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e**finance**lab

at the HOUSE OF FINANCE

Prevent Fund Investors from being  
burdened by the Financial Transaction Tax

Adaptation and Perception of  
Cloud Computing in German Banks

Competition among Electronic  
Markets and Market Quality

The Review of the Markets in  
Financial Instruments Directive



Deutsche Bank



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## Editorial

# Prevent Fund Investors from being burdened by the Financial Transaction Tax

Hans Joachim Reinke

On September 28<sup>th</sup>, 2011, the European Commission presented its draft law for the introduction of a financial transaction tax (FTT), scheduled to come into force on January 1<sup>st</sup>, 2014. The way this tax is being planned, it would be counter-productive: in particular, it would burden fund investors. This is not justified in view of the rationale and objectives of introducing this tax.

The plan is to levy the FTT on all financial transactions in securities and derivatives executed by financial institutions, provided that at least one of the institutions involved is domiciled within the EU. The concept of "financial institutions" includes banks, investment companies and pension funds (amongst other institutions). A "financial transaction" may be the purchase or sale of a financial instrument. The tax therefore affects buyers and sellers of instruments such as equities and other securities, securities lending and repurchase agreements, as well as derivatives and structured products.

The key question is whether the FTT, in the form that is currently being proposed, really taxes those market players it is designed to tax? I do not think so. At the end of the day, despite all good intentions, it will hit retail investors. This is because investment funds – whose separate fund assets are held by retail investors – are planned to be explicitly covered by the FTT in the future.

In the interest of these investors, and as a trustee of the money they have entrusted us with, I wish to very clearly state our strong objection to a financial transaction tax being levied on investment funds, and hence, on retail investors' assets. The financial crisis was not caused by investment funds, nor by their investors. The way it has been proposed, the FTT would not achieve its stated political objective of hitting those who triggered the financial crisis – speculative players on the financial markets. Instead, it would hit small savers putting aside 50EUR a month to invest in a fund for building wealth or saving for retirement. The FTT would be a hidden tax



**Hans Joachim Reinke**  
Chairman of the Board of Managing Directors  
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increase, whereby politicians are oblivious to the fact that the capital saved in investment funds belongs to citizens: it is not owned by investment companies – financial institutions the tax is designed to burden. In fact, investors would be hit several times: first, when buying fund units; second, when the fund purchases securities; and (potentially) a third time, where the manager of a fund of funds is buying units in another fund. And of course, the same would happen when selling: the state would be charging up to six times, at the expense of returns available to small savers. As a consequence, the FTT would work as a penalty against active fund management since it would increase transaction costs at the level of each individual fund. In contrast, passively-managed products (which are structured once, with portfolio rebalancing on rare occasions only) would in fact be given preference – a contradiction of the regulatory objectives otherwise pursued by the EU Commission. The FTT would in effect penalize active investment strategies, which are the more important in an environment characterized by increasing volatility.

What will be the cost for investors, specifically? The tax rate is expected to be a minimum 0.1% of the purchase price for securities, and 0.01% of the nominal value for derivatives. Depending upon the type of fund concerned, this would diminish investors' returns by an average 0.30% to 0.55% p.a. at least.

To render this situation completely absurd, legislators are once again proposing to grant preference to assurance contracts over fund investments for private retirement provisions. This would distort competition; it is both politically unacceptable and unjustified – a short-winded and populist measure.

In summary, I would therefore characterize the planned FTT as yet another typical example for a regulatory initiative that was launched with good intentions, but badly executed. FTT will hit small savers and taxpayers, but not those who caused the financial crisis. In my view, therefore, the FTT must not be levied on investment funds and their investors.

# Research Report

## Adaptation and Perception of Cloud Computing in German Banks

BASED ON THE RESULTS OF A MULTI-PARTICIPANT CASE STUDY THAT WAS CONDUCTED IN THE COURSE OF THE YEAR 2011, THIS ARTICLE OUTLINES THE CURRENT UTILIZATION AND ASSESSMENT OF CLOUD COMPUTING BY GERMAN BANKS.

Ulrich Lampe  
Dieter Schuller  
Ralf Schaarschmidt\*

Melanie Siebenhaar  
Ralf Steinmetz

### Introduction

Cloud computing is a novel IT paradigm which promises to deliver IT services in a utility-like manner, i.e., flexible, scalable, and on-demand, based on a fine-granular billing scheme (Buyya et al., 2009). Due to the recent market entry of various widely recognized providers, cloud computing has not only sparked interest among private consumers and the scientific community, but has also gained increasing popularity among enterprise IT users.

