

The MiFID Revolution

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The present Policy Brief paints a portrait of the likely EU securities market landscape post-MiFID. Much of the available analysis on MiFID has focused on short-term adjustment and compliance costs, especially regarding IT investments. Yet MiFID represents a revolution in European securities markets that is likely to lead to deep and long-lasting structural changes. The analysis in this Policy Brief concentrates on ten predictions that the authors make about the likely impact of MiFID on market structures, and the likely strategic responses of financial services firms.

1. Introduction

The Markets in Financial Instruments Directive (MiFID) has essentially been seen so far as an IT and compliance exercise for financial services firms. As a result, much of the analysis surrounding MiFID compliance and the development of business strategies for the new regulatory landscape have focused on building the supporting IT infrastructure and on upgrading systems.

This paper argues, however, that the impact of MiFID extends far beyond mere IT and compliance alone. The unprecedented scope of harmonisation of securities markets legislation and the resulting open architecture ushered in by MiFID, especially in trade execution and reporting, will cause a profound upheaval within existing market structures.

MiFID is nothing short of a revolution: it will see banks operating as exchanges for some activities, exchanges offering alternative execution services that more closely resemble the structure of OTC markets than traditional organised markets, and the decentralisation of order execution among a panoply of venues in markets previously governed by concentration rules: *le monde à l'envers*. MiFID will have a profound impact on the organisation, day-to-day operations and business strategies not only of investment firms – which have tended to be the focus thus far – but also of exchanges, asset managers and other financial markets intermediaries, such as brokers, data consolidators and business solutions providers. Overall market design and functioning are likely to be heavily impacted, not least because the implementation of MiFID is not a static event necessitating only one-off sunk

costs; rather, it will require firms to make constant dynamic readjustments to remain competitive.

In light of this reality, it seems that insufficient analysis has been devoted to the strategic implications of MiFID, even though these will be far-reaching – even more so, we believe, than what Basel II represented for banks – because of the profound market restructuring that can be expected. The accompanying uncertainties as to how market participants are to position themselves strategically in the new regulatory landscape and respond to newly emerging threats will shake up the status quo.

As with all revolutions, the shock to the status quo will represent a profitable opportunity for those who are well-prepared – and a death sentence for those who cannot adapt to the new environment. The well-prepared are the actors who in the post-MiFID world will generate higher revenue streams, steal market share from the less well-prepared, and begin to compete in areas lying outside their traditional scope of service provision – areas previously closed to them, or deemed to be unprofitable prior to MiFID. On the other hand, the less well-prepared will be startled soon after November 2007 to find themselves competing in business lines against actors from whom they previously faced little or no competition, including actors whom they may not even have viewed as natural competitors prior to MiFID.

2. 10 key predictions on the impact of MiFID

MiFID will accelerate some important ongoing changes in European financial markets that are driven primarily by technological improvements and enhanced competition in the provision of financial services arising from globalisation. Greater recourse to electronic trading, the facilitation of straight-through processing, the continued disintermediation of brokering through direct market access and algorithms and the ‘exchangisation’ of OTC markets are but a few examples of ongoing structural shifts in financial markets that will be reinforced or precipitated by MiFID.

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MiFID leads to a higher degree of harmonisation for investment services and securities transactions in the EU, by extending the reach of services and products covered as compared to the Investment Services Directive (ISD), and by imposing more detailed performance rules on exchanges and investment firms. As such, it should lead to more integrated European capital markets, but will also have significant impacts on market structure and development.

MiFID directly touches four distinct groups of actors within the financial services industry: investment firms (which may have fairly different organisational models across countries), exchanges and quasi-exchanges (multilateral trading facilities – MTFs), data vendors and specialised IT firms and solution providers, such as third-party algorithm developers. It affects equity markets, commodity and derivatives markets, and to a lesser extent bond markets.¹ This represents a considerable upgrade as compared to the Investment Services Directive, which it replaces. We therefore start our analysis with a discussion of the main developments in European capital markets over the past decade and review the effects of the ISD. We next rehearse the key points of MiFID and discuss the issues raised by its implementation for the various markets affected. A final section offers a brief outlook for the future of European securities markets. While numerous papers have already been published on how to prepare for MiFID, there has been much less consistent analysis of its impact on the market and the industry.

In our view, MiFID will bring about the following fundamental changes:

