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FinTechs and Banks: Co-opetition
for Technological Innovation

The Role of High-Frequency Trading
for Order Book Resiliency

Crowdfunding versus Credit when
Banks are stressed

MiFID II – Status Quo and
Next Steps



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Editorial

FinTechs and Banks: Co-opetition for Technological Innovation

Moritz von der Linden

With more than USD 12 billion invested into FinTech ventures globally in 2014, everyone is talking about FinTech. In the light of still increasing regulatory requirements, high competition, and eroding margins the questions is: will the banking industry be able to keep pace with the innovative capacity of FinTechs?

The majority of FinTech startups is operating in the retail banking sector. Technological innovations are outperforming most of the products of traditional banks. Having had online banking around for two decades, the transformation of retail banking just started a couple of years ago. Even today, mobile banking solutions are lacking the user experience and functionality of, e.g., online shopping apps. Hence, new ventures have the chance to focus on functionality which caters to customers' needs.

Exemplary companies are PayPal or Iwoca and others. Each of them started off by covering one single step of the specific process chain

in order to build a superior solution. In this context, the conflict of existing banks becomes obvious: each step in the individual value chain is vulnerable. Given their limitations based on overall strategy, organizational speed, and resources, banks might not always allocate investments in the most efficient way. Historically, retail banking was dominated by rather large banks and client contact was personal.

Today, with a market full of online banking and new venture-driven innovations, the customer needs have shifted. Clients are looking for an intuitive online solution rather than a personal contact in one of the diminishing number of branches. This development threatens banks and triggers action. Not only Deutsche Bank – having announced to invest up to EUR 1 billion over the next years in digitization – is investing in FinTech startups, but also other banks like Commerzbank try to get a grip on the fast moving digital solutions, e.g., by investing into Iwoca. Another way to face competition is the



Moritz von der Linden
Executive Vice President
and Head of Sales
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in-house solution. One example is the “made in Germany” equivalent to PayPal – Paydirect, which recently started the pilot phase. Press commentaries named it a barrel burst coming almost 10 years too late.

Within the corporate banking world, things are different. Banking solutions are integrated into the technological backbone of corporates and have to fulfil extremely high standards. The terrain is much rougher for new ventures. Nonetheless, the acquisition of 360T by Deutsche Börse has shown that the corporate banking market bears huge potential. Followers like CRX Markets also try to gain their share of core competencies in corporate banking. The business model of being a bank-independent trading platform for trade receivables requires a regulatory approval by the BaFin. Despite higher complexity, CRX together with anchor clients like Lufthansa opens the door to the enormous B2B-market of short-term financing, which has been single-handed under

control of banks and factoring companies. Working with banks as funding partners on its platform, CRX is also an example for a fruitful co-opetition.

Summing up, the traditional banking world could break up into three playgrounds. First – the core markets of banking like public financing, corporate finance, and M&A. Here, competition by new ventures could be seen a minor threat due to the fact that the business is global, complex, and requires long-time experience. Second – retail banking, where already numerous startups try to snatch market share and barriers are lower than in the corporate world. Third – new markets based on new ideas, where the challenge is to think of innovative ways on how banking could look like in 20 years from now.

Ultimately, each player, bank or startup, has to decide if they can challenge their status quo and actively participate in designing change.

Research Report

The Role of High-Frequency Trading for Order Book Resiliency

THE SPEED OF TRADING, AND IN PARTICULAR HIGH-FREQUENCY TRADING, IS ONE OF THE MOSTLY DEBATED ISSUES AMONG REGULATORS AND MARKET PARTICIPANTS. NEVERTHELESS, SEVERAL ACADEMIC STUDIES HAVE SHOWN THAT HIGH-FREQUENCY TRADERS USING LOW-LATENCY INFRASTRUCTURE PROVIDE ADDITIONAL LIQUIDITY THEREBY REDUCING TRANSACTION COSTS IN ORDINARY TIMES OF TRADING. WE STUDY WHETHER HIGH-FREQUENCY TRADERS ALSO CONTRIBUTE TO THE RECONSTRUCTION OF THE ORDER BOOK AFTER LIQUIDITY SHOCKS CAUSED BY LARGE ORDERS.

