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Agenda

Advancing economics in business

The debate on trading and post-trading: clear and settled?

Securities trading and post-trading in Europe have been subject to significant changes in recent years. Drawing on a recent Oxera study for the European Commission, which involved an extensive survey among market participants in 18 financial centres in Europe, this article considers the impact of some of these initiatives on prices and the costs of the various services that together deliver trading and post-trading

Traditionally, each national market in Europe had its own monopoly securities trading, clearing and settlement systems, often by construct of law. This situation has changed significantly in the past 10–15 years. Capital markets and equity trading have become increasingly international—market players have been seeking to provide trading and post-trading services across borders, and this has led to several cross-border mergers and alliances.

This process has gained momentum in recent years, with the European Commission and the industry working together to remove technical, legal and other barriers to cross-border post-trading,[1] and to facilitate the introduction of competition by putting in place an industry Code of Conduct for infrastructure providers that addresses issues such as price transparency, access and interoperability.[2] Various new players have entered the markets since, strengthening competition and increasing choice for investors, investment managers and brokers.

This article examines the impact of recent changes in the industry and identifies relevant trends that assist in understanding these changes. It discusses an analysis of a new large set of data collected by Oxera from intermediaries (fund managers, brokers and custodians) and infrastructure providers (trading platforms, central counterparties (CCPs) and central securities depositories (CSDs)) operating in the trading and post-trading value chain in Europe.[3] The analysis was undertaken for a price monitoring study for the European Commission in the period October 2007–June 2009, providing the first detailed empirical description of how the European capital markets are operating in terms of market dynamics and customer and supplier behaviour.[4] The box outlines the aspects of the market covered by the study.

The contribution of the study is twofold.

- It provides a baseline (based on calendar year 2006) for the costs of trading and post-trading for domestic and cross-border transactions along the whole value chain against which changes in the future can be measured.

- For a part of the value chain (infrastructure providers, CCPs and CSDs) it measures for the first time the effects of increased competition and market integration on prices of trading and post-trading services over the period 2006–08, thereby capturing important events such as the introduction of the Markets in Financial Instruments Directive (MiFID) and the industry Code of Conduct, and the entry of new providers.

What is covered by the Oxera price monitoring study?

Two types of securities: equities and fixed-income securities.

Three types of intermediaries: fund managers, brokers and custodians.

Three types of infrastructure providers: trading platforms, CCPs and CSDs.

18 financial centres:

- **six major centres—France, Germany, Italy, Spain, Switzerland and the UK;**
- **six secondary centres—Belgium, Luxembourg, the Netherlands, Norway, Poland and Sweden;**
- **six other centres—Austria, the Czech Republic, Denmark, Greece, Ireland and Portugal.**

This article is based on the Oxera report 'Monitoring Prices, Costs, and Volumes of Trading and Post-trading Services', prepared for European Commission, DG Internal Market and Services, July 2009. Available at www.oxera.com.

The Commission intends to repeat this exercise and collect data for future years to provide an analysis of trends over time. This will enable it to assess some of the effects of its current policies and industry initiatives, and to determine public policy on the basis of both sound analysis and a thorough understanding of the market.

Trading and post-trading: a complex business?