1. As a result of high compliance costs and greater operational complexity, MiFID will lead to a further **consolidation** phase in the brokerage industry, although smaller firms will continue to have a niche, essentially because of the proximity to their clients.
2. Although investment firms and MTFs will be able to compete with exchanges on order execution as a result of the abolition of the concentration rule, **exchanges** are expected to **remain the main source of liquidity and price formation** for the time being, but they will be subject to more competition in their trade reporting and settlement activities. Despite a misconception that they will only face more competition from market-makers in the trading function, exchanges will also face enhanced competition from other exchanges. On the post-trading side, exchanges will be impacted by the ECB's Target II initiative and the EU's Code of Conduct.
3. **OTC markets** are going to be **more heavily regulated** than in the past under MiFID, meaning that the heydays of market opacity and cozy execution arrangements between providers are over: the distance between OTC markets and regulated markets will be narrowed as the former become more transparent, more competitive and more closely monitored.
4. A significant rise in **algorithmic trading** is almost a certainty. The need to rapidly search prices available on a variety of execution venues *ex-ante* and to verify the quality of execution *ex-post* will stimulate demand for business solutions such as algorithms. As execution venues proliferate, traders will rely more on smart order-routing systems to provide best execution.
5. **Trading volumes** should increase as a result of greater competition between execution venues and enhanced market transparency. More competition means lower transaction costs, which should feed into higher volumes. More transparency means more confidence in the quality of price discovery, enhancing market efficiency, which should also generate higher volumes. Greater transparency will contribute to the parcelisation of block trades into a more continuous stream of orders, since it will increase the market impact of large trades.
6. **Connectivity** is a central feature of the post-MiFID trading landscape that will be characterised by the fragmentation of liquidity pools as trading is decentralised. Connectivity necessitates the acceleration of efforts to arrive at common standards to facilitate straight-through processing in an accelerated and more competitive trading environment, as well as to ensure seamless order transmission and data retrieval, across the spectrum of business lines in a decentralised trading environment.
7. A massive **market for market data** will arise out of MiFID. In countries where the concentration rule was applied, the local stock exchange acted as the sole execution venue, meaning that market data revenues essentially accrued to exchanges. The more execution venues there are, the greater is the need to gather data. MiFID's strict best execution and order-handling rules heavily increase the need for reliable analysis in both the pre- and post-trade periods to ascertain the venues that will most likely perform a successful execution pre-trade and the self-imposed quality of execution tests MiFID requires post-trade.
8. MiFID necessitates a response on the part of **buy-side firms**. Most analysis has focused on the impact of MiFID on sell-side institutions. The buy side will be faced with the challenge of ensuring efficient data management, as market data are likely to increase significantly post-MiFID. The challenge is to monitor the quality of execution buy-side firms obtain for their clients.

¹ Under Art. 65 of MiFID, national regulatory authorities are free to extend the strict MiFID pre- and post-trade information requirements to non-equity markets. Some already do so, such as those in Denmark, owing to the large retail investor presence in its mortgage bond market.

9. Although MiFID is much more detailed and harmonising in scope than its predecessor and the European Commission has tried to restrict the loopholes in the implementing directive, **'goldplating' will continue**, as suggested by the emergence of initial indications in this direction. In addition, contract law and consumer protection remain national. The European Commission thus faces a heavy policing role in the months to come to ensure correct implementation, tight enforcement and a level playing field.
10. Given the heavy regime of MiFID, the **search for less stringent regimes**, such as those for investment funds (UCITS), can be expected, but also non-passportable national regimes may emerge. On the other hand, MiFID is so all-encompassing that its rules will spill-over into related sectors, such as asset management under the UCITS regime.

3. The ISD and the development of European capital markets

The past decade has seen a sea change in European capital markets. From a predominantly bank-dominated system, the European financial system has become more market-based. According to some indicators, it has even recently surpassed the US in this respect. For example, leading European stock market indexes have become more cyclical than those in the US, and both the issuance of corporate debt and the number and total value of IPOs (initial public offerings) in Europe surpassed those in the US in 2005.

The change since 1996, when the Investment Services Directive came into force, is remarkable. As can be seen from the hexagon in Figure 1, bond issuance more than doubled, equity market capitalisation tripled and equity market turnover and the total amount of derivatives contracts written increased six-fold. Figure 2 shows that the growth of bank assets has been overtaken by the growth in bond assets, which is another sign of the move towards a more market-based system. Although the growth of the IPO market has benefited from the enforcement of the Sarbanes-Oxley Act in the US and from some large-scale privatisations in the EU in 2005, it is a sign that the European regulatory regime is not too burdensome and/or that it manages to cope with diversity.