Benjamin Clapham

Martin Haferkorn

Kai Zimmermann

Introduction

Not only since the Flash Crash of 2010, there is a controversial discussion on the speed of trading at which especially high-frequency trading (HFT) participants act and react within the open limit order book. Proponents argue that automated decision making and low-latency infrastructure favor liquidity provision leading to a reduction of implicit transaction costs. Opponents, on the other hand, emphasize the possibility of exaggerated price movements due to HFT.

While there exist several academic studies showing a positive contribution of HFT to liquid-

ity provision (e.g., Haferkorn and Zimmermann, 2015; Brogaard et al., 2014; Hasbrouck and Saar, 2013), this paper examines the quality of order book resiliency after liquidity shocks in the presence of high-frequency traders. Based on a unique data set, we determine the contributions of HFTs in contrast to non-HFT participants following liquidity shocks to the open limit order book. During and after such shocks, low-latency traders can maximize their speed advantages and benefit from the widened bid-ask spread and the low order book depth, respectively. Given HFTs follow such strategies and support a fast replenishment of the order book, other market

participants may profit from the increased order book resiliency due to lower implicit transaction cost.

We apply a data sample of large, aggressively placed market orders that hit the open order book and clear several order book levels thereby leading to significant price impact. We focus on the order submission behavior of HFTs and non-HFT participants around these market order shocks to add further evidence on the possible benefits of HFT for liquidity.

Data Set

Our data set contains all Xetra trading messages for the DAX30 securities within the two-weeks time period from August 31st to September 11th, 2009, thereby covering 10 trading days.

The uniqueness of the available data set is caused by an indicator of algorithmic trading showing whether a certain message has been triggered by an algorithm or not. Additionally, we can identify whether the submitter of an order is a subscriber of co-location services. Combining these two attributes, we are able to differentiate three different groups of traders: HFTs, non-HFT algorithmic traders, and human traders.

Based on the exogenous shock of a large market order, we analyze the reaction and the contribution of each trader group separately in order to derive distinct patterns that characterize the behavior and commitment of these market participants to liquidity provision.

Reactions to Market Order Liquidity Shocks

Drawing on a sample of 267 liquidity shocks, two distinct observations become obvious: On the one hand, relative bid-ask spreads recover very fast and it takes only a few seconds until they reach a standard width. On the other hand, order book depth needs additional time to reach a similar constant and persistent normal level (see Figure 1).

In order to answer whether and how the specific trader groups react to liquidity shocks, we determine each group's normal liquidity provision characteristics based on the respective net liquidity provision in the five- and ten-seconds interval before the shock. The net liquidity provision which we propose is based on the number of order submissions and cancellations each trader group sends to the exchange. Since HFT activity is associated with rapid order cancellations, our measure for liquidity provision takes the net effect of order submissions and cancellations into account.

Within the five and ten seconds before the shock, human traders show on average a positive net liquidity provision ratio, indicating that this group submits more limit orders to the order book than it actually deletes. Algorithmic trading (AT) as well as HFT participants show a lower commitment as both groups' net liquidity provision ratios within the pre-event phase is significantly lower. After the liquidity shock, human traders nearly double their engagement in terms of net liquidity provision. Likewise, AT as well as HFT participants increase their engagement significantly.

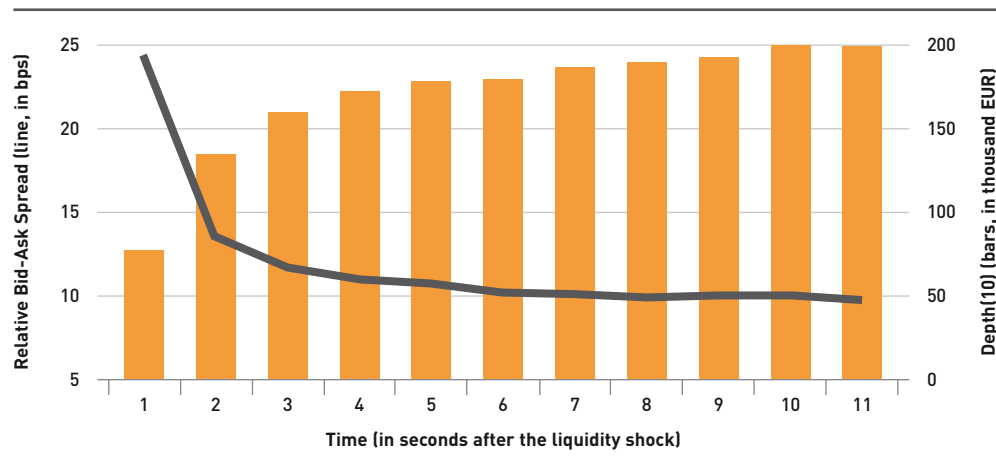


Figure 1: Liquidity Recovery in the Limit Order Book after a Liquidity Shock caused by a large Market Order

While all trading groups react to the liquidity gap due to the incoming market order, the commitment to liquidity provision of the human trader group remains the highest in both observation periods. Liquidity provision of AT as well as HFT participants, however, is more transient as order submissions are more regularly accompanied with subsequent order cancellations.