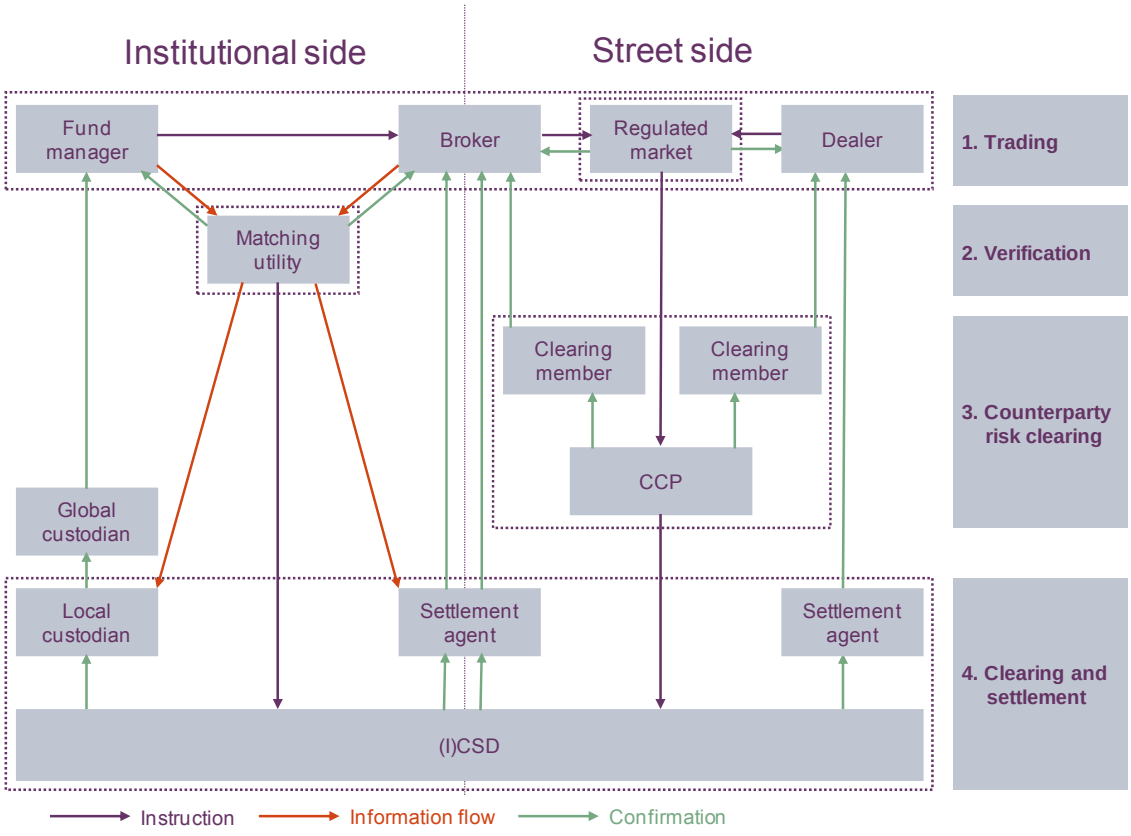
The 'simple' operation of investors buying and selling or holding securities is underpinned by a complex structure and transaction flow. It requires a number of specialised services, typically categorised as trading (offered by brokers and trading platforms) and post-trading, consisting of a range of services such as central counterparty clearing, clearing and settlement, and custody and safekeeping (offered by infrastructure providers and custodians).

There are numerous ways in which investors can access a particular market to undertake a transaction or hold a security domiciled in a particular financial centre. This underlying complexity of processes presents a significant challenge to measuring what is actually happening in the marketplace. A methodology was developed by Oxera in a previous study for the Commission to address these challenges, allowing for measurement of prices and volumes over time on a consistent basis.[5]

What is trading and post-trading?

Figure 1 presents a stylised illustration of the value chain for the provision of trading and post-trading services for equities. For any given trade order from an investor, there are typically two transactions: one on the street side, in which the broker executes the trade via a trading platform (or other trading channels), and one on the institutional side, in which the broker completes the transaction with the investor. The transaction starts with the trade order from the fund manager (acting on behalf of the investor), and the broker then executes it on the street side, and on the institutional side with the fund manager.

Figure 1 Stylised illustration of the value chain for trading and post-trading transactions



Note: This stylised illustration combines a regulated market with a CCP on the street side with a centralised matching utility on the institutional side. As such, this diagram shows the interaction of the transactions on the street side and the institutional side, and does not capture all the possible value chains.
Source: SWIFT and Oxera.

Cross-border transactions

Figure 2 shows that, for investors in major financial centres, the costs of cross-border trading transactions (ie, buying or selling equities domiciled in a financial centre other than where the investment manager is located) are around two times higher on average than those of domestic trading transactions. For investors in the 'other' financial centres (Austria, the Czech Republic, Denmark, Greece, Ireland and Portugal), the costs of cross-border transactions are around 1.3 times higher than the costs of domestic transactions. Interestingly, in the category of secondary financial centres (Belgium, Luxembourg, the Netherlands, Norway, Poland, and Sweden), there is almost no difference between the costs of cross-border and domestic transactions.

Data on post-trading shows a similar pattern in terms of domestic versus cross-border transactions. For example, the costs of using custodians for cross-border transactions are, on average, between 1.8 and 2.5 times the costs of domestic transactions and, in the case of CSDs, between 2.4 and 6.7 times the costs of domestic transactions.