In the period from January to August 2011, we have conducted a case study involving ten interviews with representatives of German banks and finance-oriented IT service providers. The aim of this study was to qualitatively examine the current perception and adaptation of cloud comput-

ing in the German financial industry; the main findings are presented in the following.

### What's Cloud Computing, anyway?

Despite its high popularity, no commonly agreed-on definition of cloud computing exists at present. However, most of the interviewees in our study either implicitly or explicitly agreed on the popular definition by the National Institute of Standards and Technology (NIST), which not only defines a set of essential characteristics, but also common deployment and service models (Mell and Grance, 2011).

The former models involve, among others, private clouds, which are either operated in-house by the cloud user himself or exclusively supplied through a third-party, as well as public clouds,

which are offered by dedicated providers and open to the general public. Common service models include infrastructures (such as storage or virtual machines), platforms (software development and execution environments), and software (complex software systems). An overview is provided in Figure 1.

### Current State of Adaptation

All banks in our case study had, at the time of the interviews, adopted the cloud computing paradigm in the form of in-house clouds. The share of IT services that follow the cloud computing paradigm ranged from 10% to 30%. Similar numbers were reported by the IT service providers with respect to their product portfolios.

In general, clouds are predominantly deployed and used by banks internally, where a focus lies on the provision of infrastructure services,

specifically, virtual machines and storage. Interestingly, most inhouse clouds at German banks do not fully adhere to the NIST definition, because they lack some of the essential characteristics, such as automated resource provisioning or billing.

In fact, in their early state, cloud initiatives appear to be predominantly characterized by the application of virtualization technologies to existing physical infrastructure. However, our study indicates that banks are currently undertaking substantial effort to overcome these deficits, both through the introduction of additional technical features (e.g., self-service resource provisioning interfaces), as well as through the development of cloud-oriented governance structures.

Third-party cloud services are utilized in a rather selective manner, commonly according to a pri-

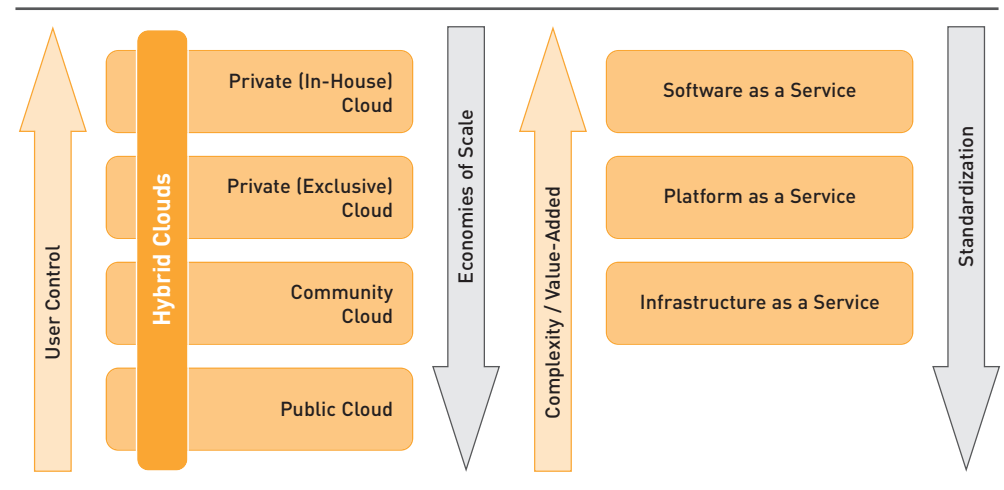


Figure 1: Common deployment and service models in cloud computing, adapted from the NIST definition (Mell and Grance, 2011)

\* IBM Global Business Services

vate, rather than public deployment model. In contrast to the in-house clouds, the focus lies on software and platform services, rather than infrastructure offers. Specifically, services which are considered “commodities”, such as messaging, are supplied through third-party clouds. However, it remains somewhat questionable whether these services can be considered actual cloud offers – in fact, many of them have existed long before the term gained general popularity.

#### **The Pros: Motivation & Benefits**

Not very surprisingly, the expectation to cut costs is the main driver for the introduction of cloud computing, according to the representatives of German banks. Cost reduction is also considered a major sales point by IT service providers. On the one hand, banks are hoping to more efficiently exploit their existing infrastructure through the adaptation of cloud principles and technologies. On the other hand, they expect to convert fixed into variable costs through the exploitation of pay-per-use models in third-party clouds. In this context, an additional benefit is seen in the possibility to control and attribute IT costs in a very fine-granular manner.

