

efl quarterly

02 | 2010

AN E-FINANCE LAB PUBLICATION

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Rethinking Regulatory Structure –  
What Do Our Financial Markets Need?

Determinants of Grid Assimilation  
in the Financial Services Industry

The Future of the European  
Post-Trading System

Foreign Exchange Markets and  
Electronic Trading



GOETHE  
UNIVERSITÄT  
FRANKFURT AM MAIN

TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

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Gestaltung  
Novensis Communication GmbH  
Bad Homburg

2. Ausgabe, 2010  
Auflage 1.400 Stück

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Printed in Germany  
ISSN 1866-1238

## Editorial

# Rethinking Regulatory Structure – What Do Our Financial Markets Need?

Dr. Stefan Mai

After decades of de-regulation in the global financial sector, 2010 will probably mark the beginning of a new era of re-regulation – though hopefully not of over-regulation. So far, the term “paradigm shift” used by some EU Commission officials to denote the new regime envisaged for EU financial markets under Internal Market Commissioner Michel Barnier allows a wide range of interpretations. At the very least, however, it means a move away from the previous emphasis on self-regulation.

Without doubt, the recent crisis has exposed various deficiencies in financial regulation in the EU: OTC trading in derivatives, especially in complex instruments such as credit default swaps, is still characterised by excessive bilateral exposures and too little collateralization. Risk valuation and risk management capabilities of both market participants and regulators have turned out to be insufficient. This is worsened by the fact that trading does not take place in a transparent environment. Finally, the OTC market for these instruments has operational inefficiencies and offers only limited legal certainty.

In order to overcome such deficiencies, the new regulatory regime should be structured according to the following guiding principles: First of all, individual responsibility for risk taking should be increased, and excessive risk exposures should be avoided. In order to achieve this, risk taking and risk management need to be strictly separated. Furthermore, market transparency needs to be optimized, and market complexity should be kept at a manageable level.

The overall objectives of reforms along these principles must be twofold: firstly, a reduction of systemic risk, and secondly, an increase in financial market stability. Two major projects to implement such reforms are already emerging:

(1) European Market Infrastructures Legislation, in short: “EMIL”, announced in November 2009:

Sweet and curiously Germanic as this acronym may sound, it might have far-reaching consequences for financial infrastructure providers such as Deutsche Börse. The out-



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lines of this legal project are still too vague to allow comments. Therefore, all I can say for the time being is that Europe’s financial infrastructure is a major factor in strengthening the international competitiveness of the EU economy. All in all, it is technologically far more advanced and better integrated than its US counterpart. I find it surprising that, in the wake of the worst financial crisis since the late 1920s, some still claim that the US financial market should serve as the role model for the world to follow. If the financial crisis has shown one thing then it is the vital importance of being able to supervise and control decisions with major repercussions on the stability, and indeed the survival of systemically important financial institutions. Therefore, it might be wise to have key institutions for the stability of EU financial markets within one’s own legislative reach – be it in London, in Frankfurt or in Paris. This would especially be true for central counterparties entrusted with the new and necessary task of playing a larger role in the OTC derivatives markets.

(2) Review of the Markets in Financial Instruments Directive (MiFID):

MiFID is about to undergo a review, especially regarding transparency requirements – for stocks, but possibly also for bonds and derivatives. At Deutsche Börse, we generally welcome any effort to increase the transparency of markets. However, apart from some exemptions such as for very large orders, transparency levels should be equal across all types of trading platforms. This is especially true for pre-trade transparency, because knowledge of the availability, price, and size of quotes still awaiting execution in the order book is essential for recreating a substitute for the central order matching venues that have been deliberately fragmented by MiFID in order to make room for more competition.

While many issues in this broad field of establishing a new regulatory structure may still be open, one thing is certain: Politics on a national, European and global level will play an essential role in the financial sector in 2010 and quite a number of years to come.

# Research Report

## Determinants of Grid Assimilation in the Financial Services Industry

FINANCIAL SERVICES PROVIDERS ARE EXPOSED TO DIFFERENT SOURCES OF INSTITUTIONAL PRESSURE ARISING FROM THE INTENSE COMPETITION AND REGULATION IN THE BANKING SECTOR. AGAINST THIS BACKGROUND, THIS ARTICLE ANALYZES THE DETERMINANTS OF GRID ASSIMILATION AND THE ROLE OF INSTITUTIONAL PRESSURE IN THE GRID ASSIMILATION PROCESS.