These estimates are for calendar year 2006 and will be used as a baseline against which changes will be measured.

The differences between the costs of cross-border and domestic trading and post-trading are driven by a number of factors:

- cross-border barriers;
- economies of scale;
- variation in the costs of trading and post-trading services across financial centres.

There are specific legal and technical barriers that make cross-border trading more costly, and the Commission and industry have been working to remove these—the impact of this will be measured over time. The following focuses on what Oxera's study reveals about the additional two factors.

Economies of scale and variation in costs across financial centres

Economies of scale are significant in this sector and this is reflected in the widespread practice of volume discounts. This means that using a broker or custodian that is not located in the domicile of the security is generally more expensive than using a local or global broker/custodian, because the former will typically have much lower transaction volumes than the latter.

The analysis also shows that the costs of trading and post-trading services in some financial centres are higher than in others. This is reflected in data from brokers that indicates that the cost of trading varies by domicile of equity. For example, all brokerage firms in the sample charge around 9bp (basis points; 1bp means 0.01% of the transaction value) for trading in equities domiciled in one of the major financial centres, but much more for trading in equities domiciled in some of the smaller financial centres such as Poland (28bp), the Czech Republic (27bp), and Greece (22bp).

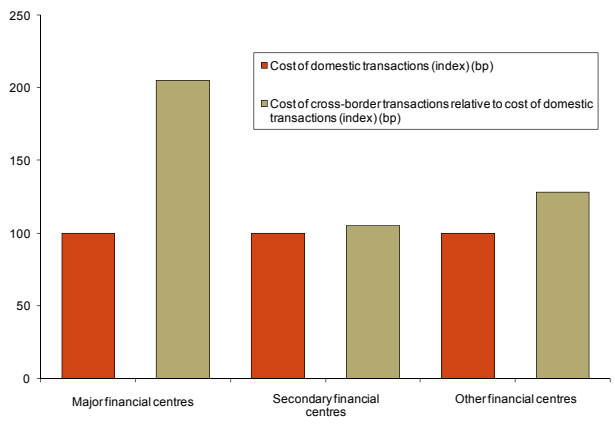
The cost of trading in securities domiciled in particular financial centres will reflect the cost of trading in the financial centres where the securities are domiciled. In other words, the relatively high cost of trading in Czech securities is likely to reflect, to some extent, the relatively high cost of trading in the Czech Republic.

Data on post-trading shows a similar pattern. The costs of settlement and safekeeping services vary by domicile of security. In the secondary and other financial centres, the costs are, on average, between 1.3 and 2.1 times higher than in the major financial centres.

This variation in costs across financial centres explains some of the higher costs of cross-border transactions. If an investor is located in a 'cheap' financial centre and trades in an 'expensive' financial centre, this will result in the costs of cross-border transactions being higher than those of domestic transactions.

The variation in costs across financial centres may in turn be explained by differences in the services offered. For example, in some financial centres, trade execution is offered in a bundle with other services such as research, while in other financial centres it is not—or is offered, but to a lesser extent. In some cases, the variation in costs may also be due to economies of

Figure 2 Costs of cross-border trading transactions



Source: Oxera (2009), op. cit.

scale at the financial centre level, explaining why trading and post-trading is more expensive in some smaller financial centres.

The combined effect of these two factors (economies of scale and variation in costs across financial centres) is important to consider. The pattern that emerges is that the domestic transactions of investors domiciled in a major financial centre will tend to be of high-volume and will be undertaken in a relatively cheap market, while their cross-border transactions are likely to be relatively low-volume in each financial centre, especially for secondary and other financial centres.

While investors in secondary and other financial centres are trading domestically in relatively 'expensive' centres, their main cross-border transactions are likely to be concentrated in relatively 'cheap' major financial centres.

This may explain why, for investors in the 'secondary' financial centres (see Figure 2 above), there is almost no difference between the cost of cross-border and domestic transactions. The additional cost of crossing the border is likely to be more than offset by the fact that domestic trades in these secondary financial centres are more expensive than those in foreign markets (eg, major financial centres) where these investors trade.