Most interview partners agreed that a reduction of overall IT costs could be achieved through the introduction of cloud computing. Yet, it remains somewhat questionable whether these effects can be attributed to cloud computing as a whole or rather to the use of virtualization technologies, which permits an effective consolidation of physical machines. The potential for cost reductions due to the use of third-party clouds is seen more controversially. Some interviewees specifically

pointed to the potentially high costs of integrating internal and external cloud systems. In addition, some bank representatives doubted the benefits of a pay-per-use billing scheme in third-party clouds, stating that many applications were characterized by constant, rather than fluctuating load. Apart from cost reductions, actual benefits are seen in the scalability of cloud systems, which may result in performance improvements for certain applications. In addition, a reduction of IT provision times and thus, time-to-market, were named as major advantages.

#### **The Cons: Obstacles & Drawbacks**

According to our interview partners, the main obstacle for a more widespread adoption of cloud computing – specifically, third-party cloud services – consists in security and compliance concerns. In this context, the interviewees explicitly pointed to the strict data privacy laws in Germany and Europe. However, most bank representatives agreed that such issues could probably be resolved in the context of private cloud computing, based on appropriate legal agreements. This view is naturally shared by IT service providers; in fact, some argued that the use of third-party cloud offers could actually result in security improvements. With respect to public cloud computing offers, the interviewed bank representatives expressed doubts that the technical and legal obstacles could be quickly resolved; the general assessment was that, at present, public cloud computing offers could hardly be utilized in compliance with legal and regulatory requirements, except in selected use cases, such as the use of virtual machines for software testing purposes.

An additional aspect of concern for banks is the risk of vendor lock-in, which is aggravated by a lack of standardization in cloud computing at present.

Based on their practical cloud computing experience, most banks have further identified the need for the development of cloud-oriented governance mechanisms. According to one interviewee, for instance, a novel challenge consists in the treatment of competing resource demands within a shared (virtualized) infrastructure.

#### **Tomorrow’s Forecast: Cloudy?**

All respondents in our study expect a more widespread adoption of cloud computing in the future. The question whether the utilization of third-party cloud services will serve as a substitute or rather as a complement to the in-house provision of IT services sparked some controversy. The majority of the interviewees believe that third-party cloud services will play a more dominant role in the future, but within a hybrid cloud environment consisting of internal and external services. Accordingly, the role of IT departments is expected to somewhat shift from operations to supplier management in the future. Other interviewees believe that, in accordance with the cloud computing vision, IT services will truly become a utility in the future, thus essentially eliminating the need for in-house IT provision in the long run.

With respect to security and compliance issues, the idea of a “German cloud” raises some interest, as does the concept of community clouds that are operated by multiple banks

conjointly. Through such models, economies of scale in large clouds could be exploited, while banks would still be able to pursue security and compliance objectives in an effective manner.

#### **Conclusions**

In summary, the results of our case study indicate that cloud computing has made its arrival in German banks. However, the adaptation of this novel paradigm can still be considered in its infancy, due to the fact that clouds are predominantly operated and used internally and, at the same time, lack some of the essential characteristics that would permit additional cost savings over traditional IT infrastructures. In addition, external cloud services are used in a very selective manner at present. However, it appears that both banks and IT service providers are currently undertaking substantial efforts to evolve cloud computing to a more mature state, thus also addressing common security and compliance concerns.

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Cloud Computing and Emerging IT Platforms: Vision, Hype, and Reality for Delivering Computing as the 5<sup>th</sup> Utility. In: Future Generation Computer Systems, 25 (2009) 6.

## Research Report

# Competition among Electronic Markets and Market Quality

WITH THE MARKETS IN FINANCIAL INSTRUMENTS DIRECTIVE (MIFID) IN EFFECT, NEW ELECTRONIC MARKETS EMERGED IN EUROPEAN EQUITIES TRADING. WE ADDRESS THE IMPACT OF MARKET FRAGMENTATION ON STOCK LIQUIDITY BY EXAMINING SAMPLES OF EUROPEAN BLUE CHIP STOCKS BEFORE AND AFTER THE INTRODUCTION OF MIFID.

