

How will EU securities infrastructures evolve in globalized financial markets?

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Introductory paper

I. Europe is still characterised by the existence of multiple stock exchanges and clearing and settlement infrastructures, which has an impact on the cost and efficiency of market transactions:

- The competitiveness of European capital markets, which is a key issue for the European economy, is hindered by the fragmentation¹ and resulting insufficient scale of EU securities infrastructures. This reduces their attractiveness for non-EU issuers and cross-border investors and the prospects of an effective integrated EU financial market.
- The resulting extracosts of cross-border EU cash securities transactions due in part to high clearing and settlement costs remain a major concern for the competitiveness of the EU cash securities markets and for their users:
 - Domestic EU costs are higher than in the US but only by a slight margin
 - Cross-border costs within the EU for cash securities which are considered to be 4 to 10 times higher than the US costs and twice to six times higher than domestic EU costs depending on the studies.²
 - The available studies show that a reasonable range for the aggregate excess cost of post-trading for investors is between €2 Billion and €5 Billion.³
- These extracosts are mainly due to insufficient integration, harmonization and interoperability of EU markets as identified by the Giovannini group and different assessments conducted on the occasion of EU Commission initiatives. Enhancing transparency and competition among EU securities infrastructures are additional drivers identified to enable price reductions and efficiency gains.

¹ Securities post-trading infrastructures are fragmented at the EU level as central providers exist in each domestic market for clearing and for settlement of orders.

² From an investor's point of view, EU securities settlement domestic costs range from 0.40 to 4 € and are higher than in the US (0.10 to 2.90 €). EU cross-border costs are higher: 20 € or more on average (source: Oxera, LSE, CEPS – presented by the ECB at the FESE convention in June 2007) .

The EU Commission also mentions that cross-border equity transactions are on average twice to six times more expensive than a domestic transaction. Available studies seem to converge towards an average value for cross-border transactions of between 15 and 20 € per transaction (source: Draft working document on post-trading activities 23.05.2006).

³ For example, according to the study published by Deutsche Börse the excess costs for cross-border post-trading in the EU amount to around €2 Billion per year. Of these €1 Billion are explained by higher CSD and settlement agent costs and €1 Billion by higher custody costs

According to the EU Commission a reduction in costs between €2 Bio and €5 Bio would translate into an average reduction of transaction costs for investors of between 7% and 18% (source: Draft working document on post-trading activities 23.05.2006).

II. Competition is favoured by EU legislators and regulators as the main driver of efficiency of EU securities infrastructures but further progress in interoperability is necessary:

2.1 Further EU consolidation of securities infrastructures does not seem likely in the short term:

European players and legislators were not able to agree on a common vision for securities infrastructures despite many debates. As a result different models have developed in the market:

- The main European securities trading and post trading infrastructures were practically all demutualized in the 90s with the consent of political and industry decision makers leading each company to adopt its own strategy (different consolidation scenarios, capitalistic and governance arrangements, positionings and marketing strategies...) and reducing potential room for manoeuvre of legislators, regulators and users in this field. In addition this has led some EU infrastructures to move away from the “not-for-profit user-owned” model in place previously and still existing eg in the US for post-trading activities (DTCC) towards more “for-profit” business models.
- Due to diverging interests between infrastructures and intermediaries and between different categories of intermediaries (eg wholesale broker dealers, retail banks, global custodians):
 - No agreement was reached on the need to regulate “core activities” despite strong demands coming from some stakeholders. Consequently, the Commission did not wish to push for further regulation in the post-trading area or for political orientations coming from the Council. ⁴
 - There was no agreement either on a target model for further integrating securities infrastructures in the EU or even on the need to pre-define a model rather than promoting competition among infrastructures:
 - Horizontal consolidation was favoured by some (eg Euronext, LCH Clearnet, Euroclear OMX...). This is because of the potential economies of scale and network effects obtained in each step of the value chain, and possibly a more effective use of capital employed and reduced connection costs for users in infrastructures covering several markets
 - Other infrastructures (Deutsche Börse, Borsa Italiana, Spanish stock exchange...) preferred vertical consolidation which can potentially enable exchanges to control the whole chain of activities and to bring efficiency through coverage of the whole processing chain.
- Several attempts by EU infrastructures to merge in the recent years were unsuccessful eg Euronext / LSE, Deutsche Börse / Euronext, Deutsche Börse / Borsa Italiana... This was explained mainly by incompatibilities between business models and governance models. ⁵
- The only recent merger under way within the EU is LSE and Borsa Italiana.