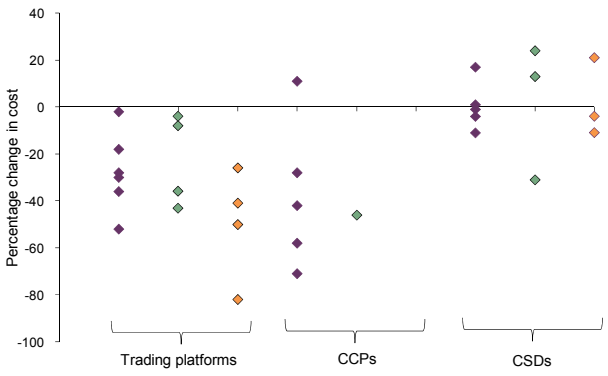
Prices and costs are coming down

In the past few years, various infrastructure providers have reduced their prices in response to new players entering the market. Oxera's study shows that in all financial centres this has resulted in a significant reduction in the costs of using trading platforms, with some financial centres indicating reductions of up to 80% (expressed in terms of cost per transaction) over two years.

There has also been a significant reduction in the costs of using CCPs, ranging from 20% to 80%. The evidence regarding CSDs is more mixed. The data does not reveal a systematic trend—in some financial centres costs have increased, while in others they have decreased.

This reduction in the costs of using infrastructure providers reflects some significant price reductions made in recent years, and is arguably what would be expected as competition increases (partly as a result of the various policy initiatives aimed at strengthening competition).

Figure 3 Change in costs of using infrastructure providers



Note: For trading platforms, the cost per on-book trading transaction is shown; for CCPs, the cost per central counterparty clearing transaction; and for CSDs, the cost of account provision in basis points of the value of securities in custody. The changes in costs of clearing and settlement services (offered by CSDs) are not presented here, and range from –60% to +70%. The different colours denote the financial centre classifications: major (purple), secondary (green), and other (orange) financial centres.
Source: Oxera (2009), op. cit.

… or going up?

Although the costs per transaction on trading platforms have fallen in all financial centres, the costs expressed in terms of the value of trading have increased in some financial centres, such as France, Italy, the Netherlands, Spain and the UK. This may reflect a trend in the brokerage sector towards smaller transactions, which in turn is the result of brokers splitting orders into more transactions with the aim of reducing market impact (ie, reducing the effect that the transaction may have—a transaction may move the market price upwards when buying or downwards when selling). This trend is also reflected in the increase in the use of transaction methods such as algorithmic trading (eg, in the UK, the use of this transaction method increased from close to 0% in 2003 to 12% in 2007).[6] As a result, one trade order today requires more trading and post-trading transactions, potentially increasing investors' costs per value of trade since trading and clearing and settlement services are charged on a per-transaction basis.

Thus, on the one hand, the costs of using infrastructure providers have fallen (as a result of lower prices and the application of volume discounts), and on the other hand they have increased (as a result of an increase in the number of transactions per order). In some financial centres, the net result of this is a decrease in costs and in other centres an increase.[7]

Other industry trends

Identifying and monitoring these industry trends is important in understanding the changes in the costs of trading and post-trading to investors. Other relevant trends include efficiency improvements in the value chain, changes in the channels used by investors and

intermediaries to trade, clear and settle, and the unbundling of services.

Anecdotal evidence suggests that the costs of trading and post-trading transactions that fail (eg, due to technical errors) can be substantial in some financial centres, and technological advances may reduce the costs and risks of clearing and settlement over time.[8]

The costs that investors and intermediaries incur may also change depending on the channels they use for trading and post-trading. A fund manager may send a trade to a broker or directly to a trading platform or crossing network. Alternatively, fund managers may cross the trades (of different investors) internally. In turn, a broker may execute the trade on a trading platform, cross the trade internally (internalisation), or trade with another trade bilaterally over the counter (OTC). Similarly, to clear and settle, fund managers and brokers have a number of different options and for cross-border transactions, the options are even more numerous.

The analysis indicates that an increasing proportion of members on trading platforms, CSDs and, to a lesser extent, CCPs originate from outside the domicile of infrastructures. This rise in cross-border users of trading platforms and CCPs has also been broadly reflected in the growth in the proportion of activity by these members on infrastructures. Overall, between 2006 and 2008 there appears to have been a trend towards increased use of infrastructures in other financial centres.