Peter Gomber

Marco Lutat

Markus Gsell

### Introduction

The rules set out by the Market in Financial Instruments Directive (MiFID) and its implementing measures have harmonized regulation of financial markets on a European level and try to create competition and a level playing field among different types of electronic financial markets. This new regulatory setup has indeed increased competition, and within a short time-frame, incumbent exchanges have lost significant market share to new competitors, so-called Multilateral Trading Facilities (MTF). These new competitors, e.g., Turquoise, Chi-X or BATS Europe, entered the market with a pan-European scope concerning tradable securities, offering similar market models and functionalities as the incumbent exchanges but at lower explicit trading costs. Thereby, the fragmentation of the European securities trading landscape is steadily increasing since early 2008. However, the effects of fragmented trading are ambiguous.

Investors and issuers articulate concerns whether fragmentation might reduce market quality or not. Some market participants try to overcome fragmentation by applying trading software tools such as smart order routing engines (SOR) or liquidity aggregation mechanisms. SOR access multiple liquidity pools, i.e., exchanges or alternative trading systems, to identify the best destination and apply proprietary algorithms to optimize order executions. Against this background, we analyze the impact of fragmentation on home markets and overall European liquidity.

### The New European Trading Landscape

Before the applicability of MiFID, in some member states of the European Economic Area, so-called concentration or default rules were in force, which eliminated or at least hindered the possibility to trade aside from Regulated Markets, i.e., the incumbent exchanges.

Furthermore, different national regulations prevented market operators from offering pan-European market venues. Therefore, European securities trading was – on a per security basis – typically concentrated on the home market of the respective security. Since November 2007, with the harmonized regulation set out by MiFID, Regulated Markets and MTFs are competing for investors' order flow. This attracted numerous new entrants to the market for markets and led to the fragmentation of trading among the home market and MTFs.

The MTFs entered the market with significantly lower explicit cost schemes, which forced the Regulated Markets to adapt their fees schedules as well. However, explicit costs are not the only determinant for transaction costs in secu-

rities trading. An even more relevant share of cost is determined by so-called implicit trading costs, which are driven by a market's liquidity. Because liquidity is subject to strong positive network externalities, market venues are eager to attract as much trading interest to their platforms as possible.

The fragmented landscape in European securities trading increases the competitive pressure on all venues. Along with the increasing fragmentation of trading comes an increasing fragmentation of market data, because each venue has its own order book and its own trade reports. The clear picture of trading interest in a security that was given when trading was concentrated on one market is nowadays distorted. Therefore, it became more difficult to assess whether

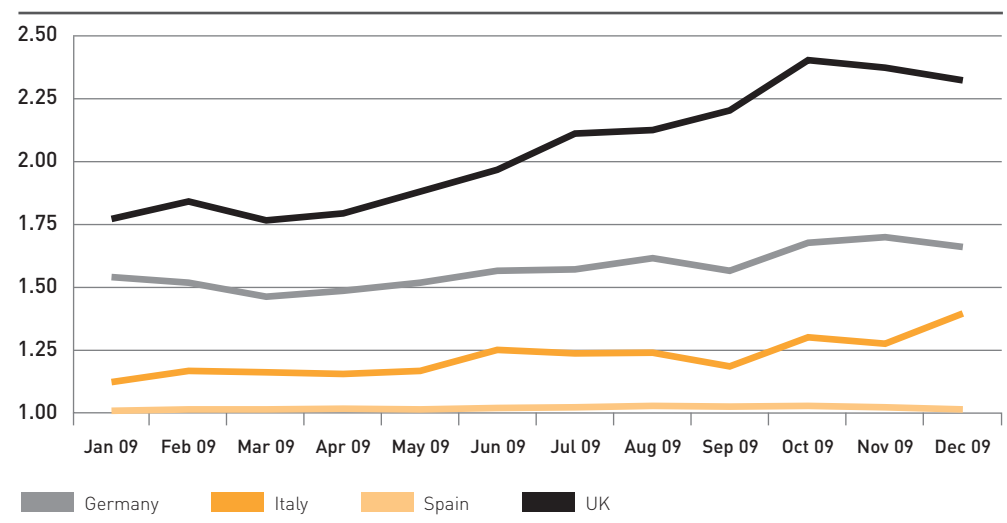


Figure 1: Fragmentation in European markets – Inverse Herfindahl-Hirschman index

market quality in terms of liquidity has improved or worsened with market fragmentation.

### Dataset

In order to assess the net effect of competition and fragmentation on liquidity, we make use of one specific exception to the European equities trading landscape: Spain. While in most European countries trading significantly fragmented with the applicability of MiFID, Spanish equities are still strongly concentrated on their home market. Figure 1 quantifies order flow fragmentation for selected European markets in 2009, when eventually all major MTFs had launched their services, with higher index values indicating a higher level of fragmentation.