⁴ The issue of unbundling services and accounting separation is nevertheless included in the code of conduct adopted by EU securities infrastructures in 2006, according to which CSDs are asked to unbundle the 5 main categories of services they provide and to disclose costs and revenues for each unbundled service to the National regulator. In addition infrastructures have been asked to define common principles for allocating costs. Some users nevertheless consider that this step forward is insufficient and that infrastructure services should be more clearly separated from commercial activities in future accounting separation.

⁵ ie opposition between vertical and horizontal models, between user-owned / user-governed models and listed companies...

As a result horizontal consolidation remains partial in the EU⁶ and some trading infrastructures, which had triggered partial horizontal consolidation, have recently merged with US counterparts. This may limit the prospects of further consolidation of EU players in the short term and possibly pave the way for a similar movement in post-trading:

- In the trading area, Euronext and OMX which had successfully conducted horizontal consolidation across several EU countries have recently merged with US counterparts (respectively NYSE and NASDAQ) following in particular the difficulties they experienced to further consolidate within the EU.
- Some observers consider that this movement could spread to some post-trading infrastructures. This may lead to higher economies of scale for the EU post-trading infrastructures concerned. But some European users are concerned by this eventuality putting forward a certain number of regulatory, governance and supervisory issues⁷. They consider in priority that mechanisms should be put in place to ensure that the needs of EU users are sufficiently taken into account eg in investment decisions or in pricing decision validations. Oversight processes similar to those put in place within the NYSE-Euronext group may be a possible solution.
- These transatlantic mergers may contribute to increase competition within the EU and to strengthen the global competitiveness of EU market places by increasing economies of scale. But mergers in trading could possibly also reduce the chances of further EU consolidation in the short term, by creating at least 4 clusters in the EU that will probably be difficult to combine, not counting the underlying clearing and settlement organizations: NYSE-Euronext, OMX-Nasdaq, Deutsche Börse and LSE / Borsa Italiana (to which could potentially be added some projects emerging through MiFID in particular).

2.2 EU legislators and regulators have chosen to encourage competition among EU infrastructures as a way to reduce costs and potentially favour more integration. The emphasis is now on open access rather than on a choice of model (ie horizontal versus vertical):

MiFID and the code of conduct being currently implemented create a framework to enable competition to develop:

- The code of conduct adopted by EU securities infrastructures and due to be fully operational by the end of 2008 is designed to create the conditions of competition and possible price decrease in cash securities markets, improving the transparency and

⁶ Despite initial horizontal consolidation in clearing and settlement (eg LCH Clearnet, Euroclear, Nordic CSDs...) there are still at present 19 securities settlement systems in the Euro area and 30 overall in Europe plus several clearing platforms.

⁷ Regulatory issues: EU regulatory frameworks applying to these infrastructures and their users should also be preserved

Governance issues: In a potential transatlantic or global infrastructure the needs of EU users may not be sufficiently taken into account eg investment decisions or in pricing decisions validation. Indeed EU users may have different needs from US ones for example regarding different financial instruments. Supervisory issues in the event that central counterparties handling Euros may be partly or totally located outside the Euro zone

Technological issues: users usually wish to be as close as possible to the location of infrastructures to ensure sufficient reactivity

Potential security and confidentiality issues related to the data transiting through EU infrastructures

interoperability of EU cash securities post-trading infrastructures and the unbundling of post-trading services⁸.

- MiFID encourages the emergence of new trading venues such as MTFs and systematic internalizers to compete with stock exchanges.
 - The objective is to drive prices down while ensuring a high level of transparency. Some observers are nevertheless concerned that the benefits potentially brought by MiFID in the trading and clearing space may be offset in the short term by an increase in the fragmentation of liquidity and a reduction of economies of scale.⁹
 - MiFID has led to the emergence of different projects in the trading space (eg Project Turquoise, Chi-X...). This should also enable new competitors to enter the market of clearing services (eg with EuroCCP the subsidiary of DTCC ensuring the clearing of the Turquoise project and Fortis Bank providing the EMCF CCP facility for Chi-X), but the settlement will still be performed in the local CSDs.