Contributions to Order Book Resiliency

In order to evaluate how the different groups' trading behavior affects order book liquidity resiliency in the post-shock phase, we determine the quality of the order book resiliency for each event. Therefore, we revert to the two characteristics of liquidity in the form of relative bid-ask spreads and order book depth as proposed by Degryse et al. (2015). The quality measures for liquidity are then related to the specific net

liquidity provision ratios of each group within the period following the liquidity shock.

We find that even though human traders are among the group with the highest net liquidity provision ratio in the post-shock phase, their contribution to the recovery of the bid-ask spread is questionable. Within the five as well as the ten seconds observation period, no abnormal positive recovery effect is measurable when human traders provide more liquidity.

Focusing on AT participants, we observe a significant relation within the ten seconds after the event. Thus, algorithmic traders that provide net liquidity to the order book following a shock target for the top of the order book and therefore improve the relative bid-ask spread. However, AT participants need several seconds before this effect becomes significant.

In contrast, HFTs that rely on co-located infrastructure show a significant and robust relation between their net liquidity provision ratio and the abnormal spread recovery rate. Hence, HFTs instantaneously affect and recover the widened bid-ask spread after the liquidity shock when providing additional liquidity to the limit order book. This result is in line with the fast recovery of the bid-ask spread as depicted in Figure 1.

Concerning the recovery of the limit order book depth, results again give a different impression. Both AT as well as HFT traders do not significantly participate in the recovery of the order book depth, even during events when their submissions heavily outweigh their cancellations. The specific net liquidity provision ratios remain insignificant within the short-term as well as in the long-term observation period. Thus, even if submissions heavily affect the relative bid-ask spread, the actual order sizes are too low for achieving a significant increase in the order book depth. Human traders' net liquidity provision, however, shows the opposite characteristic. Even within five seconds after the liquidity shock, submissions coming from human traders are significantly recovering the lost order volume.

In contrast to AT and HFT traders, their submission volumes are of relevant sizes in order to impact the order book depth. Despite the relative low activity levels of human traders, their high net liquidity provision ratios combined with the larger order sizes are the key components in depth recovery.

Conclusion

Our results show, for the data set under investigation, that solely high-frequency traders reduce the bid-ask spread within the first seconds after a liquidity shock induced by a large market order thereby making use of their speed advantage. However, liquidity recovery in terms of order book depth, which is especially relevant for larger orders, takes significantly longer and is accomplished by human traders' submission activity only. This study has important implications for academics, regulators, and market operators alike as it unveils the distinct liquidity provision behavior of HFTs and human traders.

References

- Brogaard, J.; Hendershott, T.; Riordan, R.:** High-Frequency Trading and Price Discovery. In: Review of Financial Studies, 27 (2014) 8, pp. 2267-2306.
- Degryse, H.; Jong, F. de; van Kervel, V.:** The Impact of Dark Trading and Visible Fragmentation on Market Quality. In: Review of Finance, 19 (2015) 4, pp. 1587-1622.
- Haferkorn, M.; Zimmermann, K.:** The German High Frequency Trading Act. In: Proceedings of the 18th Annual Conference of the Swiss Society for Financial Market Research, Zurich, Switzerland, 2015.
- Hasbrouck, J.; Saar, G.:** Low-latency Trading. In: Journal of Financial Markets, 16 (2013) 4, pp. 646- 679.