Martin Wolf  
Roman Beck

Jens Vykoukal

### Motivation

Financial services providers are exposed to different sources of institutional pressure arising from the intense competition and regulation in the banking sector. Against this background, the implementation of Grid technology can be seen as a potential strategic response to increasing requirements in terms of complex new financial products, the assessment of arising risks, and sophisticated investment strategies. So far, however, little empirical research has been conducted to quantify the determinants of Grid assimilation in the financial services industry. In the following, a theoretical perspective on the organizational drivers and inhibitors of Grid assimilation (see hypotheses 1-5, Figure 1) and the role of institutional pressure in the assimilation process (see hypotheses 6-8, Figure 1) is introduced. This conceptualization is evaluated based on 197 complete

responses from North American IT decision makers of financial services providers. The results from partial least squares analyses suggest a strong positive impact of mimetic and normative pressure on Grid assimilation, but surprisingly do not support the hypothesized strong relationship of coercive pressure on Grid assimilation.

### Grid Computing as Strategic Response to Environmental Pressure

Due to its hyper-competitive market and high regulatory pressure, the financial services industry is particularly exposed to a high level of institutional pressure that forces firms to comply with regulatory and environmental norms (Ang & Cummings, 1997). Moreover, the financial services industry exhibits information-intensive business processes, high computational demands, and fast changing cus-

tomers needs. These industry characteristics are reflected by its above average annual IT investment (approx. 8% of the annual revenues), which is almost twice as high as in other industries (Zhu et al., 2004). One way to meet arising institutional and computational challenges is the assimilation of a Grid-based IT architecture that facilitates the ability to

accelerate resource-demanding computations and data mining operations. By these means and by the aforementioned computational and data mining capabilities, the timely assessment of complex financial products and available risk exposure becomes feasible, eventually fostering regulatory compliance and organizational legitimacy.

Technological Context	Definition
Grid Infrastructure Capability	The firm's technical capability resulting from having extensive access to distributed computing power and purpose-specific technologies (e.g., a high-capacity, low latency network).
Grid Technology Integration	The degree of inter-connectivity among applications and the inter- and intra-organizational backend systems or architectures.
Organizational Context	Definition
Grid Technology Competence	Explicit knowledge and skills (e.g., distributed systems programming skills, knowledge of virtualized environments) owned by the firm's IT staff that are needed to successfully develop Grid architectures and Grid applications.
Grid Implementation Management Capability	Operational middle management capability to successfully monitor and guide through the process of Grid assimilation from both a technological and business-driven perspective.
Firm Size	Firm size as surrogate of organizational innovativeness and flexibility.
Environmental Context	Definition
Mimetic Pressure	The pressure to imitate structurally equivalent successful organizations in the same industry without necessarily considering the firm-specific context.
Coercive Pressure	The pressure grounded in societal expectations and dependencies towards other firms. In case of the financial services industry, regulatory pressure decisively drives or restricts the assimilation of new technologies.
Normative Pressure	Pressure that is rooted in the ongoing process of professionalization. This pressure arises from the exchange of best practices among business partners, suppliers, and the government.

Table 1: Determinants of Grid Assimilation

**Determinants of Grid Assimilation**

Based on a literature review and several expert interviews, different core determinants involved in the Grid assimilation process on the organizational level can be identified. Basically, these determinants can be summarized as representations of the technological, organizational, and environmental context (see Table 1).