The T2S project undertaken by the ECB should lead to a reduction in settlement costs by favouring a concentration of securities settlement on its platform according to many potential users (provided the launch of the project is formally confirmed in 2008):

- T2S should provide a centralized option for central bank money settlement in the Euro zone much awaited by many users who consider it as the main possible consolidation opportunity at the EU level in the medium term and a major driver of harmonisation and consolidation in settlement.
- Its supporters also believe that T2S can contribute to bring the further integration, harmonisation and safety of securities settlement that is needed to leverage the potential benefits of competition in trading and clearing permitted by MiFID and to reduce the costs of settlement services for users (connectivity, back office...).
 - Indeed the deals executed through alternative venues such as Turquoise or Chi-X will still be settled in the local CSDs, as well as those using potential links developed between CCPs and CSDs and enabled through further interoperability.
 - Therefore further consolidation at the settlement level seems essential according to these players to enable competition to develop in trading and clearing.
- The T2S platform will not be operational before 2013 but the industry is expected to progressively adapt its organisation to the future platform, provided the launch of the project is confirmed in 2008.
- Some observers consider nevertheless that further consolidation of CSDs, would be necessary to reap the full economic benefits of the project. Since T2S focuses on settlement services only it will not solve the fragmentation of value-added services provided by some CSDs (custody, asset services, tax services, etc...) and users will still

⁸ Significant progress has been made in the publication of prices and of discount schemes and in defining conditions for links between post-trading organisations to be established according to the reports of the MOG, the Monitoring Group in charge of monitoring the progress of the code. Some progress has also been made in price and service comparability with the publication of conversion tables. Main pending issues are whether conversion tables will enable effective comparability and the definition of common principles for allocating costs to support the accounting separation objective. The outcome of the different requests made for links and their underlying business case are another issue that will have to be followed closely.

⁹ If alternative venues are successful they should deprive stock exchange from part of their volume which will reduce their economies of scale and this fragmented liquidity may require from certain players new systems to be put in place to track and reconcile the data on different venues.

be maintaining links with many existing CSDs¹⁰. Some add that although T2S may eventually trigger further consolidation (eg by taking out potentially a significant part of the business of some CSDs that rely strongly on settlement revenues) this may lead, at least in the short term, to an increase in the custody prices of CSDs deprived from a large part of their settlement revenue.

2.3 The conditions of an effective and fair competition in cash securities markets still need to be put in place and progress will probably remain slow until the remaining technical, legal and fiscal barriers are lifted in particular:

Competition in the trading of cash securities requires effective interoperability of post-trading infrastructures:

- The code of conduct defines conditions that enable links between the main infrastructures to be developed but the potential business case of these links still needs to be demonstrated:
 - The outcome of demands made by LCH-Clearnet to develop links with its German and Italian counterparts as well as those made by Clearstream to its British, French, Dutch, Portuguese and Belgian counterparts will give an indication of the level of interoperability that can be reached in the near future.
- Interoperability will also be facilitated by the lifting of the remaining technical, legal and fiscal barriers identified by the Giovannini group which is now urgently required to build an effectively integrated European securities market:
 - Lifting the remaining Giovannini barriers identified in 2001 is a top priority to enable MiFID and the code of conduct proposals to have an effect on competition and costs through greater interoperability.¹¹ The T2S platform, if its implementation is confirmed, will help to lift progressively certain barriers and will favour the convergence of securities settlement services. Proposals are being made to lift the remaining barriers but the feasibility of their implementation still needs to be assessed in greater detail (eg in particular for the fiscal ones) and a proper roadmap put together.
 - Finalizing discussions around the ECB-CESR industry standards is also an important issue following the guidelines given by the Commission recently on the players that should be submitted to these standards ie CCPs, CSDs and ICSDs.

2.4 Yet, some users believe that interoperability may be costly and should be a step towards further consolidation of EU securities infrastructures:

Some users are indeed concerned that the dispositions of the code and of MiFID may lead to a “spaghetti model” with investments required to develop the links and costs to operate them (connectivity, capital...). Some are also sceptical of the interest to favour interoperability developments in settlement through links between CSDs in parallel of the development of the Target 2 Securities platform which should ensure de facto interoperability in settlement possibly in a similar timeframe: indeed links may take several years to become fully operational.

Therefore they believe the ultimate goal of these different initiatives should be to further consolidate EU securities infrastructures. Some point out that the consolidation of settlement

¹⁰ T2S should reduce the number of settlement connections of users but not their custody connections

¹¹ At present around 50% of the technical barriers are considered to remain unsolved and insufficient progress has been made on the legal and fiscal issues which need to be tackled by EU finance ministers and regulators according to many statements.

in the Eurozone through the Target 2 Securities platform could be a significant first step towards further consolidation, even if it is not compulsory and may not reduce the number of CSDs users need to be connected to in the short term, as mentioned previously.