The sample for our analysis is made up by two distinct groups of equities. The first group of stocks is made up of the constituents of the Spanish IBEX 35 blue-chip index, the second group of constituents of the EURO STOXX index. We select only those securities that were constituents of the respective index during our observation periods. The group of Spanish stocks is restricted to those 24 securities that are present in the EURO STOXX.

We restrict the EURO STOXX constituents to stocks from those countries that are nowadays among the top-fragmented Euro-denominated markets, i.e. the Netherlands, France, Germany, Finland, Belgium and Italy. Within the remaining set of EURO STOXX constituents we identify stocks comparable to the securities

in our Spanish sample by selecting those 24 stocks with the closest free float market capitalization before our observation periods.

Two distinct observation periods are chosen. The first observation period focuses on trading before competition and fragmentation of European securities trading set in and refers to the 60 trading days prior to the applicability of MiFID on November 1<sup>st</sup>, 2007. This observation period is referred to as *pre-MiFID*. In this period we only refer to the home market, because fragmentation was not present yet. For the choice of the second observation period, a number of constraints have to be met. Particularly, periods directly after the applicability of MiFID are inappropriate, as fragmentation steadily increased: The new competitors gradually expanded the set of securities tradable on their systems and moreover, some new competitors started their operations only several months after the applicability of MiFID, e.g., Turquoise did not start before September 2008. Further, the economic and financial crisis, which had its outburst with the breakdown of Lehman Brothers in September 2008 and thereafter, had significant effects on securities trading. To lessen the impact of this market turmoil on the results of our analysis, we decide to use an observation period which is not close to our pre-MiFID observation period and where the market values in terms of index levels are as close as possible to the values of the first observation period. To avoid impact of the Greece crisis, we select the 60 trading days

prior to May 1<sup>st</sup>, 2010 as our *post-MiFID* observation period.

Intraday market depth tick data were retrieved from Thomson Reuters Tick History for the securities' home markets, as well as for the three main MTFs Chi-X, BATS Europe and Turquoise.

### Methodology

Based on the data's time-stamps, we aggregate order books across the different venues to construct a European consolidated order book. For all securities in the sample, the combined market share for the home market and the three main MTFs lies above 97% during the observation period. For each trading day, order book characteristics are calculated in one minute intervals during the market phases of continuous trading.

In order to measure liquidity, relative spreads and quoted values at best bid and ask limits are computed for both the consolidated order book and a stock's home market. Because relative spreads and quoted values are often considered insufficient to capture liquidity (Irvine et al., 2000), we apply another measure (Exchange Liquidity Measure – XLM) and determine the implicit execution costs of a round-trip transaction by using the information about all the visible orders in an order book and thus capture order book depth (Gomber et al., 2004).

Relative spreads, XLMs and quoted values rep-

resent the dependent variables in our regression model and we estimate the means of these measures for both observation periods, changes in these means, and test for the statistical significance of these changes applying panel data techniques. For testing the significance of changes in the means, we assume that a liquidity measure for a respective stock and day can be expressed by adding up a stock-specific mean, an event effect, control variables and an error term. In the model we account for changes in a stock's traded volume, price level, volatility and minimum tick size by including them as control variables. Rogers standard errors are applied for testing of significances of liquidity changes in the means of pre- and post-MiFID period (Petersen, 2009).

### Results

For the EURO STOXX instruments, an increase in liquidity, measured in terms of relative spreads and XLM, can be observed for the consolidated order book. As depicted in Figure 2, for the total sample spreads narrow by 24.66% and the XLM for a round-trip of 50,000 Euros and 100,000 Euros reduces by 30.70% and 43.12% respectively. Nevertheless, the value quoted at the top of the order book reduces by 85.73% and 84.83% for the bid and the ask side respectively, which represents a decrease in the thickness of the order book's top. This finding is primarily driven by a strong reduction of tick sizes that most markets experienced between the pre-MiFID and post-MiFID observation period.