Figure 1. EU securities market growth, 1996-2005

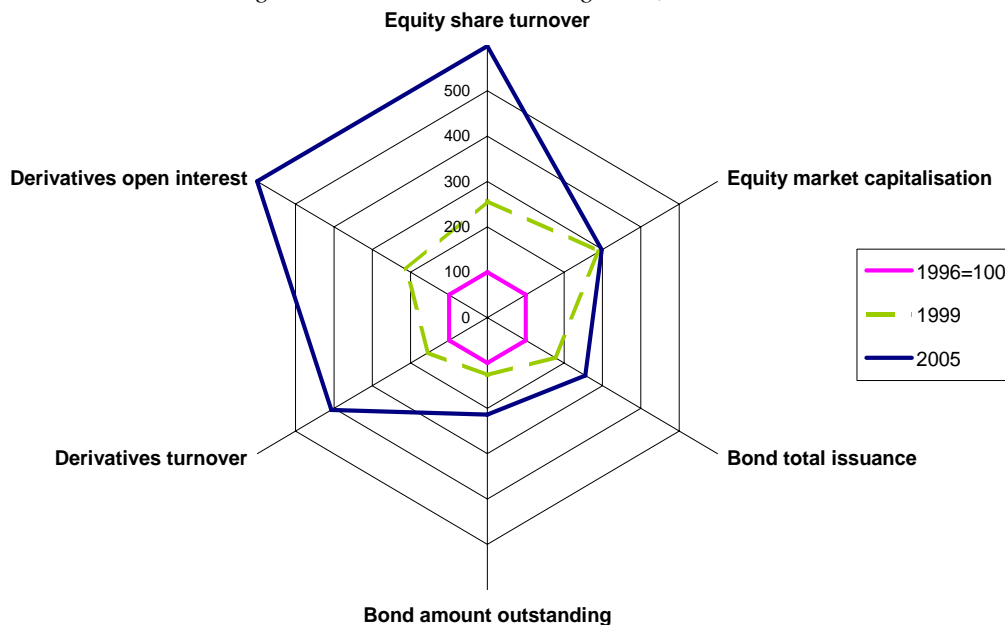
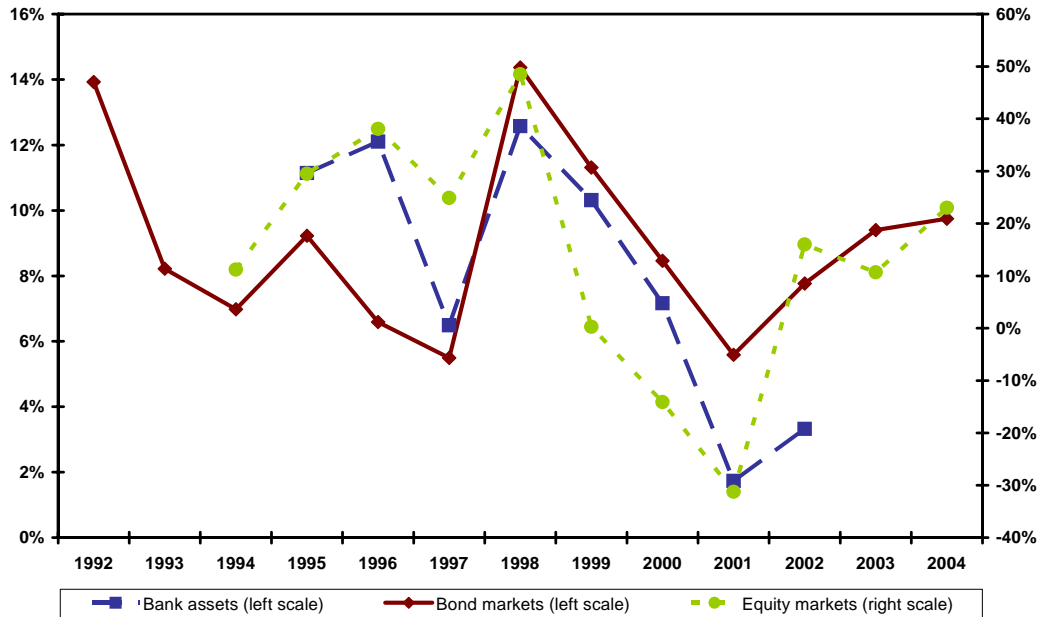


Figure 2. Growth of bank vs. securities markets in the EU



It is difficult to distinguish the extent to which this phenomenon is the result of regulatory initiatives, as compared to simple market developments. The growth of the European financial markets has occurred against a backdrop of efforts to create a truly integrated market, and has benefited from relatively benign macroeconomic conditions at global level. But it is certain that specific policy initiatives have contributed to the spectacular financial market development in the EU, a fact that has probably not been sufficiently emphasised in the political discourse. Foremost, in our view, there is a clear positive effect of EMU. The introduction of the euro has created a much bigger, more liquid and stable currency zone, which has created better conditions for issuers and asset managers, and has increased competition amongst intermediaries. A clear indication is the use of the euro as a currency for international bonds: since 2004, the euro has overtaken the dollar as the main currency of denomination for international debt issues, and it currently accounts for about 46% of the total value outstanding of international debt securities (as of September 2006). The Financial Services Action Plan (FSAP), launched in 1999, has contributed to creating an awareness of the importance of a well-functioning single capital market, and measures adopted under the plan, which are already in force, such as the prospectus directive, have not had a negative impact on European capital markets, contrary to some expectations. The prospectus directive creates a much more harmonised European regime for issues on capital markets, and does not exclude domestic, but 'non-passportable' regimes, such as the Professional Securities Markets (PSM) of the London Stock Exchange or Euro-MTF of the Luxembourg exchange.

Moving more specifically to the effects of the ISD, it is clear that the free provision of trading screens in the EU and the single licence for brokerage services has contributed to the reconfiguration and restructuring of

European securities markets. The former allowed the trading activity and liquidity to concentrate on the stock exchange of the home market of a listed corporation, and thus also improve the price formation process. This is apparent from the reduction in the number of foreign listings from firms from other EU countries on EU exchanges. The single licence for brokers increased the competition in securities brokerage services and contributed to the consolidation and scale enlargement in the sector. Many smaller European brokers have been absorbed into larger entities, mostly commercial banks, and not many managed to survive as independent entities. Ironically, the member state which was the most critical of the ISD during the negotiations,² the UK, probably benefited the most from these effects. Although conduct-of-business rules were not sufficiently harmonised to allow cross-border provision of services for retail clients, this did not prevent wholesale markets from integrating and investment banks from consolidating their European operations in a few financial centres.

Some of these effects had already started well before the ISD came into force. The competition between exchanges started with the creation of SEAQ International, a screen-based quotation system specialising in non-British stocks, by the London Stock Exchange in 1985, and the deregulation or 'Big Bang' of the London market a year later. This allowed London to attract many trades in continental European stocks. Continental European exchanges reacted by improving their auction systems and liberalising market access and commissions.

The downsides of the ISD, however, were the lack of harmonisation of conduct of business rules, and the privileged status of the exchanges, alias 'regulated

² It suffices to look at articles in the British business press in the period of the negotiations of the ISD (1991-92).

markets', many of which had in the meantime been privatised. This was addressed in the ensuing MiFID.