III. Recent transatlantic developments require securities infrastructures issues to be assessed from a more global perspective and have introduced derivatives as a key issue in the debate:

3.1 Transatlantic opportunities could widen but some fear that EU securities infrastructures may be unfavoured by insufficient economies of scale. This reinforces the need to go towards further integration of EU infrastructures as fast as possible in parallel with mutual recognition:

- Mergers such as NYSE-Euronext and OMX-NASDAQ should increase transatlantic business opportunities for EU infrastructures and their users (eg listing opportunities for issuers and exchanges, cheaper access for investors...) but the competitiveness of EU infrastructures should be improved:
 - In the EU MiFID creates a favourable environment for US infrastructures to compete with European ones as demonstrated by the Turquoise project for example and the recent successful bid by DTCC for this project.
 - Developing transatlantic platforms enable US infrastructures to offer US-based issuers alternative or additional listing opportunities in the EU with a different legal environment.
 - Some players believe that this could enable them to re-capture a large part of the business that may have left the US because of the US regulatory environment.
 - These transatlantic mergers should also theoretically create more opportunities for EU cash securities infrastructures to enter the US market¹². But some consider that this may be difficult due to the insufficient scale of most EU post-trading infrastructures compared to the consolidated DTCC in particular¹³. In addition it may be difficult for EU infrastructures operating with a “for-profit” business model to compete with DTCC which is a not-for-profit organisation functioning at cost. This reinforces the need for EU infrastructures to develop further integration by the lifting of the Giovaninni barriers and the progress of interoperability to increase their global competitiveness.
- In parallel some legal or regulatory barriers still need to be lifted to ensure a regulatory level playing field between US and EU infrastructures:
 - Some legal hurdles remain: EU infrastructures wishing to enter the US market need to conform to US legislation, and the reverse is true. Many practical issues need to be covered such as registration criteria for the players operating in the market (eg brokers...), criteria included in issuer prospectuses, acceptance of trading screens....
 - There are discussions at US and EU level on a multilateral recognition framework as well as bilateral negotiations between US and EU supervisors.

3.2 The recent decision of the US DoJ to allow the merger between the US derivatives exchange CBoT and its clearing house CME has reactivated the

¹² Eg the European subsidiary of the DTCC (Euro CCP) has recently declared it is ready to sign the code of conduct and to face competition in its home market.

¹³ They believe that the recent success of DTCC over LCH Clearnet in its bid for the clearing operations of the Turquoise project illustrates this advantage.

issue of the discrepancies of legal frameworks in listed derivatives markets and shown the need to approach derivatives markets, in particular, from a global perspective:

- The present legal framework concerning listed derivatives is the result of a certain number of focused decisions on the occasion of merger or acquisition bids and not of a concerted action. This results in certain discrepancies that need to be clarified within the EU and on a transatlantic basis:
 - Many exchanges have been allowed to integrate vertically trading and clearing of derivatives, which many players consider to be an efficient set up in the derivatives market, some through specific decisions (eg CBoT and CME), others through decisions related to the exchange as a whole (eg Deutsche Börse - Eurex).
 - Yet, creating competition in the derivatives markets, where most contracts are eventually offset by symmetrical contracts, requires exchanges to have access to the existing pool of investors' outstanding positions known as open interest¹⁴ through an open access to the clearing house. Having to re-create a liquidity pool is also a major hurdle¹⁵.
 - At the same time for Liffe Euronext any vertical integration projects are legally constrained by the decision of the UK Competition Commission related to the Euronext bid for LSE¹⁶ illustrating possible level playing field issues within the EU and between the US and the EU between derivatives exchanges which control their clearing house and those which only have contractual relationships with their clearing house.
 - In addition the merger of CBoT and CME may reduce the prospects of competition in the US market. Therefore any development of competitive US offers in the EU listed derivatives market through MiFID should be examined with caution.
- This issue shows the need for assessments conducted by EU authorities (eg related to potential merger or consolidation projects) to be systematically adapted to the global dimension of the derivatives market¹⁷
- More generally the specificities of derivatives markets should be clearly considered in the initiatives of EU institutions¹⁸. For example:
 - Settlement operations differ: derivative contracts are generally not a transfer of the underlying interest; that transfer occurs as part of a separate transaction unless the contract is extinguished by offset.