Research Report

Crowdfunding versus Credit when Banks are stressed

BANK INSTABILITY SEEMINGLY COULD PUSH BORROWERS TO USE CROWDFUNDING AS A SOURCE OF EXTERNAL FINANCE. WE CONSTRUCT A NOVEL, HAND-COLLECTED DATA SET OF VENTURES' USES OF EQUITY CROWDFUNDING IN GERMANY, THEIR RELATIONSHIPS WITH BANKS, AND VARIOUS VENTURE TRAITS SINCE 2011. BY OBSERVING VENTURE-BANK RELATIONSHIPS, WE CAN IDENTIFY IF VENTURES CONNECTED TO SHOCKED BANKS ARE MORE LIKELY TO USE CROWDFUNDING IN AN ATTEMPT TO SUBSTITUTE FOR CONTRACTING BANK CREDIT SUPPLY. OUR RESULTS SHOW THAT CROWDFUNDING IS SIGNIFICANTLY MORE LIKELY FOR NEW VENTURES THAT INTERACT WITH STRESSED BANKS. INNOVATIVE FUNDING SOURCES ARE THUS PARTICULARLY RELEVANT IN TIMES OF STRESS AMONG CONVENTIONAL FINANCIERS. BUT CROWDFUNDED VENTURES ARE GENERALLY ALSO MORE OPAQUE AND RISKY THAN NEW VENTURES THAT DO NOT USE CROWDFUNDING.

Daniel Blaseg

Introduction

Akerlof's (1970) seminal lemons problem epitomizes the key challenge faced by any investor: how to select projects from a pool of opaque applicants. Traditionally, banks help resolve the information asymmetry between savers and investors by developing screening competences and acting as delegated monitors (Diamond, 1984). But dramatically reduced transaction and information acquisition costs, together with historically low interest rates, impede banks' incentives to engage in costly

Michael Koetter

information generation, which can lead to the contraction of credit (Puri et al., 2011) or misallocated funding to projects that are too risky (Dell'Ariccia and Marquez, 2004). Against this backdrop, a novel form of financing may rival bank credit and connect even small savers with risky new ventures that face traditionally tighter financing constraints (e.g., Robb and Robinson, 2014).

This innovative way to reduce transaction costs in entrepreneurial financing is called "equity

crowdfunding". Bradford (2012) defines equity crowdfunding as a scenario in which supporters or investors receive a stake in the ventures they fund, in the form of profit participation or straight equity. We similarly define equity crowdfunding as a source of funds, obtained when an entrepreneur sells equity shares of a company to a group of (small) investors through an open call for funding on Internet-based platforms.

Institutional background

Equity crowdfunding platforms are non-bank financial institutions that provide intermediation services for the offering and sale of stocks and similar securities to the general public. These services include the provision of standardized contracts, technology infrastructure for the transactions, and investor relations. To reduce investors' transaction costs, they also provide standardized information, such as pitch decks, financials, and valuations sourced from the venture, without guaranteeing their correctness though.

Most equity crowdfunding platforms do not act as open marketplaces but instead serve as network orchestrators, curating the offerings placed on the platform after a cross-check of formal criteria, such as limited liability and available documentation. Whereas some platforms allow the direct acquisition of securities in the venture, others act as nominated agents and pool funds. Because they facilitate the sale of equity-like instruments without voting rights, the platforms

fall outside the legal brokerage framework. Yet, rapidly growing crowdfunding markets worldwide have prompted some countries (e.g., Italy, the United Kingdom, France, Germany, Spain) to develop specific crowdfunding regulations with the goal of protecting non-professional investors and increasing the transparency of offers in the shadow banking market.

German crowdfunding platforms use financial instruments and equity-like mezzanine capital, such as silent partnerships ("Stille Beteiligungen") and participation rights ("Genussrechte"). More common debt-like mezzanine instruments take the form of subordinated loans ("Partiarische Nachrangdarlehen"), which are less regulated. The offerings of a venture based on equity-like securities in Germany are limited to EUR 100,000 per year without an official prospectus, which is accepted by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) as long as there are more than 20 investors or the offering is aimed at non-professional investors with a share price of less than EUR 50,000. Subordinated loans skirt this problem and allow offerings with higher volumes.