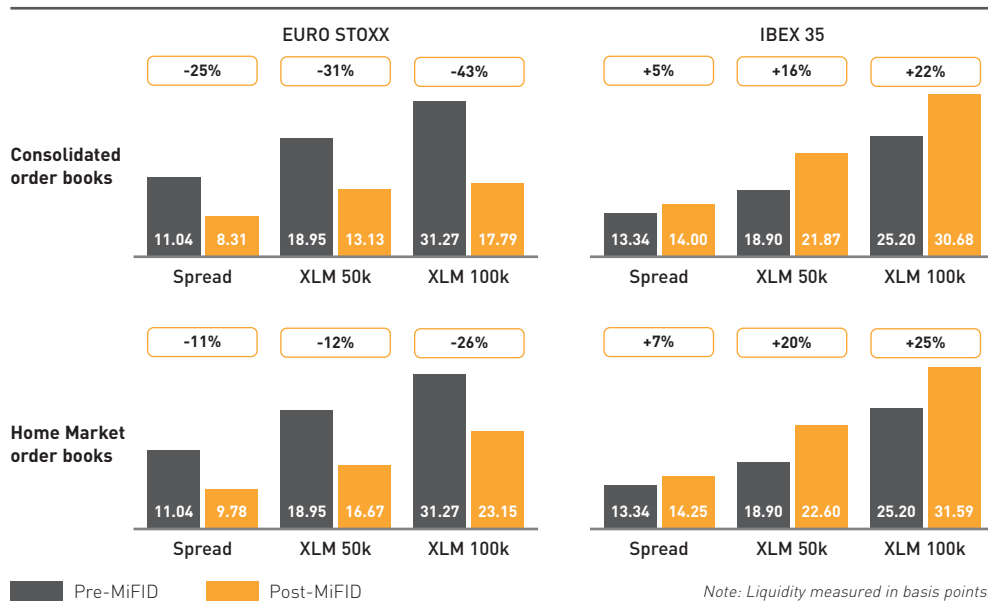


Figure 2: Liquidity measures for consolidated and home markets' order books from pre- to post-MiFID period

As the coefficients of the indicator variable in our regressions are throughout negative, statistical inference suggests a highly significant positive impact of the MiFID induced competition between markets and the consequent fragmentation on overall liquidity for the sample stocks.

Obviously for a stock's home market solely, the increase in liquidity is pronounced less intensively compared to the consolidated order book, but still present. Those findings stress the contribution to overall liquidity of the new competition, which can be attributed to arbitrage between the home market and a more aggressive quotation behavior on the home market. In our regression model, a statistically significant positive impact of market fragmen-

tation on a stock's home market liquidity can be derived.

For the Spanish IBEX 35 instruments, the results are contrary to those for the EURO STOXX. In the consolidated order book, the liquidity measures relative spread and XLMs increase for the entire sample by 4.96%, 15.68% and 21.75% respectively, which translates into a decline in overall liquidity available to investors in Spanish blue chips. Again, quoted values at the top of the order book experience a strong decrease, which can mainly be attributed to tick size reductions.

Since fragmentation in IBEX 35 stocks was shown to be less intense than for EURO STOXX

instruments, differences in the results for the consolidated order book and the home market are less pronounced here.

### Conclusion

Our paper addresses the impact that competition and market fragmentation have on a stock's liquidity. For this purpose, two distinct samples of stocks have been examined before and after the introduction of the new competition triggered by MiFID. The main difference in the characteristics of those samples is the degree of fragmentation. Results from panel regression models indicate a contrary development of liquidity in EURO STOXX and Spanish IBEX 35 stocks. For the former, a significant positive liquidity effect in the home market and a virtual order book consolidating multiple markets can be found between the observation periods. In our model, those changes can be attributed to the positive effect of competition. This positive impact of competition and the resulting fragmentation on liquidity can be split up into two parts: First, a direct effect arises from the mere existence of new electronic trading venues in which liquidity is collected. In our sample, those new trading venues contribute to the liquidity improvements in the consolidated order book. The second part can be referred to as an indirect home market effect. As pointed out in some former academic work on fragmentation in the US, the competition for order flow between traders in different markets is one potential explanation for our findings in the home market. In order to attract order flow in form of marketable orders to their market and thus increase the probability of execution, traders

are tempted to post more aggressive quotes in a competitive environment. For the Spanish stocks in our sample, a significant negative liquidity effect is observable. During the same period, those stocks experienced little competition between markets, resulting in a low degree of fragmentation.

Concluding, our study presented empirical evidence that competition and market fragmentation among electronic financial markets in Europe has led to higher market quality in terms of liquidity.

The results provide relevant input for market participants in Europe and the European Commission, given that the Commission is currently in the process of an intensive MiFID Review.