Finally, at certain levels in the value chain, there is a trend towards unbundling of services. An example is the brokerage sector where, traditionally in most financial centres, brokers have offered trade execution in a bundle together with other services such as research and access to analysts, making it difficult to identify the costs of trade execution (the focus of the price monitoring study) only. In some financial centres, such as France and the UK, regulatory changes have resulted in a trend towards the unbundling of the costs of non-trade execution services, which should make it easier to capture 'pure' trade execution costs in future price monitoring studies.[9] Unbundling may make the costs of individual services more transparent, and could change purchasing behaviour (eg, buying the individual services from different parties), potentially resulting in additional competitive pressure.

The debate: clearer but still unsettled?

EU trading and post-trading have been subject to considerable debate for years.[10] Oxera's price monitoring study for the Commission is the start of a project aimed at assessing the impact of initiatives to strengthen competition and integrate markets. It shows that competition has had a significant impact and that cross-border activity has increased. However, questions about the end-game of the market structure remain.

First, although competition appears to be having an effect on prices, the question of the optimal market structure has not yet been answered. For example, how many CCPs could the market sustain? The strength of economies of scale and network effects is illustrated by the history of the CCP in the USA (the National Securities Clearing Corporation (NSCC), now part of the Depository Trust & Clearing Corporation). It is sometimes forgotten that this CCP was created not as the single provider, but rather as one among other competing providers, with consumers having a choice about where to clear and settle. However, over time all clearing business 'tipped' towards this CCP, which then gradually took over the other US systems. Will Europe prove that its model of competition is an alternative solution for the long term?

Second, to what extent can national markets be integrated? The price monitoring study confirms that economies of scale are significant and may explain at least part of the difference between the costs of cross-border and domestic transactions. This indicates that, even after removing all barriers to cross-border transactions, some differences in costs between domestic and cross-border transactions may continue to exist simply as a result of economies of scale and smaller volumes of cross-border transactions than domestic transactions. The latter is due to home bias in investments. Although this home bias has been diminishing over time, the data suggests that investors continue to allocate a disproportionately large part of their investment portfolios (30–60% for institutional investors) to domestic securities. How long will it take for investors to change their attitude and go pan-European?

[1] For a summary of this work, see CESAME (2008), 'The Work of the Clearing and Settlement Advisory and Monitoring Experts' Group ("CESAME Group")—Solving the Industry Giovannini Barriers to Post-trading Within the EU', November.
[2] FESE, EACH and ECSDA (2006), 'European Code of Conduct for Clearing and Settlement', November; and European Commission (2006), 'Clearing and Settlement: Commissioner McCreevy Welcomes Industry's New Code of Conduct', press release IP/06/1517, November.
[3] Oxera (2009), 'Monitoring Prices, Costs and Volumes of Trading and Post-trading Services', report prepared for European Commission, DG Internal Market and Services, July.
[4] Transactions in both equities and fixed income securities are analysed. This article focuses on transactions in equities.
[5] Oxera (2007), 'Methodology for Monitoring Prices, Costs and Volumes of Trading and Post-trading Activities', report prepared for European Commission, DG Internal Market and Services, July.
[6] Oxera (2009), 'The Impact of the New Regime for Use of Dealing Commission: Post-implementation Review', report prepared for the UK Financial Services Authority, April, p. 29.
[7] There may be similar trends in the cost of using CCPs and CSDs. Although the costs per transaction have fallen in some financial centres, the costs per value of trade may have increased due to smaller average transaction sizes. Insufficient data was available to make an analysis possible. The subsequent study will look into this issue in more detail.
[8] Oxera (2008, 'Building Efficiencies in Post-trade Processing: The Benefits of Same-day Affirmation', report prepared for Omgeo, June.
[9] Oxera (2009), 'The Impact of the New Regime for Use of Dealing Commission: Post-implementation Review', report prepared for the UK Financial Services Authority, April, p. 29.
[10] For an overview of the initial discussion, see Niels, G., Barnes, F. and van Dijk, R. (2003), 'Unclear and Unsettled: The Debate on Competition and Regulation in Clearing and Settlement of Securities Trades', *European Competition Law Review*, **24**, pp. 634–39.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email d_holt@oxera.com

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