4. Implementing MiFID

Although the European Commission initially considered going for a more limited review of the ISD, it finally chose for a fundamental overhaul, which was also related to the introduction of the 'Lamfalussy approach', which opened the way for secondary legislation in EU securities law. But the European Commission did not change the basic scope of the directive, as regulating brokers and markets.

The main changes brought about by MiFID are:

- The harmonisation of conduct of business rules for securities trading, including strict rules on best execution of trades, client categorisation and client reporting;
- Rules on the internal governance of investment firms, requiring them to tackle conflicts of interest, maintain good governance and ensure continuity of their services;
- The abolition of the concentration rules of the ISD, by which member states could require trades to be executed on the main exchange or the 'regulated market';
- The much greater possibility for investment firms to internalise trades, as 'systematic internalisers' for retail-market size trades, subject to strict pre- and post-trade transparency requirements, or less limited above these thresholds;
- The European passport for Multilateral Trading Facilities, which can be created by investment firms and exchanges;
- The extension of the single passport regime to some other services (investment advice and non-discretionary asset management) and some other markets (commodities, more derivatives).

The degree of detail in MiFID as compared to the ISD is considerable. This is to some extent normal, as the MiFID harmonises rules on conduct of business which were largely left out of the ISD. However, we believe that the EU has probably gone too far in its harmonising scope.³ Rather than being strictly principles-based, the directive has become rules-based for some important provisions, resembling a maximum harmonisation directive in some parts at least. Measured on the basis of a simple word count, and including the implementing measures, the directive is almost five times more extensive than the ISD, which it replaces.

The complexity of MiFID, especially its provisions with respect to the regulation of broker-dealers, makes it difficult for member states and firms to implement all of

its provisions in a timely manner. Member states must implement the rules by 31 January 2007, but an additional delay until 1 November 2007 was granted by the Commission for the full application of the rules. The European Commission has warned that it will be strict in pursuing member states that have not implemented the directive on time and properly.⁴ However, it is already safe to say that several member states will not have implemented the rules in time.⁵

To our knowledge, not many systematic surveys have been conducted at the firm level on the degree of preparedness for MiFID. An extensive survey of investment firms based in Germany carried out by the University of Frankfurt found that, in early 2006, only 14% of the firms concerned were very familiar with the new rules, and only about half had started the necessary internal preparations (on a sample of 55). Most firms had foreseen the implementation in 2007, also from a budgetary perspective. A survey of financial institutions Europe-wide by KMPG, carried out around the same time, found about the same degree of preparation (48% on a sample of 199), and that only 29% of the surveyed firms had assigned a project manager. A more recent survey carried out for the UK Financial Services Authority (FSA) during the summer of 2006 continued to find the same degree of preparedness (score of 4 out of 10) (LECG, 2006).

The interesting finding of the first two studies is that MiFID is primarily seen as an IT and compliance exercise. Surprisingly, less thinking seems to have been invested in developing a MiFID strategy across the business. This was the main message of the KPMG report, which found a blatant lack of awareness in top management on the strategic implications of MiFID. The University of Frankfurt study found that only 30% of surveyed firms had thought about the strategic implications, and among those, the theme of 'best execution' seemed to be the most important. The degree of awareness differs from country to country and may result from the fact that some national regulators, such as the German BaFin, have given markets very little feedback on the national regulatory strategy, nature, scope and impact of MiFID implementation. On the other hand, others, such as the UK FSA, have been very forthcoming and transparent, and have preceded national MiFID implementation exercises by extensive consultations with the industry.

⁴ At the Banker Awards Dinner in London on 10 October 2006, Commissioner Charlie McGreevy remarked that he was "very concerned that some Member States have stated publicly that they will not be able to transpose MiFID on time" and made clear that the Commission "will launch immediate infringement procedures against any Member State which fails to transpose on time".

⁵ Spain, for one, has already publicly declared it will not be able to implement MiFID in time, and Germany has dropped hints to this effect.

³ See Casey & Lannoo (2006).

The most wide-ranging findings concern the cost of implementation, suggesting considerable confusion and little consensus as to the real impact of MiFID. The Frankfurt University study comes up with relatively low figures, which are proportional to the size of the firm: most of the surveyed firms expect compliance costs to range from €500,000 to €1 million. Some 16% of firms expected costs of between €1 and €5 million and only 4% anticipated that costs would exceed €20 million. The implementation of the best execution provisions is considered the most important cost element. On the other hand, in its analysis on the impact of MiFID, JP Morgan estimated implementation costs for very large institutions to reach €106 million (largely due to IT investments and disclosure requirements), with proportionally larger costs for the smaller institutions in their sample. The technology company Vhayu estimates the cost of compliance to be between \$6 and \$36 million per institution, affecting small banks proportionally more.⁶ In its cost/benefit analysis, the Financial Services Authority estimated that, to be in line with the rules on internalisation alone, the cost to dealer firms would be between £8 and £40 million (FSA, 2006). Another study for the FSA estimated the one-off cost of implementation for the UK investment industry, excluding internalisation, at £90,000 for small firms, £2.15 million for mid-sized firms and £4.75 million for large firms (LECG, 2006, p. 67).