**Discussion**

In essence, our results suggest that there is a substantial positive impact of mimetic and

normative pressure on Grid assimilation (see Figure 1). In detail, mimetic behavior and professionalization tendencies (normative pressure) are very present in the process of Grid assimilation in the financial services industry. The significant impact of mimetic pressure indicates technological uncertainty or ambiguity in the financial services industry leading to the facilitation of mimicry among competitors. As far as the professionalization tendencies in the financial industry are concerned, Grid assimilation can be assumed to be a strategic

response towards arising institutional pressure. Vendors and customers increasingly demand more sophisticated financial products and investment strategies, thus requiring improved data mining and data processing capabilities as provided by Grid architectures. Surprisingly though, we are not able to find a significant path leading from coercive pressure towards Grid assimilation as hypothesized. This is especially astonishing since the financial services industry is exposed to a very high level of regulation and thus direct governmental impact (coercive pressure). However, this indicates that there is a mediating agency (e.g., top management) involved in the causal relationship between coercive pressure and (Grid) assimilation (Liang et al., 2007) facilitating the sensemaking of Grid systems in terms of regulatory compliance. Surprisingly, Grid technology competence is not found to significantly impact on Grid assimilation, which is counterintuitive. This might be grounded in the fact that virtualized Grid infrastructures are a rather smooth evolution of well-established concepts such as cluster computing and Service-oriented Architectures, not exhibiting high visibility towards end users and thus not necessarily requiring idiosyncratic technical competences. Interestingly, our results suggest that especially the conceptualized complementarity of Grid infrastructure capability, Grid technology integration, and Grid implementation management capability as surrogate of organizational Grid readiness is decisively determining the Grid assimilation process. Among these factors, especially Grid implementation management capability as a

representation of the middle management capability with regard to the operational management of both technical and business capabilities exhibits the strongest impact on Grid assimilation. Our findings emphasize that smaller financial services providers (but still with more than 1,000 employees) are more likely to be open-minded towards technological innovation such as Grids. This is reasonable due to the fact that smaller firms are exposed to a lower risk of reputational losses rooted in ill-conceived technological innovation. In addition, their lower level of exposure to public attention might generate space for a more flexible attitude towards (technological) innovation.

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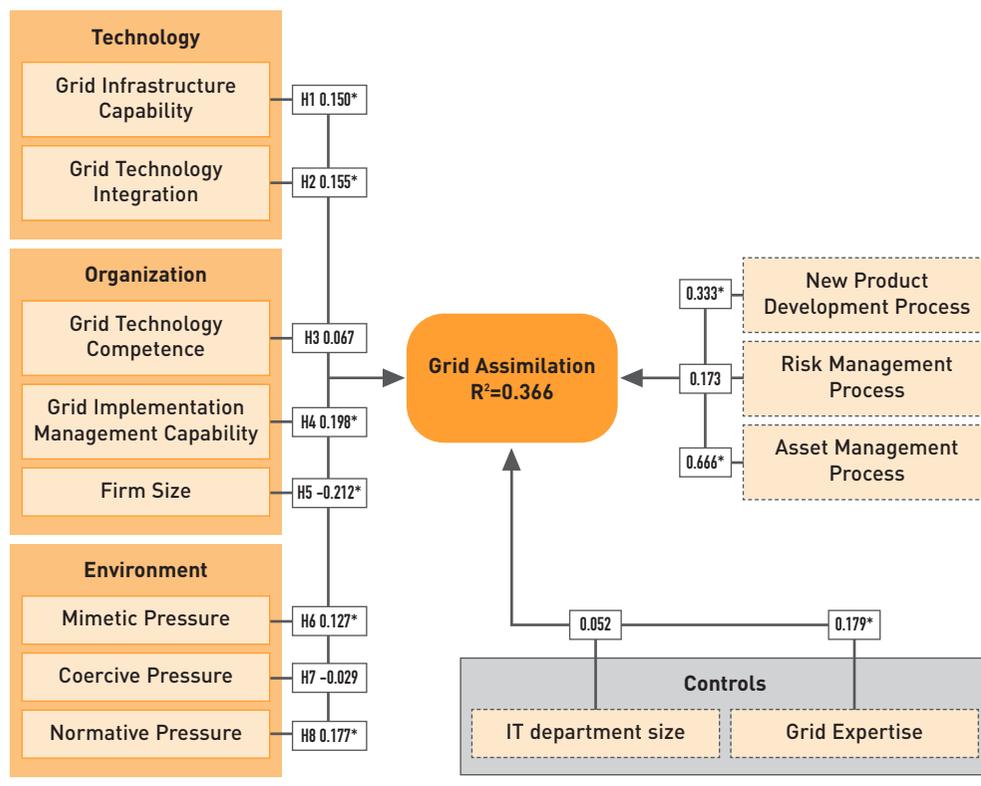


Figure 1: Empirical Results (N=197, \*: significant at the 0.05-level)

# 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 MULTI-TUDE 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.