Table 1 provides an overview of the German crowdfunding market. The first six projects were funded at the end of November 2011 on the Innvestment and Seedmatch platforms. As of December 2014, 14 active crowdfunding platforms were facilitating equity crowdfunding or revenue-sharing models in

Platform	Year				Total
	2011	2012	2013	2014	
Bankless24	–	–	0.18 (2)	0.37 (4)	0.55 (6)
Bergfuerst	–	–	3.0 (1)	1.1 (1)	4.1 (2)
Companisto	–	0.55 (6)	2.65 (15)	3.9 (9)	7.1 (30)
Fundsters	–	–	0.56 (5)	0.48 (6)	1.04 (11)
Innovestment	0.1 (2)	1.0 (13/8)	0.85 (11/4)	0.3 (7)	2.25 (33/12)
Mashup Finance	–	0.1 (1)	0.11 (1)	–	0.21 (2)
Seedmatch	0.35 (4)	2.2 (22)	7.32 (22/1)	9.17 (20)	19.04 (68/1)
Others	–	0.0 (1)	0.55 (11)	0.45 (7)	1.0 (19)
Total	0.45 (6)	3.85 (43/8)	15.22 (68/5)	15.77 (54)	35.29 (171/13)

Volume raised in the German equity crowdfunding market with successful campaigns, in millions of EUR. The number of (successful/unsuccessful) offerings appear in brackets.

Table 1: German Crowdfunding Market

Germany. Nine more platforms started operations, but closed before their first offering. The total funding volume of equity crowdfunding platforms in Germany in 2011 was around EUR 0.45 million, but it rose to EUR 35.3 million by the end of 2014. Seven of the 14 active platforms had one or no offerings during this period, and 95% of the total volume was raised on five platforms: Seedmatch (approximately EUR 19 million), Innovestment (EUR 2.3 million), Bergfuerst (EUR 4.1 million), Fundsters (EUR 1 million), and Companisto (EUR 7.1 million). In total, 171 offerings by the end of 2014 came from 165 different ventures.

Thirteen offerings were unsuccessful in that the minimum amount of the venture requested by the company was not raised during the funding process.

Empirical investigation

We test whether the “wisdom-of-the-(investor) crowd” can substitute for bank credit as a major source of funding for new ventures by exploiting exogenous shocks to young ventures’ banks. We construct a novel, hand-collected data set of ventures’ uses of equity crowdfunding in Germany, their relationships with banks, and various venture traits since 2011. By observing venture-bank relationships, we can identify if ventures connected to shocked banks are more likely to use crowdfunding in an attempt to substitute for contracting bank credit supply. In so doing, we move beyond the admittedly important descriptive evidence in this nascent strand of literature, which does not permit inferences about the causal effects of the determinants of crowd-funding.

We also control for observable management and venture traits to determine if more opaque ventures with greater information asymmetries are more likely to use crowdfunding as an alternative source of financing. Greater information asymmetries increase capital costs, which implies a well-known pecking order of capital structure: Internal funds are preferred over debt, and equity is a last resort of funding (Myers and Majluf, 1984).

To mitigate information asymmetries and facilitate the efficient allocation of financial resources (from savers to productive investors), financial intermediaries generate private information by establishing close and long-term relationships (Rajan, 1992). But relationship lending is costly, so banks may turn down funding requests by promising, yet hard-to-assess projects such as new ventures if they cannot confidently cover the costs associated with producing necessary private information (Petersen and Rajan, 1994). In this setting, we investigate if ventures tied to banks that struggle to cover the costs of private information generation are more likely to tap a potentially less-than-wise crowd as a funding source.

The financial crisis of 2008 amplified the generally prevalent challenges that young and small ventures confront when trying to raise external finance. In the aftermath of the great financial crisis, the number and volume of equity financing rounds from venture capital sources declined significantly, credit supply tightened in the Eurozone and in Germany, even local lenders reduced their loans (Puri et al., 2011).

Credit supply shocks are especially important for new ventures. However, most existing empirical evidence is geared toward venture capitalist funding (for an overview, see Gompers and Lerner, 2001). The ability of crowdfunding to substitute for bank credit or other sources of external finance, due to its significantly

lower transaction costs in the Internet age, in particular remains unclear. This research gap exists primarily because of the absence of data. We hand-collected a sample of all the ventures that applied for funds on major German equity crowdfunding platforms since 2011. That is, among 357 new ventures for which we have data, 157 applied for equity crowdfunding at one of the six major German online platforms between November 2011 and June 2014.

We manually gathered the data for the crowdfunding ventures from each platform webpage and database. For the 200 ventures that did not use crowdfunding, we obtained the venture and management variables from the membership database of the Federal Association of Startups. Thus, in contrast to previous research, we can estimate the probability of tapping the “wisdom of the crowd”, conditional on venture and managerial traits (like size, asset structure, credit rating, location of headquarter) relative to a relevant comparison group of comparable young ventures that face similar financing constraints.