Notwithstanding efforts by the European Commission to ensure harmonious implementation, it can be expected that ‘goldplating’ will continue. The FSA, which is probably the most advanced in the implementation exercise, has already announced that its rules in two areas will be ‘super-equivalent’ to the EU rules: consolidation of post-trade data information and research rules. As regards the former, the FSA fears that under the new framework, where there is a greater flexibility and choice in permitted publication channels, the quality of market data may suffer. The FSA has therefore proposed a regime of Trade Data Monitors as obligatory venues for trade reporting. As regards research rules, the FSA may seek to retain its rules on the use of dealing commissions, which set out which kinds of goods and services can be paid for in this way (Clifford Chance, 2006). Other member states may face difficulties in implementing the entire set of rules, as they did not have previous rules on certain activities currently governed by MiFID, or what rules did already exist were limited. The French ‘Autorité des Marchés Financiers’ (AMF), not an example of the lightest regulator in Europe, stated in its recent consultation document on best execution that “the MiFID best execution requirement is far more precise than the existing provisions of the AMF General Regulation on the same subject” (AMF, 2006, p. 4). The European Commission thus faces a heavy task in the coming months to live up to its stated intentions.

Therein lies the contradiction of MiFID: while the Commission sells it as a ‘principles-based’ directive, parts

of it are heavily rules-based, particularly the provisions related to transaction reporting, post-trade transparency and other provisions that figure in the Level 2 Regulation. At the same time, even regulators such as the FSA that are the most favourably disposed to a principles-based approach to regulation, grounded in sound market failure analysis and regulatory impact assessments, have found it difficult to develop a concise code governing conduct-of-business rules. The FSA’s MiFID rulebook now numbers over 500 pages.

5. Market impact

There is a consensus that the biggest impact of MiFID will fall on investment firms, and established exchanges will be less affected. However, it could be more appropriate to say that, in the short term, the impact of MiFID is most likely to be felt by investment firms, but in the long term the implications of MiFID will likely be more profound for exchanges. We expect this result because of the combination of internalisation by investment firms and increased competition to exchanges from actors in other business lines such as data vending, such that the traditional business model of established exchanges is going to be challenged as never before. Although investment firms will initially feel the impact of MiFID more directly in terms of the one-off costs associated with compliance with the new best execution, systematic internalisation, client (re-) classification requirements, exchanges will feel an indirect impact as they reposition themselves strategically in response to investment firms’ and other market participants’ moves. Exchanges may also choose not to wait to react to competitive threats but might opt instead to anticipate them by taking an aggressive proactive approach to the new reality.

It is curious to note that a radical shift of stance towards MiFID has emerged from the City and large financial players. Whereas two years ago, MiFID was seen as an enemy to be beaten back, today large banks view it not only as a *fait accompli*, but also as an opportunity to be seized. The directive is seen not just as incurring costs, but also as an important source of new revenues, at least for the well-prepared.

5.1 Investment firms

The expectation is that the implementation of MiFID will lead to a further consolidation process in the brokerage industry. This view does not only emanate from reports of analysts and consultants, but also of regulatory authorities, such as the FSA. The implementation cost figures, mentioned above, are a case in point. In addition, the growing complexity of the legislation and the heavy compliance are burdens that can hardly be absorbed by small brokerage firms, which were widely present in many continental European countries until a decade ago. Moreover, MiFID could exacerbate the differences between the larger and smaller players. Large firms have much of the required IT infrastructure and capacity in place to deal with MiFID relatively well, whereas the cost

⁶ <http://www.vhayu.com/pdf/MiFID.pdf>

for smaller firms will be more pronounced (JPMorgan, 2006, p. 24). However, the surveys of firms in the German and British markets (Frankfurt University and LECA) imply that the cost factor should not be exaggerated, and that it is proportional to the size of the firm. Smaller brokers are reported to have said that they have already brought their operations in line with many of the provisions of the directive, and that they are already providing 'best execution'. The client suitability requirements are much easier to implement for smaller firms than for large ones, or are already complied with, since they know their customers much better, and they do not have the same need for expensive computer solutions. Hence even if most observers expect consolidation to continue, niche players with a strong client focus may continue to thrive.

Very large players are expected to face significant compliance costs. A report by JPMorgan analysts expects that €19 billion (!) could be wiped off the market capitalisation of eight leading European wholesale banks as a result of MiFID. This effect is predicted to be driven by a mixture of increased competition (lower profits) and the costs of implementing the detailed client suitability arrangements, higher transparency and strict best-execution requirements resulting from MiFID. The JP Morgan analysts expect the directive to above all represent a threat to the integrated banking model, whereby the retail distribution network will subsidise the investment banking division to a lesser extent as a result of outsourcing to cheaper third-party providers. The loss of captive private banking volumes (i.e. private banking trades which are executed on the investment bank's internal platform) is expected to lead to a 20% decline in margins.

