it useful for data consolidators to ‘flag a trade’ of which they are the primary publication channel. This should allow data consolidators to distinguish between primary and secondary publication and limit the risk of duplication.

As regards the time limit for the availability of trade information, the CESR guidelines restate the maximum 3 minutes of the implementing regulation, but that as a rule it should go much faster. Inadequate technology cannot be used as an argument “for publication close to three minutes on a frequent basis”.

The UK FSA took a diametrically opposed route to CESR, and proposed binding rules for data providers in order to ensure data quality and to counter fragmentation. The FSA claims that the expected growth of off-exchange trading will increase the probability of data fragmentation. This will “reduce market transparency, hinder price discovery and undermine equity market efficiency”, which will make it harder for firms to check best execution. Data should continue to be monitored effectively, also under MiFID, and the FSA argues that it cannot afford to take the risk of waiting to see if market forces will deliver a solution: “acting to consolidate after fragmentation has occurred would be more costly” (FSA, 2006, pp.103-104).

Consequently, the FSA introduced minimum standards for data consolidators, which it terms Trade Data Monitors (TDM), which will come into force with MiFID in November 2007. Before authorising a TDM, the FSA will make a series of assessments covering security of information, data integrity, timely dissemination, systems and resources and contingency planning. TDM must make trade information available on a reasonable non-discriminatory commercial basis, in a manner which is easily accessible to other market participants. TDM would be responsible for monitoring in real-time the trades reported to them for errors, and for contacting the reporting firm for correcting the trade information. The FSA says it does not intend to limit the number of TDM, and that they could also be non-UK entities, although they will also require an FSA license.

The FSA was therefore not prepared to wait for the outcome of report, requested under Article 65.4 of MiFID, which the Commission will have to prepare one year after the entry into force of the directive, i.e. in October 2008 “on the state of the removal of the obstacles which may prevent the consolidation at the European level of the information that trading venues are required to publish.” Although it judged the risk too high to wait, it is in fact another example of gold-plating, which adds to the four which were formally communicated by the FSA to the European Commission further to Art. 4 of the 2006 MiFID implementing directive (FSA, 31 January 2007). It could also be seen as a way to protect the data services of the London Stock Exchange, which is today doing what a TDM would be expected to do when MiFID comes into force. One can already wonder how TDM will work for foreign firms, such as non-UK exchanges, which are selling data on the UK market. Will non-UK consolidators need to have a FSA license? How will the UK FSA monitor compliance of consolidators established outside the UK? In the next section, we will try to give our assessment of these questions.

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6 An MoU was signed between the two dominant players in the messaging, Swift, which has a quasi-monopoly over back-office post-trade reporting with the ISO 15022 and 20022 standard, and FIX, which is the dominant player in the pre-trade space with its latest Fix 4.4.
3. Will a market-led approach to data consolidation work?

A comparison with the debt markets does not immediately offer consolidation that a market-led approach to post-trade data consolidation will work. Debt markets which mostly take place OTC and are decentralised over a multitude of trading venues, are not immediately the example of the most transparent market. Although initiatives are underway to increase the level of transparency, they do not seem to be enough. Retail investors lack good data on the bond markets, and no consolidated data sources exist to verify best execution, which will be required under MiFID. The FSA, which argues that it is too risky to wait for equity market data to fragment, and to affect price formation and market efficiency, may thus have a point when it is proposing to set criteria for TDMs.

However, price transparency now essentially concerns equity markets, and they remain fundamentally different from debt markets. The latter still take place predominantly OTC, are characterised by a multitude of instruments and maturities, and only a fraction of the debt securities outstanding are traded regularly. Equity securities are much more homogeneous, they are traded much more frequently, and there are probably only about 500 highly liquid European stocks.

In this sense, we would argue that the FSA initiative is premature and even presents risks to pan-European consolidation. It is likely that the markets will adapt to the new environment, for a variety of reasons:

1) as exchanges are expected to remain the main source of liquidity and price formation after MiFID, they will also be the primary source of the trade data;

2) there are competitors to the data aggregation activities of exchanges in the market, which have the necessary structure and processes in place, and the incentives to react; and

3) MiFID creates the possibility for new providers to enter the market.

Most studies so far agree that exchanges will remain the main source of liquidity after MiFID (see, for example JP Morgan, 2006). This means that their trade data will also remain qualitatively the best. So exchanges can be expected to continue to benefit from network effects. However, the revenues derived from these services can be expected to decline. Exchanges will need to be more active to sell their services and buy data from internalisers, whereas they used to get this for free in the past. And there will be more competitors active in the data market to take a slice of this market. On the other hand, as trading volumes are expected to grow with MiFID as a result of increased competition and lower transaction costs, so will the market for market data. In addition, because of the conduct of business and best execution rules, banks will need to check trades more regularly and maintain records, thereby reinforcing demand again.

Apart from the exchanges, data vendors and other firms can also be expected to react to the opening-up of the market for equity market data. The Reuters and Bloomberg will certainly not step aside, as the data can be commercialised and because this has been their core business for many years. Other firms too, which are active in IT or consulting, may see this as an opportunity to develop new products and enter the market for data. Banks themselves may see this as an interesting proposition to make money from market data, a market which can be expected to grow with MiFID. The announcement of Project Boat fits in with this.