Another challenge that plagues empirical literature pertaining to the role of crowdfunding is the notorious unobservability of the arguably most important competing source of external finance: bank credit. Because we collect information about each ventures’ bank relationship, we can exploit the heterogeneity in bank distress in the aftermath of

the financial crisis and identify credit supply shocks to ventures according to the health of their main external financier.

In total, we identify 82 banks connected to the new ventures in our sample and specify five alternative indicators of stressed relationship lenders. The main indicator is whether a bank received capital support from the German Special Fund for Financial Market Stabilization ("SoFFin"), which came into effect as of 2008. With an alternative approach, we also classify banks as stressed if they report an existing restructuring plan according to the comprehensive assessment conducted by the European Banking Authority (EBA) in November 2014, how stable the bank is according to the EBA, how stable the parent of a bank is according to the EBA, and whether a regional savings bank belongs to a stressed Landesbank in 2008 (see Puri et al., 2011).

Discussion of Results

By observing which ventures co-operated with banks that had to be bailed out by the German government, we identify an effect of an exogenous credit supply shock on the likelihood of using equity crowd funding. The main results show that ties to a bank bailed out by the SoFFin increase the probability that the venture taps a crowdfunding platform by 18%. The positive effect of crunched banks on the use of crowdfunding remains statistically and economically significant, even when we control directly for bank financial profiles

(CAMEL). Alternative indicators of bank distress and especially the existence of restructuring plans shared with the EBA yield qualitatively similar results, though with weaker statistical significance.

The analysis also shows that bad credit scores increase the probability that a venture uses crowdfunding by 31%. Supply-side restrictions move banks to handle their lending more restrictively, and ventures that cannot demonstrate their creditworthiness are not financed. This result suggests that among opaque new ventures, riskier projects tend to tap equity crowdfunding instead of bank financing. We also find that smaller ventures and ventures with fewer tangible assets are more likely to use crowdfunding. The small amounts obtained in a crowdfunding offering make this finding plausible. Larger ventures often need greater volumes and have access to other, sometimes also cheaper sources of capital, such as initial public offerings. These results may indicate that ventures with greater information asymmetry suffer the most from a credit supply shock, and therefore seek crowdfunding as an alternative.

Whether these projects are more likely to be lemons or gems that have been neglected by banks is an important question for further research. However, other management team characteristics have no statistically significant effect. Likewise, the rating of the venture's quality by experts, the location of the headquarters, the reception of a scholarship, and

the number of heads all showed no significant influence on a venture's use of crowdfunding. That is, the use of crowdfunding is not a question of management or other organizational factors. This result also supports the hypothesis that quality differences of ventures are not crucial. Perhaps the most important finding though is that ventures are more likely to use crowdfunding when their bank is affected by a credit crunch. Equity crowdfunding thus seems to be of particular importance for entrepreneurial finance as a critical source of capital in stressful times for banks.

References

Akerlof, G.:

The market for lemons: Quality uncertainty and the market mechanism.
In: Quarterly Journal of Economics, 84 (1970) 3, pp. 488-500.

Bradford, C.:

Crowdfunding and the federal securities law.
In: Columbia Business Law Review 1 (2012), pp. 1-150.

Dell'Ariccia, G.; Marquez, R.:

Information and bank credit allocation.
In: Journal of Financial Economics, 72 (2004), pp. 185-214.

Diamond, D. W.:

Financial intermediation and delegated monitoring.
In: Review of Economic Studies, 51 (1984) 3, pp. 393-414.

Gompers, P.; Lerner, J.:

The venture capital revolution.
In: Journal of Economic Perspectives, 15 (2001) 2, pp. 145-168.

Myers, S.; Majluf, N.:

Corporate financing and investment decisions when firms have information that investors do not have.
In: Journal of Financial Economics, 13 (1984) 2, pp. 187-221.

Petersen, M. A.; Rajan, R. G.:

The benefits of lending relationships: Evidence from small business data.
In: Journal of Finance, 49 (1994) 1, pp. 3-37.

Puri, M.; Rocholl, J.; Steffen, S.:

Global retail lending in the aftermath of the US financial crisis: Distinguishing between supply and demand effects.
In: Journal of Financial Economics, 100 (2011), pp. 556-578.