To what extent will banks internalise? We would maintain that, because of the constraints on internalisation and the associated costs for banks to implement it, *systematic internalisation*, as defined by the directive, will remain limited. The JP Morgan study estimates that the potential savings of an internal exchange would be just 2% of the overall cost of trading. This result is based on the assumption that 20% of trades are settled internally, whereas most large banks settle a maximum of 5% of trades internally today. Exchanges are therefore expected to remain the main source of liquidity for equity shares. However, the trades to which the rules on systematic internalisers apply are limited to retail trades in some 500 blue chip shares, and hence a bank that is dealing above a retail market size is not bound by the rules.⁷ While internalisation was already tolerated in markets such as Germany and the UK, it was not allowed, or only allowed to a (very) limited extent, in France, Italy, Spain and (to a lesser extent) the Netherlands. If, after the removal of the concentration rule, these exchanges are seen to be inefficient or to charge excessive fees, they could rapidly

lose market share in these countries once their effective monopolies are ended. Apart from challenging exchanges on trading activities, internalising banks are no longer requested to pass the trade information obtained on to the exchanges for publication. Under MiFID, they are free to publish data reports through a Multilateral Trading Facility or a data vendor instead of an exchange if they so prefer.

The complexity of the regulatory regime will certainly drive firms to look into alternatives. The regime for investment fund companies (UCITS III), which was adopted in 2002, introduced the single license for fund management companies, broadening the 1985 UCITS product directive. It is a valuable although more constrained alternative than MiFID. It grants the 'single license' to fund management companies in the broad sense of the word, allowing the management of investment funds, the 'core services', but also other forms of portfolio management, such as pension funds for individuals, investment advice, safekeeping (custody) and administration of investment funds, which are seen as 'non-core' or ancillary. However, elements of MiFID, such as the increased transparency, best execution and cost unbundling could also spill over into the UCITS regime, which is currently under review.⁸ Whether MiFID would also lead member states to create new non-passportable regimes, as was done under the 2003 Prospectus Directive, is also a possibility, albeit a rather theoretical one at this stage.

5.2 Exchanges

The regulatory changes resulting from MiFID are less profound at the outset for exchanges than investment firms. Apart from tighter organisational and governance requirements, the regime does not change that much from the ISD. However, two developments will have an important direct impact on European exchanges: 1) the increased competition on the trade information side from other channels and 2) the impact of the ECB and EU initiatives on the settlement side. In addition, there is the impact of the market developments in the investment firms industry, described above, and the competition from Multilateral Trading Facilities, which can compete with exchanges for order flow.

Traditionally, exchanges were the predominant, almost exclusive source of market data, not least due to the concentration of trading and data reporting imposed by regulatory authorities. With this breakdown will come increased opportunities for investment firms to recapture revenue streams that were originally generated by their orders. The aggregate pan-European market for market

⁷ The systematic internalisation requirements apply to trades below the 'standard market size threshold', i.e. the average of the value of retail trade transactions.

⁸ Directive 2001/107/EC amending Council Directive 85/611/ECC relating to undertakings for collective investment in transferable securities (UCITS), with a view to regulating management companies and simplified prospectuses, OJ L41 of 13/02/02.

data is estimated at about €2.3 billion per year.⁹ This sizeable revenue pool is up for grabs by innovative firms and other financial market actors.

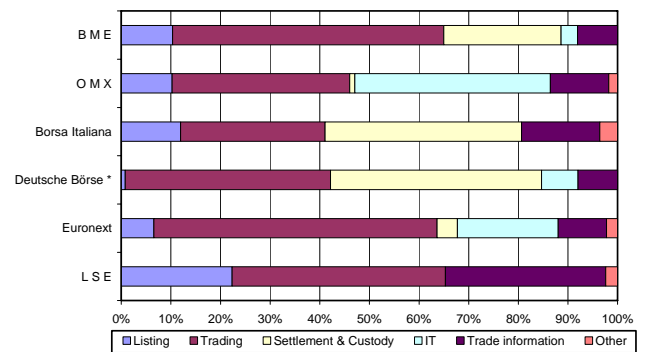
Investment firms have not been slow on the uptake. Already, a group of nine London-based investment banks have set up a joint effort called ‘Project Boat’, which is intended to capture back data revenue sources from trades where investment firms – and not the exchange – were the liquidity providers/facilitators. Prior to MiFID, investment firms paid exchanges a fee to report OTC trades, only to buy back the collated and repackaged information from information providers against a fee. This odd situation squeezed investment firm margins on both the revenue and cost sides. By opening up the architecture for trade reporting, MiFID will challenge an important revenue source for exchanges and provide a valuable opportunity for investment firms to get in on the game. Even self-regulatory bodies such as the International Capital Markets Association (ICMA) are positioning themselves to use existing engines and technology to tap some of this expected revenue stream.

Income from the sale of trade information today accounts for about 12% of the revenue of the six largest exchanges in the EU. For some exchanges, it is much higher, reaching 32.3% for the London Stock Exchange (although in this case the figure also includes revenues from regulatory information services). Although the usefulness of the trade information gathered by exchanges is closely related to the degree to which exchanges are the main source of liquidity, the competition from new facilities or from data vendors, resulting from the ‘open architecture’ for market data introduced by the directive, may form a direct threat to this revenue stream for exchanges. Hence, the combined effect of more internalisation by investment firms or more trades routed through MTFs could have a direct impact on the completeness of the trade information that exchanges collect and sell.

Exchange participation fees (commissions) will also come under pressure with the proliferation of execution venues and the breakdown of the traditional national trading environment. So will trading fees, which currently account for about 45% of the largest European stock exchange revenues on average (see van Steenis et al.). Exchanges will not only face more competition from liquidity providers, but also from other exchanges, who can compete for liquidity in equities that are not necessarily cross-listed in their home market. For example, the SWX Swiss Exchange launched a ‘sponsored segment’, in July 2005, whereby Swiss Exchange members can trade foreign-listed equities on the SWX, even if these securities are not cross-listed on the SWX.