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## Insideview

# The Review of the Markets in Financial Instruments Directive

INTERVIEW WITH MARKUS FERBER, MEMBER OF THE EUROPEAN PARLIAMENT

**On October 20<sup>th</sup>, 2011, the European Commission published its proposals for the review of the Markets in Financial Instruments Directive (MiFID). As one response to the G20 2009 Pittsburgh agreements, the aim of the new proposals is to improve the transparency and oversight of less regulated markets, specifically OTC markets, to make financial markets more efficient and to strengthen investor protection. Mr. Ferber, is the MiFID review a milestone to achieve the G20 goals?**

It definitely is. If you take a look at the achievements on European level so far you can see that we already took some important steps. We have created the framework for new European supervisory bodies. We have already adopted important dossiers like the Directive on Alternative Investment Funds Managers or the Regulation on Short Selling. Other legislative dossiers are still discussed. But now we are at the starting point of the MiFID review in the European Parliament. For me, the MiFID is the core of the financial markets regulations as we regulate the venues where trading is taking place. I am completely in line with the G20

agreements which say that we want to have no unregulated product and no unregulated markets in the end.

**A major point of criticism on the initial MiFID of 2004 is an insufficient coverage of all forms of trading. The new proposals introduce a new trading venue category, Organized Trading Facilities (OTF). To what extent do you see a need for the OTF category system?**

At the moment, it is not about time to take position but to ask questions. The new category OTF will definitely be one of the major issues in the upcoming discussions and therefore we put questions about it in our questionnaire to which all interested parties and stakeholders can reply. But as an OTF would be less regulated than, for example, an MTF we really have to look if this is in line with the overall aim to create more transparency and more protection on the financial markets.

**Transparency, and specifically its extension to non-equity markets, became a central**



Markus Ferber  
Member of the European Parliament

**component in the proposal. Will these measures improve market stability and integrity?**

Of course, we want to create as much transparency as possible without harming the proper functioning of financial markets and without having a negative impact on competition. Therefore, we will look very closely at these proposals always having in mind that it is about to guarantee financial markets stability.

**The Commission responds to concerns on high frequency trading by far reaching proposals, e.g. the introduction of mandatory market making. Please provide your perspective on this issue.**

At this stage, it is too early to say how we approach this matter, but this will be one of the key issues. In general, I welcome the fact that the Commission took on board the issue of high frequency trading. That was also one of the major demands the European Parliament brought up in the so-called Dark Pools report, which was adopted in December 2010 with regard to the MiFID review. If we take a look at the changes on the markets in the last years, it

is absolutely clear that we also have to take the technical changes in trading into account.

**We understand that you have been appointed by the European Parliament as the rapporteur for the review of MiFID. What will be your key topics in the process of finalizing the directive in 2012?**

At the moment, we try to gather as much information as possible to get a complete picture of all the concerns and solutions within the MiFID review. Besides the ones we already spoke about, key topics will also be the question of position limits and to what extent we can or should regulate commodity markets. Furthermore, we definitely have to focus on an appropriate investor protection and the competences for ESMA. In this regard, I also want to raise the question if the possibility for ESMA to ban services or products ex-ante is the right approach, or if we should think about a licensing procedure for services and products before they can be offered on the markets.

**Thank you for this interesting conversation.**

# Infopool

## News

### New Position

Christian Schulze has accepted a position as Assistant Professor in Marketing at the Frankfurt School of Finance and Management. He will start in his new position on March 1<sup>st</sup>, 2012. Congratulations! We wish him all the best for his future career.

### Awards and Dissertations

Dr. Jens Vykoukal (layer 1) has received his doctoral degree on August 31<sup>st</sup>, 2011 with his dissertation on "Business and Environmental Benefits through Grid Technology Empirical Findings from the Financial Services Industry". Congratulations!

The team of authors Peter Gomber, Marco Lutat and Moritz Weber (all from layer 2) has received the Best Paper Award of the 15<sup>th</sup> International Business Research Conference in Sydney, Australia for their contribution "The impact of MiFID on market quality". Congratulations!

E-Finance Lab researchers Christoph Seebach as well as Sven Weber, Roman Beck and Robert Gregory (all from layer 1) are nominated for the Best Paper Award at the 45<sup>th</sup> Hawaii International Conference on System Sciences for their contributions "Searching for Answers – Knowledge Exchange through Social Media in Organizations" and "Combining Design Science and Design Research Perspectives – Findings of three Prototyping Projects". Congratulations!

### EFL Spring Conference 2012:

#### Cloud Computing in the Financial Industry – A Security and Compliance Nightmare?

Recently, cloud computing has emerged as a novel paradigm that suggests a groundbreaking shift in the way IT services are provisioned and consumed. Through consequent service orientation and the exploitation of economies of scale, cloud computing promises to deliver IT capacities both more flexibly and cost-efficiently than traditional in-house IT. However, moving applications and data into the cloud does not only suggest multiple benefits, but also poses novel challenges. Will the dream of low-cost, flexible computing become a security and compliance nightmare for the highly regulated financial industry, in the long run?