Rajan, R. G.:

Insiders and outsiders: The choice between informed and arm's-length debt.
In: Journal of Finance, 47 (1992), pp. 1367-1400.

Robb, A.; Robinson, D.:

The capital structure decisions of new firms.
In: Review of Financial Studies, 27 (2014) 1, pp. 153-179.

Insideview

MiFID II – Status Quo and Next Steps

INTERVIEW WITH ELISABETH ROEGELE

The European Securities and Markets Authority (ESMA) has recently finalized its work on important draft regulatory technical standards (RTS) specifying MiFID II and MiFIR. When do you expect these RTS to enter into force?

ESMA has just sent its proposals to the European Commission. It is then up to the Commission to review the RTS. In a second step, the European Parliament and the European Council will be involved. Our estimate is that the RTS will not enter into force before early 2016.

The transparency regime for non-equity (i.e., bonds, derivatives, etc.) is completely new. The methodology for assessing liquidity has been the subject of rather controversial discussion within the industry. Could you tell us about the approach chosen?

Indeed, this was a major challenge for all parties involved. Since MiFID I, we have had a transparency regime for shares that will not change dramatically. This is different with

regard to non-equities. Here, we as regulators are entering completely new territory. The task is to increase transparency without hurting liquidity. Some of the markets, e.g., those for bonds and many derivatives, are characterized by episodic trading patterns. Therefore, a variety of proposals has been discussed. For most instruments, a class-of-financial-instrument approach (COFIA) will be used. A class is considered liquid if it meets certain quantitative criteria. For most asset classes, COFIA will be dynamic, i.e., each class will be assessed on a yearly basis in order to take market developments into account. However, for bonds, an instrument-by-instrument approach (IBIA) will be applied, i.e., each single bond instrument will be assessed on a quarterly basis if it meets certain quantitative criteria with regard to days traded, nominal amount traded, and number of trades per day.

Another controversial discussion related to the calibration of the transparency waivers, i.e., the large-in-scale (LIS) and size-specific-to-the-instrument (SSTI) waivers. What is



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the purpose of these waivers and how are the waiver thresholds determined?

The waivers' aim is to protect market participants that provide liquidity or enter into large transactions. Getting the calibration correct is indeed no simple task. We expect a mix of static and, in most cases, dynamic thresholds. So, again, ESMA will have to run regular calculations, which will demand a major technical and financial effort of all regulators and ESMA. In general terms, the thresholds for pre-trade waivers will be lower than for post-trade waivers, and the SSTI will be lower than the LIS.

Market participants also held a lively debate about the organizational requirements for algorithmic traders suggested by ESMA. What is expected here?

BaFin places high demands on the risk and compliance management of banks and investment firms. In line with our current supervisory practice, the new RTS will require all algorithmic traders to systemically conduct sound self-

assessments and validations. Moreover, there must be a system of different controls such as pre-trade controls, real-time monitoring, and an ex-post surveillance generating alerts on the next trading day. In some cases, the RTS is more granular than the existing BaFin Circular 06/2013 – for example, by specifying pre-trade controls and testing of algorithms. The requirements address several aspects of risk management such as testing procedures, business continuity arrangements, and kill functionalities as well as setting special requirements for the provision of direct electronic access. In addition, firms will have to implement effective IT security measures as safeguards against cyber-attacks, and conduct penetration tests and vulnerability scans. They will also have to implement an IT strategy and effective IT management processes to ensure the reliability and inherent stability of their trading systems. In my view, this is necessary to ensure orderly markets and to cope with the specific risks of an ever-increasing use of automated trading technology.

Thank you for this interesting conversation.

Infopool

News

New EFL Tier-2 Partner

We are pleased to announce that as of August 2015, the USD AG has joined the E-Finance Lab as a new tier-2 partner. The USD AG provides high-quality services around the important topic of security and offers solutions for protecting companies against hackers and other criminals. USD was founded in 1994 and is head-quartered in Neu-Isenburg. Welcome to the E-Finance Lab!

ISPRAT Research Grant for Layer 1

Layer 1 raised a research grant for staffing a position of a research assistant for one year from the "Interdisziplinäre Studien zu Politik, Recht, Administration und Technologie e.V." (ISPRAT) for conducting research in the area of information system infrastructures. The application was submitted by Prof. König in collaboration with the former EFL member Prof. Beck (IT University Copenhagen).

