Research Report

The Future of the European Post-Trading System

A Delphi Study in the Light of Globalization and the Financial Crisis

THE EUROPEAN POST-TRADING LANDSCAPE IS RECENTLY CHANGING FUNDAMENTALLY DUE TO THE FINANCIAL CRISIS, REGULATORY ACTIONS, AND THE STRONG LINKAGE OF GLOBAL FINANCIAL MARKETS. THE SYSTEMIC IMPORTANCE OF POST-TRADING INFRASTRUCTURES UNDERLINES THE INDUSTRY'S SIGNIFICANT DEPENDENCE ON SAFE AND EFFICIENT RISK MANAGEMENT PROCESSES. USING THE DELPHI METHODOLOGY IN A STUDY AMONG A MULTITUDE OF EXPERTS FROM DIFFERENT AREAS OF POST-TRADING, WE TRIED TO DEVELOP A JOINT AND COHERENT VIEW OF THE MOST IMPORTANT ISSUES FOR THE EUROPEAN POST-TRADING SYSTEM IN THE NEAR FUTURE.

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Motivation

The share ownership structure in Europe is becoming more and more international as 37% of all stocks are held by foreign investors. A growing proportion of trades is in foreign shares or by foreign investors, meaning that not only more transactions need to be settled, but more of these transactions require cross-border settlement, i.e. the complexity of settlement rises. Trading activity, market liquidity, and capital market growth depend on safe and efficient trading and post-trading systems.

In the light of the financial crisis, the importance of appropriate post-trading arrangements has gained even more weight and the focus of regulators and politicians is on ensuring the integrity, efficiency, and the greatest possible robustness of the post-trading system. The European Commission's plans for future policy actions, for instance, are bound to change the European post-trading landscape fundamentally. It is therefore relevant and guiding information both for policy makers and market participants to know how the future post-trading industry might look like in five to ten years from now.

Previous Research and Objective of the Study

As interest in international securities trading has grown over the last years, so has the awareness of academics in researching these markets. Research topics cover a wide range from market microstructure theory and transaction cost analysis to the investigation of competitive markets and of network effects.

In contrast to a vast amount of academic research that focuses on the trading level, research with regard to the post-trading sector is rather sparse. Existing research on clearing, settlement, and custody issues or on the parties involved in these businesses regularly only addresses isolated factors, while a comprehensive view on the entire post-trading landscape is missing.

Recent dynamics underline the need for a comprehensive view on the entire post-trading landscape. In an industry where a clear vision of how its preferred end state should look like is missing, it is fairly difficult for the involved parties to assess strategic directions for the future. The present work therefore intends to close this gap by developing a joint and coherent view of the future shape of the European post-trading system, taking into consideration the current challenges arising from the ongoing worldwide financial crisis. In the following, we will briefly outline the functions and activities in post-trading, present the applied methodology (Delphi study) and some of our key results. The full results of the study are provided by (Chlistalla et al., 2010).

The Post-Trading Industry

Clearing and settlement are required after two parties have decided to transfer the ownership of a security. The purpose of clearing is the efficient handling of risks inherent to concluded, but still unfulfilled contracts: Clearing confirms the legal obligations from the trade. Subsequent to the clearing stage, the second

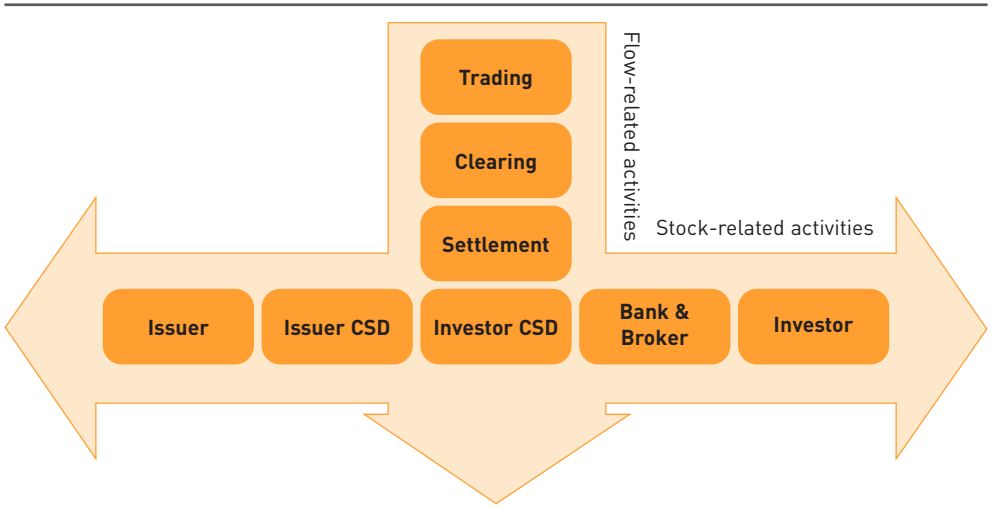

Figure 1: Flow-related and Stock-related Activities in the Securities Trading Value Chain (adapted from European Central Bank 2007)