¹⁴ Open interest means the total number of open contracts on a security, that is, the number of future contracts or options contracts that have not been exercised, expired or fulfilled by delivery. Hence, the open interest position at the end of each day represents the net increase or decrease in the number of contracts for that day.

¹⁵ These issues were illustrated eg by the previous attempts of Liffe or Eurex to penetrate the US market. Indeed when it is controlled by the exchange the clearing house has strong incentives to block competition for its contracts by refusing to give margin offsets to clients who want to trade the same contracts elsewhere in particular.

¹⁶ At present Liffe Euronext is the only major player in EU derivatives markets still operating with a horizontal model.

¹⁷ For example, in the event of a possible transatlantic merger in the post-trading field, the issue of the outcome for derivatives should be assessed with particular attention

¹⁸ These specificities have not always been taken into account in the different EU level initiatives led so far, eg in the Giovannini group or in competition assessments conducted on the occasion of merger bids (according to many players consulted)

- Derivatives are forward contracts and open positions involve an on-going maintenance that may last for several years ensured by the issuer and the clearing house
- Interoperability issues are particularly acute due to the open interest control issues mentioned above

3.3 The need to potentially develop specific mechanisms and to identify priorities to ensure that the interests of the European users of transatlantic or more global infrastructures are preserved should also be considered:

- Even if EU infrastructures have progressively moved away from the traditional user-owned model they retain user governance processes in many cases which may have to be confronted with those of their non-EU potential partners.
- This concerns all areas of business and in particular the way investment decisions are made, the role users have in the specification of new developments or of new features or in the validation of pricing decisions or more practical issues such as the security and confidentiality of data.
- European political decision makers should identify priorities and ensure that the appropriate mechanisms are in place to preserve the interests of EU users in these possible mergers.

IV. In summary, three key issues requiring a strong political commitment need to be solved to ensure the competitiveness of EU securities infrastructures:

4.1 A new political drive to allow further consolidation of EU cash securities infrastructures through the lifting of the Giovannini barriers in priority:

- Lifting the Giovannini barriers is a priority action for increasing competition through interoperable infrastructures¹⁹ and to enable further consolidation of EU securities infrastructures in the future resulting from the possible impacts of the Target 2 Securities project or from the pressure of competition.. It is therefore a key objective for creating a competitive European securities market.
- A new approach to this issue is required eg to identify common priorities that impact on cash securities markets most, to adapt the level of alignment required to its feasibility in the short or medium term (eg for fiscal issues) or to focus first on specific key markets
- A clear roadmap should be developed and appropriately monitored.

4.2 Taking into account the global competitive environment and specificities of derivatives markets is also required:

- Today derivatives markets are global and hence Europe cannot consider them in isolation.
- Any measures, assessments or decisions affecting European derivatives markets and their competitiveness (eg at the occasion of consolidation projects) should be made in a global context and taking into account the specific features of these markets.

4.3 In addition, political decision makers should define the priorities to preserve the interests of European users in the context of globalized infrastructures and the modalities to enforce them

¹⁹ Infrastructures that will also be more easily accessed remotely

- Political decision makers should ensure that mechanisms are defined for the involvement of users in investment decisions or in the validation of pricing or technical standards evolutions decisions, ensuring that EU regulatory frameworks applying to these infrastructures and their users are preserved.
- They should also identify ways to solve the potential supervisory issues in the event that central counterparty activities handling Euros are located outside the EU.

Main questions to be covered at the Eurofi event and in a possible subsequent study:

- Do European infrastructures still make sense in this global context and what is the meaning of a “European infrastructure”? What type of control is required?
- What are the prospects for further EU, transatlantic or global consolidation projects? Is reducing the fragmentation of EU infrastructures still a priority? If so how could it be achieved?
- What measures are required to ensure that MiFID and the code of conduct lead to greater competition and interoperability in the EU in cash and derivatives securities markets?
- What actions are required to favour the competitiveness of EU derivatives trading and post-trading infrastructures? How can clarification be obtained on the issue of vertical silos for derivatives? Do existing or possible transatlantic infrastructure mergers have any influence on this issue?
- What should be the role of political decision-makers in speeding up the lifting of the Giovannini barriers which is a major driver of the competitiveness of European cash securities infrastructures?
- On what issues should the needs of EU users be taken into account in global infrastructures in priority? How can this be ensured?

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