In addition, it is not as though data are of top quality today. In markets not applying the concentration rule, trades executed off-market are not necessarily reported or incorporated rapidly in the on-market statistics. The extensive use of off-exchange trading in the German inter-dealer and institutional market means that many trades currently go unreported. In the UK, off-exchange trading is mostly reported through the London Stock Exchange, but non-domestic trades will surface and account for 8% of overall trade volume. Hence MiFID, by allowing commercialisation of market data, could improve market data and quality.

But there are certainly drawbacks and risks to a market-led approach, the most important ones being data quality and the lack of technical standardisation. As trades diverge over a multitude of venues, trade data quality may diminish, making the best execution requirement, which applies across markets, more difficult to ensure. Will exchanges and data aggregators be capable of consolidating this information at a high level? As data become proprietary, exchanges may no longer be interested in paying to aggregate the data from third parties. In addition, there is the question of the public availability of market data. These are issues which are probably best left to the European Commission to address in its 2008 review. However, setting unilateral national standards, as the FSA is proposing to do, constitutes an obstacle to European consolidation.

4. Market data consolidation under the US NMS rule

The EU’s approach differs radically from what is in place in the US, and what is being put in place in the context of the Reg NMS (“National Market System”). The US requires mandatory consolidation of market data in a mutualised entity, and has a complex formula-based system in place to allocate the revenues to the nine self-regulatory organisations (SROs) that feed the data into the plan and set the pricing.

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7 For a more detailed discussion of this issue see an earlier ECMI Policy Brief by Jean-Pierre Casey (2006).

8 Securities Industry News, 27-01-07

9 If other national regulators decide to follow the FSA example by imposing national standards, it seems inevitable that MiFID’s intention of achieving pan-European consolidation will be made more difficult, if not impossible. It could also be argued that the FSA initiative goes against the EU’s E-commerce directive (98/48/EC), which outlawed national authorisation schemes for information society services.
The rules, adopted under Rules 601 and 603 of Regulation NMS as well as joint industry plans, are designed to promote the wide availability of market data. They should strengthen the existing market data system, which provides investors in the US equity markets with real-time access to the best quotations and most recent trades in the thousands of NMS stocks throughout the trading day. For each stock, quotations and trades are continuously collected from many different trading centres and then disseminated to the public in a consolidated stream of data. As a result, investors of all types have access to a reliable source of information for the best prices in NMS stocks. When Congress mandated the creation of the NMS in 1975, it noted that the systems for disseminating consolidated market data would “form the heart of the national market system”.  

A single consolidator model for the dissemination of market data remains, however, very controversial. As with other networks, it exposes the problems a single entity can cause. For a European reader, not only does it appear to be alien to the US system, it also means that competition is removed in data markets, which may negatively impact on the quality of the data and increase prices. In addition, all sources of data must be accessed and all data bought, and users retain less freedom to develop quotation and trade data that is best tailored to their users. This means higher data fees for the end user, since the distributor/vendor must subscribe to all data sources. Furthermore, the complex pricing system leads to gaming (‘tape shredding’) and distortion, since the SROs have no incentive to lower their pricing.

In consultations in the US with market participants regarding a proposal to overhaul the existing consolidation, several market commentators argued for a competing consolidators model, where pricing and consolidation specifications are determined by market forces. Several commentators, for example, were convinced that the level of the fees was too high. Following the recommendations of an ad-hoc committee, the SEC considered that the single consolidator model was to be preferred, as it benefits investors, particularly retail, to help them to assess quotes prices when they place an order and to evaluate the best execution of their orders. Changes to that model would thus compromise the integrity and reliability of the consolidated data stream, according to the SEC.

5. Conclusion

The opening-up of the market for equity market data is part of the MiFID revolution, but the impact on the market structure is difficult to forecast. It can be expected that exchanges will fight to defend their position, but they will certainly lose revenues from data vending, and may be forced to consolidate this activity with other operators. Many other groups are, however, preparing to enter into that market or to increase their market-share, which should give comfort to regulators. In addition, the competitive effects of MiFID could improve data quality and availability.

The European Commission and CESR will have to closely monitor market developments and data quality in the months following the entry into force of MiFID. The maintenance of a single consolidator model in the US is a useful reminder that the most developed capital market in the world chose a radically different model from the EU. The UK’s FSA with its regime for Trade Data Monitors opted for a model of regulated competition, although this raises serious questions from a single market perspective, as it is another example of national gold-plating, not announced yet to the EU Commission under Art. 4 of the MiFID implementing directive.

Another item to watch is data pricing. How prices will move is difficult to predict, but competition and the arrival of newcomers should keep them in line. Pricing will need to be watched – in particular in relation to smaller players, as they will need similar access to data as their larger competitors to guarantee best execution, but may not have the same market power. Competition authorities will thus have to watch carefully how markets will adapt.

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11 It is interesting to note that in the area of securities settlement, the US also have a single entity, whereas the EU has competing entities.

12 For a detailed discussion on this see Nina Mehta in Traders Magazine (2006), Reg NMS to drive tighter markets.

13 The Seligman Committee (or Market’s Data Advisory Committee) was instituted by the SEC in 2001 to advise on the market data structure in the US. Interesting to note is that although a majority of members of the Committee apparently favoured a competing consolidators approach, the Committee did not formally propose it.
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 exchanges, banks, trade associations and academics.

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 to 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.

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