	Round 1 (N=158)	Round 2 (N=45)	Round 3 (N=45)
Financial Infrastructures	14	9	12
Custodian Banks / Users	7	5	6
Supervisory Authorities	5	6	6
Academics	4	5	6
Consultancies / Technical Infrastructures	4	4	3
Associations	4	4	4
Regulated markets / MTFs	4	3	3
Total	**42**	**36**	**40**
Response rate	**27%**	**80%**	**89%**

Table 1: Participants and Response Rates

operation is settling a trade. Settlement is the exchange of cash or assets in return for other assets or cash and transference of ownership. The securities trading value chain consists of the complete set of relationships from investors to custody service providers, including the provision of all trading and post-trading activities. There are two types of activities in the trading and post-trading value chain: flow-related and stock-related activities. While flow-related activities are triggered by a trade on an execution venue, stock-related activities are independent from actual trades and relate to the holding of securities (e.g. corporate actions). Figure 1 shows that these two are closely related, as the choice of market structures for the provision of stock-related activities will directly affect the market structures for flow-related activities (Oxera 2007).

Delphi Study

The Delphi methodology is a group facilitation technique in the form of an iterative multi-stage process, designed to transform individual opinions into group consensus. It is a flexible approach commonly used within the social sciences. This technique seeks to obtain the opinions of experts through a series of structured questionnaires (referred to as "rounds") or interviews. After each of these rounds and following statistical analysis regarding group collective opinion, the results are fed back in a structured questionnaire to the previous round's participants who are then asked to reassess these results. This process is ongoing until consensus is obtained or diminishing returns can be observed (Hasson et al., 2000).

In his seminal work on methods for decision making, Dalkey (1969) describes the results of an extensive set of experiments conducted in order to evaluate the effectiveness of the Delphi procedures for formulating group judgments. Dalkey focuses on the three features of the Delphi procedures: (i) Anonymous response: opinions of members of the group are obtained by a formal questionnaire; (ii) Iteration and controlled feedback: interaction is effected by a systematic exercise conducted in several iterations, with carefully controlled feedback between rounds; (iii) Statistical group response: the group opinion is defined as an appropriate aggregate of individual opinions in the final round.

One of the most significant benefits of the Delphi methodology is the fact that the researcher does not need to bring the interviewees together physically. This guarantees that the participants cannot influence each other directly. Nevertheless, they retain the opportunity to change their opinions in later rounds when realizing from the collective opinion that they may have missed items or thought them unimportant.

Controversial debate rages over the use of the term "expert" and how to identify a professional as an expert. Hasson et al. (2000) therefore point out the importance of a fine balance among the expert panel.

Our study consisted of three consecutive rounds. The objective of round one was to generate the hypotheses for assessment in the subsequent rounds. Round one began with an openended set of questions that generated ideas and allowed participants complete freedom in their responses. This helped to identify issues which would be addressed in subsequent rounds. The experts were asked open questions on six topics on and around post-trading. Round two was made up of the analysis of the results of round one. Therefore, the answers from the first round were analyzed and transformed into hypotheses, which were then presented to the experts in round two. In our case, quite extensive amounts of qualitative data were generated: The outcome of the first round amounted to 595 hypotheses and 21,000 words. Finally, 191 hypotheses were derived in total. For the assessment of the hypotheses a 5-item Likert scale was provided.

In round three, the participants were provided the results of the analysis of round two's responses with corresponding statistical information (mean and standard deviation) presented to indicate first trends towards collective opinion.

Table 1 shows the number of participants per round and per expert group. Upon their registration, the participants were requested to provide details on their affiliation, position, and the number of years of industry expertise. They were also asked to select from a list of categories the perspective from which they would be answering the questionnaire. The mean industry expertise of the panel is 12.5 years. On average, 94% of the hypotheses were rated by the participants.