⁹ “Wall Street and Technology: MiFID Rules Break the Exchange Monopoly on Trade Reporting”, 20 October 2006 (www.wstonline.com).

Figure 3. European stock exchanges revenue decomposed by activity



* Clearing revenues from EUREX are included in the trading share of Deutsche Boerse, a more precise decomposition is not available.
Source: Stock Exchanges Annual Report 2005.

The threat to the revenue that exchanges earn from settlement services may be even more severe, at least for the vertically-integrated exchanges. Art. 46 of MiFID requires clearing and settlement facilities to provide direct access to regulated markets from other member states. In itself, this article may not change much, as a similar provision already existed in the ISD, and vertically integrated exchanges are already providing direct access. However, to the extent that MiFID allows internalisation, it may lead to settlement occurring on platforms other than that of the exchange. In addition, MTF’s can obtain a European passport and settle where it is most cost-effective. Vertically-integrated exchanges may be protected from some of these pressures as it will be difficult to organise settlement outside the home country of the securities issuer, because of the need for specific local company- and tax-law expertise.

The main question in settlement revolves around the impact of initiatives by the ECB and the EU on post-trading. The European Commission has proposed a code of conduct for settlement providers to improve price transparency in, and ease of access to C&S (clearing and settlement) systems. The code requests providers to unbundle pricing and accounting of C&S activities. It allows C&S firms to offer their services on a pan-European basis. Although the code has not yet entered into force, some have already stated that it will spell the beginning of the end for the vertically-integrated exchange model.

As regards the ECB initiative, it is again too early to say how far-reaching it will be and how likely it is to affect the activities of settlement providers. In principle, the ECB will only provide settlement against central bank money for euro-denominated government bonds or assets eligible for Eurosystem credit operations (meaning in practice all euro-denominated securities), but it will not manage corporate actions. This will, as the ECB indicated itself, “eliminate the need for any other settlement platform for securities transactions denominated in euro at CSD level” (Godeffroy, 2006). Although local C&S may continue to provide STP (straight-through processing), and settle in the end on the Target 2 securities platform, there will be no technical justification to do so. The creation of a monopoly

for settlement of euro-denominated securities will, according to the ECB, lead to post-market integration and to the exploitation of scale economies. This initiative could potentially have a serious detrimental impact on the settlement income of vertically-integrated exchanges and bond settlement platforms, and it may further harm them by leading banks to reconsider their relations with these entities for corporate actions as well, where custodians will try to win more market share.

Nevertheless, exchanges may generate further revenue streams post-MiFID, namely in IT and consulting. However contradictory it may sound, exchanges may sell in-house matching services to banks, and in this sense try to keep control on internalisation and the related technology. As banks may not have the in-house IT expertise to become systematic internalisers, exchanges' IT departments may offer their services in the market. Euronext is said to have already engaged in talks with banks to this effect.

Exchanges could also establish MTFs to facilitate the execution of unwieldy or complex trades that are unfit for entry into electronic order books and which users might prefer to negotiate 'off-market' instead of in an 'upstairs' negotiated deal – thereby coming under less stringent disclosure requirements than those which apply to 'on-exchange' deals; or they may do so simply to cater to specific niches in the market. Exchanges could also benefit from increased trade transparency requirements in OTC markets or the 'exchangisation' of certain market segments that were heretofore essentially OTC. This trend is clearly ongoing in the bond and investment fund markets and gives exchanges a chance to compete where previously there was little opportunity to do so.

Estimating the competitive threat MTFs will pose to exchanges is a difficult exercise at this stage. Much will depend on the response of exchanges to MiFID and their ability to further improve their efficiency in the form of lower fees, better price formation processes and improved infrastructure, as resulted for example from the creation of Euronext (Pagano & Padilla, 2005). Do these challenges therefore portend a further consolidation amongst exchanges? It will be important in the coming months and years to find the right balance between consolidation and competition in a sector that already today is highly concentrated. The four largest EU exchanges control 84% of equity turnover and 93% if the largest five players are considered. MTFs may be a useful tool to ensure that markets do not become too concentrated. MTFs may also enjoy a competitive edge in specific markets or business segments of exchanges, such as the market for new high-growth or high-tech firms, or for the reporting of trading data, as discussed above. The traditional exchanges will thus need to be extremely attentive in the months to come.

Exchanges in the new member states will face a particular set of challenges. The large markets – Poland, Czech Republic and Hungary – all have a concentration rule in place. There is little threat for them that local banks will begin siphoning off liquidity by setting themselves up as

systematic internalisers. Their capacity to do so is limited by scarce technological resources and by the difficulty to overcome the first-mover advantages enjoyed by exchanges in a culture where liquidity has always been exchange-driven. The real threat for these exchanges will come from MiFID-induced competition from powerful foreign exchanges and large foreign banks operating out of the City of London or Frankfurt to the more liquid and larger domestic companies. Nevertheless, these exchanges do have the advantage that the investor base remains overwhelmingly local, which are essentially the large and growing pension and investment funds, which still face strict investment limits in foreign securities as a result of currency matching rules, for example. Because liquidity is concentrated in the hands of regional investors, for whom trading costs are lower when routed through the local exchange, the scale of the threat is limited for the moment. However, this may change over time. If it does, and if data vending revenues fall as a result, the main exchanges in the new member states may be forced to consolidate forces with larger exchanges elsewhere in Europe in order to survive.¹⁰

5.3 Advisory firms and solution providers

Because MiFID's conduct-of-business rules are detailed, buy-side firms may have the impression that MiFID's obligations are essentially geared towards sell-side institutions. This is a mistaken impression. There seems to be a considerable lack of understanding among buy-side firms that MiFID has important implications for the way they too conduct their business. A recent study by EdHec Risk Advisory (2006) suggests that up to 40% of buy-side firms plan to invest no more than €25,000 per year on best-execution arrangements and technologies, suggesting a surprising lack of preparedness among buy-side firms for post-MiFID challenges relating to the search for, and verification of, best execution for their clients.