Michael Chlistalla  
Torsten Schaper

Peter Gomber

### 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 ensur-

ing 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

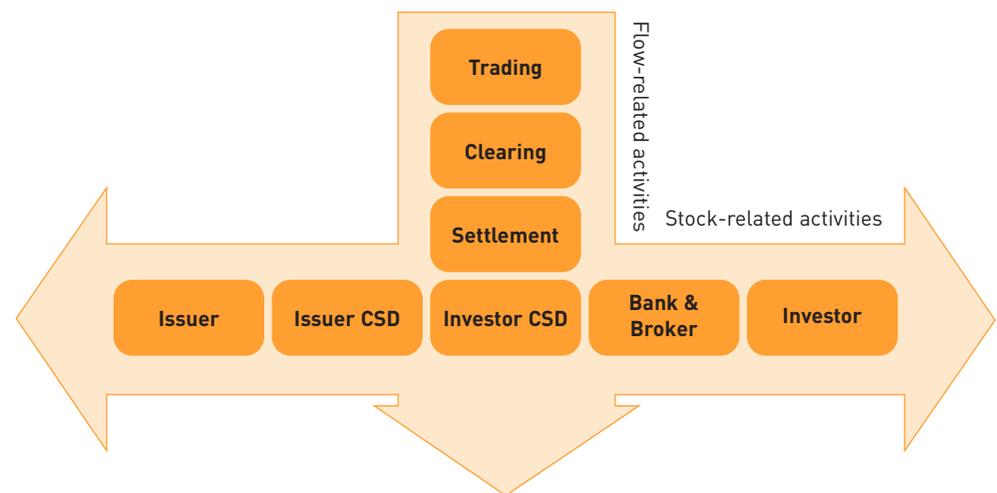


Figure 1: Flow-related and Stock-related Activities in the Securities Trading Value Chain (adapted from European Central Bank 2007)

	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
<b>Total</b>	<b>42</b>	<b>36</b>	<b>40</b>
<b>Response rate</b>	<b>27%</b>	<b>80%</b>	<b>89%</b>

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 open-ended 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 an *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

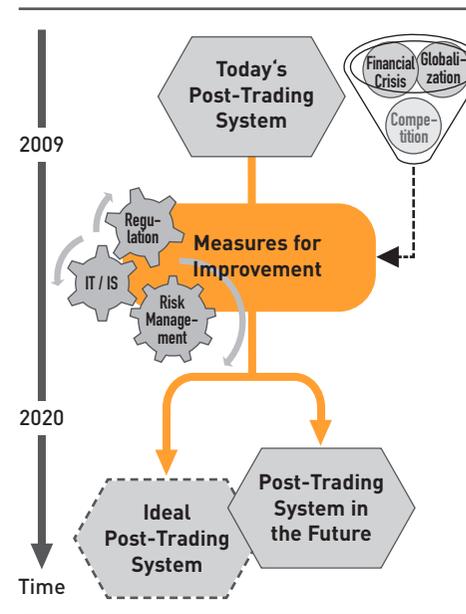


Figure 2: The Way towards a Future European Post-Trading System

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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## Insideview

# Foreign Exchange Markets and Electronic Trading

INTERVIEW WITH CARLO KÖLZER, 360 TREASURY SYSTEMS

**Please provide a brief overview on the status quo of trading in foreign exchange (FX) markets. In which way was it affected by the financial crisis?**

The FX market is in very good condition. Even at the peak of the crisis when credit lines amongst banks were very limited to non-existing, the FX market still worked. There was less liquidity and the spreads were much wider, but participants could always get out of their positions. This was and still is a major difference to other markets like credit derivatives or bonds.

Today, we have another phenomenon. Given the fact that the problems of banks and other parts of the industry have been transferred into the public sector, there is high pressure on interest rates and exchange rates, like Greece weakening the Euro. This leads to high volatility and activity.