Results

Figure 2 outlines the approach taken in this Delphi study. Our objective was to develop a coherent and well-grounded picture of the future state of the European post-trading system both concerning and *ideal post-trading system* and a realistic view on the *post-trading system in the future*. Starting from the participants' assessment of *today's post-trading system* and taking

into consideration exogenous factors such as the *financial crisis, globalization and competition,* we intended to identify *measures for improvement of the post-trading system* and to dispose of the industry's current inefficiencies. We realized that these measures can broadly be categorized into three interlocking areas, namely risk management, regulation, and IT/IS.

The assessment of *today's post-trading system* by the Delphi study expert panel turned out to be dichotomous: On the one hand, Europe's post-trading system is regarded efficient at the national level, for reasons such as high settlement rates, technical reliability and effective risk mitigation tools provided by financial infrastructures. On the other hand, the experts judge the European post-trading system to be rather inefficient at the cross-border level. The remaining Giovannini barriers are mentioned as the main reasons for the inefficiency of cross-border transactions.

In this context, the experts also criticize that some financial intermediaries and infrastructures generate revenues from the inefficiencies and that high back office costs arise for financial institutions. When it comes to evaluating the pan-European regulatory framework of securities markets, the participants of our study agree that European regulation is influenced by political agendas which lead to compromise-based solutions that reflect the political reality rather than the most efficient solutions. In sum, the experts stated that – in particular in light of the global crisis – the financial infrastructures have been very robust during the crisis. Still, a number of areas of improvement remain.

We therefore asked the experts from practice and academia to outline in a first step their view of an *"ideal" European post-trading system* and in a second step what measures need to be taken to achieve that objective. Not surprisingly, the participants characterized such an ideal post-trading system as one where all Giovannini barriers have completely been eliminated and where access and interoperability warrant the freedom of choice for investors in the area of trading, clearing, and settlement. Ideally, prices are kept low and innovation high through sufficient competition both on the trading and on the clearing level. The experts disagree that the ideal European post-trading system would feature exactly one clearing house and one central securities depository (CSD). The ideal regulatory framework, according to the panelists, focuses on functions rather than on institutions and distinguishes between the roles of market infrastructures and of financial entities taking credit risks. With reference to the financial crisis, the participants claim that standardized OTC-products should ideally be integrated into centralized clearing; in terms of the settlement infrastructure, their preferred solution is an integration of both the cash and the securities leg within a single settlement platform.

The participants of the study seem to be well aware that the ideal post-trading system as described above is still a long way off. Nevertheless, they do have a clear view of what the industry could realistically look like in 2020: The experts characterize the *future European post-trading system* as generally more integrated than today. Initiatives set off today will be finalized in 2020, such as the implementation of TARGET2-Securities that will speed up

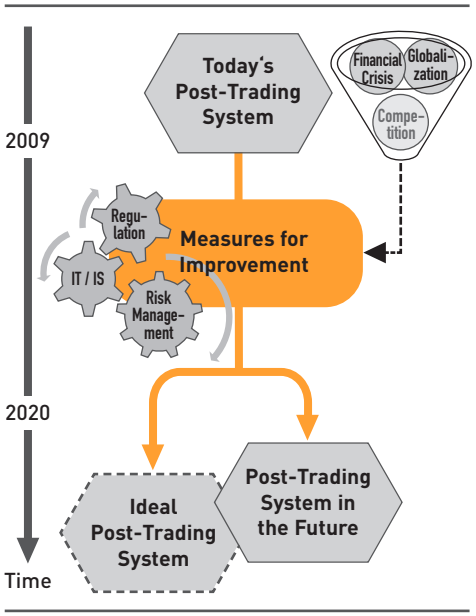

Figure 2: The Way towards a Future European Post-Trading System

the European consolidation process. Giovannini barriers are expected to be partially removed: while the technical, market practice and legal barriers are effectively seen to be eliminated, the participants presume the removal of the fiscal barriers to require more time. Despite of increasing integration of the industry, the experts do not think that there will only remain one single settlement institution; nor do they agree that there will be one user-owned and user-governed settlement infrastructure. Post-trading is not believed to remain an area where excessive profits are achievable. In this environment, custodian banks that only serve domestic markets will be challenged. The main competitive battle field of agents, custodian banks, and CSDs will be custody services and corporate actions. CSDs are expected to create networks offering single access to clients and European clearing houses will provide services for complex products (like CDS).

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