Like law and advisory firms, business-solutions providers are sure to be key winners from MiFID implementation as all market participants seek to cope with a vastly more complex trading landscape. Algorithmic trading is one of those solutions, and as such, it represents one of the ongoing market trends that we identified earlier in this paper and that are likely to be reinforced or accelerated once MiFID is implemented. The predicted increase in algorithmic trading will be driven by both demand- and supply-side forces.

On the demand side, pressure on firms to rely more on algorithms post-MiFID will come from the regulatory provisions related to execution obligations. MiFID establishes a requirement that investment firms develop a best-execution policy which is occasionally tested by the investment firm for robustness. In this way, a firm's clients will know *ex-ante* the criteria against which an executed

¹⁰ We are grateful to Slawomir Pycko, Deputy Director for Planning and Business development at the Warsaw Stock Exchange, for valuable insights in this paragraph.

trade will be judged ‘best’, thereby helping to hold investment firms accountable when the quality of execution is doubtful. For two reasons, algorithmic trading systems are probably the most reliable way for investment firms to ensure they have effective best-execution policy in place. First, they can be programmed to hunt for the best prices across a wide range of execution venues in mere fractions of a second; secondly, the parameters that govern the way the algorithm hunts for a ‘best’ result and the definition of that ‘best’ result (i.e., price/cost, speed of execution, market impact, or any linear combination of these or other criteria) are set *ex-ante* by the algorithm developers (and/or traders, depending on how flexible the system is). The smart order-routing systems merely seek to optimise the given algorithm. The fact that an algorithm is based on set, predetermined parameters leads to a clear and transparent presentation of the firm’s execution strategy *ex-ante*, so that the firm’s clients are duly informed of the criteria used to assess execution venues and route orders. At the same time, consumers can be more confident about execution results, since the algorithm carries out the optimisation in a purely mechanical predetermined manner: intelligent systems, unlike real traders, do not face conflicts of interest and merely carry out trades in a disinterested manner as a function of the inputs.

As for the supply-side forces, the vast amount of previously unavailable market data that MiFID will generate through more stringent transparency requirements and through the proliferation of execution venues is likely to enhance the development and refinement of algorithmic solutions, whose performance often depends in great part on the volume of high-quality data available. The increase of market data will enable new and next-generation algorithms to be developed, stimulating demand in response to innovation.

Algorithms today do not account for a large percentage of trades in volume terms. A recent survey of European buy-side firms indicated that they accounted for only 3% of trades, compared to 11% carried out via direct market access (e.g. multi-dealer-to-client platforms, or B2C), 17% via programme trading and 69% in traditional cash transactions (see Cooper, 2006). Despite this low figure, the growth rate of algorithmic trading has been brisk, and we predict it will increase significantly in the post-MiFID landscape. A recent survey conducted by IBM even claims that 90% of traders in Europe will lose their jobs to algorithms by 2015, although this figure seems very high to us (see IBM, 2006b). Nevertheless, it is a real possibility that as the quality, flexibility and performance of algorithms rise, trading in liquid securities will likely involve fewer human traders in future.

As greater transparency is introduced into the marketplace and as the speed at which new information is impounded into prices increases, the market impact of block trades has increased. Because of the increasing costs transparency imposes on block trades, eligible counterparties and institutional investors that are trying to offload large positions have been led to seek greater recourse to

programme trades, which parcel up blocks into smaller tickets to minimise market impact. It is therefore not surprising that one observes a progressive fall in the size of trading tickets in European equity markets as greater post-transparency is introduced into the market.

Finally, in terms of overall market impact, another benefit of smart order execution/routing, whether algorithmic- or programme-based, is that it is likely to enhance both the speed and the quality of price discovery, thereby improving market efficiency.

Apart from buy-side firms, a number of sell-side solutions providers can be expected to gain from MiFID, including data vendors and data consolidators/disseminators, connectivity solutions providers, data management providers, and others who will benefit from the enormous market for market data that is likely to result from MiFID.

6. Outlook

Whether MiFID brings another ten years of growth in Europe’s securities markets is of course difficult to predict. But it certainly brings more competition in securities markets and will substantially change the market environment. Trading volumes can be expected to further increase as a result of greater competition between execution venues and enhanced market transparency. As Europe’s capital markets become further integrated and the nationality of firms becomes less clear, exchanges will be in more direct competition with each other for the blue chips. In addition, their business model will be challenged on the trade information and settlement side.

The requirements on investment firms to provide best execution and to unbundle their fees for securities transactions should, in addition to other directives adopted under the FSAP, stimulate the confidence of retail investors and increase their participation in securities markets. Transaction fees should decline, and disclosure further improve.

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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.

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