**Did technology broaden the range of market participants that want to directly participate in FX markets?**

Indeed, over the last ten years major new categories of participants have entered into the FX market. Enhanced technologies and e-commerce are in fact the main enablers for that development. Between 1998 and today, the overall FX market has grown from USD 2 trillion in daily trading volume to USD 4 trillion. This growth was only possible through the scalability of electronic trading.

The new strong group of participants are institutional players. And here we have three subsets. There are the asset managers that trade much more FX than they used to. They strip the FX risk from the underlying security risk (e.g. bonds), and manage it separately. They introduced overlay management on FX and they identified FX as a separate asset class. A second category that has been boosted by electronic offerings is the retail market. Ever more individuals invest and speculate in FX. Thirdly, hedge funds had tremendous momentum in the last couple of years and traded a lot of FX on either a macro level, on a latency arbitrage basis or just as hedges for carry trades from



Carlo Kölzer  
CEO  
360 Treasury Systems

credit facilities in foreign currencies like the Japanese Yen.

The access to aggregated liquidity through electronic trading venues has highly catalyzed the FX market.

**What drives the transformation of the FX market from phone-based over-the-counter trading to a market dominated by rule-based electronic trading?**

The FX market was a very fragmented M-to-N market, where participants called some banks to find out the best price. Transparency did not really exist and the search costs were high. Automation did not exist; neither did a proper audit trail on an automated basis.

The key advantages of electronic trading are transparency, straight-through processing, audit trail documentation, and performance measurement as well as an overall reduction of costs.

Rule-based trading is not as matured in the FX

market as it is in the equity market. The proportion lies at 15 to 20%, but is expected to increase.

**What are the key challenges your organization and its competitors are facing due to increased sub-millisecond trading?**

Some challenges might occur in conjunction with regulatory changes. Challenges always exist in relation to technological progress and dynamic customer's demand. 360T has to be flexible enough to react on these different dimensions of changes. Proprietary trading might become less, hedges might be more relevant. New currencies might come into the game like the Chinese Renminbi (CNY), the Indian Rupee (INR), the Brazilian Real (BRL), etc. We are forced to invest into an ever faster, more reliable and richer technology... that's the name of the game. So far, we have been very successful in that. Given that we will be celebrating our 10<sup>th</sup> anniversary this year, we hope to continue to write that success story further.

**Thank you for this interesting conversation.**

# Infopool

## News

The annual joint meeting of the Council and the Board of the E-Finance Lab was held on March 3<sup>rd</sup>, 2010, at CeBIT Hannover, the world's largest IT fair. Upon invitation by IBM Germany, the members of both committees discussed the E-Finance Lab's recent achievements and outlook for 2010. Afterwards, a guided tour across exhibition stands of top industry players like IBM, VMWare, Microsoft, BearingPoint, and T-Systems with presentations from senior managers took place. IBM's top executive event closed the day. We cordially thank IBM for the kind invitation!

### Awards and dissertations

E-Finance Lab researchers Prof. Roman Beck and Robert Gregory (layer 1), together with Oliver Marscholke, were awarded the best paper award at the 4<sup>th</sup> Pre-ICIS International Research Workshop on IT Project Management in Phoenix, USA. With their research, they show how boundary spanning mechanisms help to bridge the diverging interests of different stakeholders in IT projects.

Dipl.-Informationswirt Markus Gsell (layer 2) received his doctoral degree on February 17<sup>th</sup>, 2010, after successfully defending his dissertation thesis entitled "Essays on Algorithmic Trading". Congratulations!

Dipl. Wirtsch.-Inf. Martin Wolf (layer 1) received a scholarship from the German Academic Exchange Service (DAAD) for a three-month research stay at Georgia State University, Atlanta. In close cooperation with Prof. Arun Rai (Center for Process Innovation) he will work on the determinants and impact of Grid assimilation in the financial services industry.

### Conferences and Workshops

The Center for Financial Studies, Deutsche Börse AG and the E-Finance Lab (layer 2) are inviting to an international research conference on "The Industrial Organisation of Securities Markets: Competition, Liquidity and Network Externalities". The objective of the conference is to bring together leading academics and members of the industry in this field to focus on state-of-the-art academic research in an environment that stimulates discussions and an exchange of ideas. The conference will take place at Deutsche Börse in Frankfurt, June 28<sup>th</sup> – 29<sup>th</sup>, 2010. More information is available at [www.efinancelab.com](http://www.efinancelab.com).