The E-Finance Lab Spring Conference 2012 features talks and a panel discussion involving various industry and research experts. The Conference will take place on February 7<sup>th</sup>, 2012, at the darmstadtium conference center. For further information and registration, please visit <http://www.efinancelab.com/events/conferences/spring-conference-2012/>

## Selected E-Finance Lab publications

### Beck, R.; Schott, K.; Gregory, R.:

Mindful Management Practices in Global Multi-Vendor ISD Outsourcing Projects. Forthcoming in: Scandinavian Journal of Information Systems, 2012.

### Fritz, M.; Schlereth, C.; Figge, S.:

Empirische Evaluation von Fair-Use Flatrate-Strategien für das mobile Internet. In: Wirtschaftsinformatik, 5 (2011), pp. 257-266.

### Lampe, U.; Mayer, T.; Hiemer, J.; Schuller, D.; Steinmetz, R.:

Enabling Cost-Efficient Software Service Distribution in Infrastructure Clouds at Run Time. In: Proceedings of the IEEE International Conference on Service Oriented Computing & Applications, Irvine, California, USA, 2011.

### Gomber, P.; Lutat, M.; Weber, M.:

The Impact of MiFID on Market Quality. In: Proceedings of the 15<sup>th</sup> International Business Research Conference, Sydney, Australia, 2011.

### Gomber, P.; Lutat, M.; Haferkorn, M.; Zimmermann, K.:

Circuit Breakers in Fragmented Markets – An Assessment. In: Proceedings of the 9<sup>th</sup> International Conference on Business and Finance, Hyderabad, India, 2012.

### Pahlke, I.; Beck, R.; Vykoukal, J.:

Follow the Pack or Make an Independent Decision? How Environmental Turbulence Affects

ICT Sourcing Decisions.

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Customer Equity Sustainability Ratio: A New Metric for Assessing a Firm's Future Orientation. In: Journal of Marketing, 75 (2011) May, pp. 118-131.

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## Infopool

### RESEARCH PAPER: COMPETING PERSPECTIVES ON THE LINK BETWEEN STRATEGIC INFORMATION TECHNOLOGY ALIGNMENT AND ORGANIZATIONAL AGILITY: INSIGHTS FROM A MEDIATION MODEL

Strategic information technology (IT) alignment remains a top priority for executives. Due to rises of environmental volatility, as for example during the financial crisis, firms are looking for new approaches to identify and respond to market-based threats and opportunities. In this regard, Tallon and Pinsonneault (2011) empirically investigate the relationship between strategic IT alignment, agility and firm performance. In particular, the authors conceptualize a research model in which agility mediates the link between alignment and firm performance under varying conditions of IT infrastructure flexibility and environmental volatility. The analysis from a matched survey of IT and business executives in 241 firms clearly confirms that the relationship between alignment and performance is mediated by agility. The empirical results also show that IT flexibility provides an added boost to agility in volatile settings, thus highlighting the options value of designing flexible IT in an uncertain market.

Tallon, P. P.; Pinsonneault, A.

In: *MIS Quarterly*, 35 (2011) 2, pp. 463-486.

### RESEARCH PAPER: DYNAMIC ORDER SUBMISSION STRATEGIES WITH COMPETITION BETWEEN A DEALER MARKET AND A CROSSING NETWORK

Dark Pools and especially Crossing Networks are common systems and have long been used by institutional investors. Due to the ongoing fragmentation, the questions of competition between market venues and the optimal transparency level are getting more and more relevant. The authors therefore analyze the coexistence of a Dealer Market (DM) and a Crossing Network (CN) under three different degrees of transparency – transparency, partial opaqueness and complete opaqueness. It is shown, that the coexistence of trading venues caters to different types of traders resulting in contrary effects for order flow. The first effect is characterized by “order creation” – additional traders, who would never trade at a DM, submit their orders to the CN due to lower transaction costs. The second effect, “trade diversion”, describes the phenomenon that some orders of traders with a low willingness to trade are diverted from the DM to the CN. Therefore the introduction of a CN next to a DM does not necessarily produces greater overall welfare; determinants are the transparency level, order execution probability of the CN and the relative DM spread. Another result the authors show is that the coexistence of trading systems generates systemic patterns in order flow dependent on the degree of transparency.

Degryse, H.; van Achter, M.; Wuyts, G.

In: *Journal of Financial Economics*, 91 (2009) 3, pp. 319-338.

## 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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