From June 7<sup>th</sup> – 9<sup>th</sup>, 2010, Prof. Bernd Skiera (layer 3) hosts a workshop on "Modeling Consumer Decision Making and Discrete Choice Behavior", intended for researchers and advanced practitioners in marketing, economics, and fields in which consumer demand and choice is of interest. Please visit [www.marketing.uni-frankfurt.de/dce](http://www.marketing.uni-frankfurt.de/dce) for further details.

## Selected E-Finance Lab publications

### Beck, R.:

Can IT Lean Against the Wind? Lessons From the Global Financial Crisis.  
In: Communications of the ACM 53 (2010) 5.

### Chlistalla, M.; Gomber, P.; Schaper, T.:

The Future of European Post-Trading – Consequences for Risk Management in View of the Financial Crisis.  
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The Effect of Maker-Taker Pricing on Market Liquidity in Electronic Trading Systems – Empirical Evidence from European Equity Trading.  
In: Midwest Finance Association 59<sup>th</sup> Annual Meeting. Las Vegas, NV, USA, 2010.

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Attacks on the Internet of Services – The Security Impact of Cross-organizational Service-based Collaboration.  
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Structuring SOA Governance.  
In: International Journal of IT/Business Alignment and Governance 1 (2010) 1, pp. 58–75.

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### RESEARCH PAPER: MARKET SIDEDNESS: INSIGHTS INTO MOTIVES FOR TRADE INITIATION

Empirical market microstructure research has sought to identify trade initiators from the interaction between price formation and indicators of trading activity, including the number and sign of trades, trade size, and the duration between trades. In their paper, Sarkar and Schwartz aim to disentangle evidence of trade initiation triggered by asymmetric information (i.e., some investors are better informed than others) versus differential information or beliefs (i.e., investors have different information or interpret the same information differently). The authors define trading as more two-sided (one-sided) if the correlation between the number of buyer- and seller-initiated trades increases (decreases), and assess changes in sidedness relative to a control sample around events that identify trade initiators. Consistent with asymmetric information, trading is more one-sided before merger news. Consistent with belief heterogeneity, trading is more two-sided before earnings and macro announcements with greater dispersion in analyst forecasts, and after news with larger announcement surprises.

Sarkar, A.; Schwartz, R.

In: *The Journal of Finance* 64 (2009) 1, pp. 375–422.

### RESEARCH PAPER: THE REAL EFFECTS OF DEBT CERTIFICATION: EVIDENCE FROM THE INTRODUCTION OF BANK LOAN RATINGS

Can third-party rating agencies affect firm financial and investment policy? The author answers this question by examining the introduction of syndicated bank loan ratings by Moody's and Standard & Poor's in 1995. From a theoretical perspective, it is unclear whether third-party debt certification services should have real effects on the economy. However, the author finds that the introduction of bank loan ratings leads to an increase in the use of debt by firms that obtain a rating as well as increases in firms' asset growth, cash acquisitions, and investment in working capital. A loan-level analysis shows that the average firm's first rated loan has 4.5 more lenders on the syndicate compared to the previous unrated loan by the same firm. Actually, the increase in the number of lenders is driven by an increase in the number of foreign banks and non-bank institutional investors. The effects of the loan rating are particularly strong among borrowers that do not have a previous debt rating and have their initial loan rated BB+ or worse. This pattern suggests that third-party debt certification expands the supply of available debt financing, which leads to real effects on firm investment policy.

Sufi, A.

In: *Review of Financial Studies* 22 (2009) 4, pp. 1659–1691.

## Electronic newsletter

The E-Finance Lab conducts two kinds of newsletters which both appear quarterly so that each six weeks the audience is supplied by new research results and information about research in progress. The focus of the printed newsletter is the description of two research results on a managerial level – complemented by an editorial, an interview, and some short news. For subscription, please send an e-mail to [eflquarterly@efinancelab.com](mailto:eflquarterly@efinancelab.com) or mail your business card with the note "please printed newsletter" to

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