Professor Skiera Awarded as Outstanding Reviewer

Prof. Skiera received the Journal of Marketing 2015 Outstanding Reviewer award. Congratulations!

Professor Skiera and Co-Authors were Finalist for the MSI/H. Paul Root Award

Prof. Skiera and his co-authors were finalist for the 2014 MSI/H. Paul Root Award of the Marketing Science Institute and the American Marketing Association with the paper: Schulze, Christian; Schöler, Lisa; Skiera, Bernd (2014), "Not All Fun and Games: Viral Marketing for Utilitarian Products", Journal of Marketing, Vol. 78, Issue 1, 1-19.

New Colleague at the Chair of Prof. König (layer 1)

Clara Ament has joined the team of Prof. König (layer 1) in mid September 2015 as doctoral student. She received a Master in Management (Finance and Information Management) from the University of Frankfurt. In between, she worked in business consulting. Welcome!

Benjamin Clapham receives Maravon Markets Award 2015

Benjamin Clapham (layer 2) receives the Maravon Markets Award 2015 for his master thesis "Price Discovery in Fragmented Markets – An Event Study Based on Trading Data from Deutsche Börse and BATS Chi-X Europe", supervised by Prof. Peter Gomber and Kai Zimmermann. Maravon assigns the prize to the best academic theses concerning financial market research. Congratulations!

TU Darmstadt is one of the leading Universities regarding DFG Funding in Engineering Sciences

TU Darmstadt has been very successful in funding acquisition from Deutsche Forschungsgemeinschaft. In engineering sciences, TU Darmstadt occupies the 2nd place in the new Forschungsatlas of the DFG.

Selected E-Finance Lab Publications

Clapham, B.; Haferkorn, M.; Zimmermann, K.:

Does Speed Matter? The Role of High-Frequency Trading for Order Book Resiliency.

In: 13th International Paris Finance Meeting, 2015.

Gomber, P.; Sagade, S.; Theissen, E.; Weber, M.; Westheide, C.:

The State of Play in European Over-the-Counter Equities Trading.

In: Journal of Trading; 10 (2015) 2, pp. 23-32.

Neufeld, F.; Benthaus, J.:

Responding to Customer Demand: Investigating Customer Agility of Financial Institutions.

In: Proceedings of the 21st American Conference on Information Systems (AMCIS 2015), Fajardo, Puerto Rico, 2015.

Hisius, M.; Beck, R.:

Effectiveness of Corporate Social Media Activities in Increasing Relational Outcomes.

Forthcoming in: Information & Management (2015).

Holloway, M.; Schuller, D.; Steinmetz, R.:

Customized Cloud Service Quality: Approaching Pareto-Efficient Outcomes in Concurrent Multiple-Issue Negotiations.

Forthcoming in: Proceedings of the 8th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2015), Limassol, Cyprus, 2015.

For a comprehensive list of all E-Finance Lab publications see

<http://www.efinancelab.com/publications>

E-FINANCE LAB SPRING CONFERENCE 2016

The E-Finance Lab cordially invites you to its annual Spring Conference. The event will be held on February 16th, 2016, at Campus Westend of Goethe University Frankfurt and is organized by Prof. König and his team (layer 1). Participants have the chance to discuss the demand for, solutions from, and applications of identifiers in the financial world with speakers from science and practice. In this context, we are proud to announce Prof. John Leslie King, University of Michigan, USA as our keynote speaker. Please find further information on our website (<http://www.efinancelab.de>), where you can also register for the event. As always, the participation is free of charge.

Infopool

RESEARCH PAPER: TWEETS AND TRADES: THE INFORMATION CONTENT OF STOCK MICROBLOGS

The goal of this paper is to investigate the relationship between 250,000 stock-related Twitter messages (i.e., message sentiment and message volume) and financial market activity (i.e., abnormal stock returns, trading volume, and volatility). The results show that buy signals (i.e., bullishness of sentiment) are followed by abnormal returns while sell signals have no predictive power for returns on a daily basis. Message volume is significant only in explaining trading volume, but not returns or volatility. Thus, it seems that online investors have matured since the introduction of Social Media platforms more than 10 years ago. Quality and content (i.e., bullishness) appear to be more important than quantity (i.e., message volume) for returns.

Sprenger, T. O.; Tumasjan, A.; Sandner, P. G.; and Welpe, I.
In: *European Financial Management*, 20 (2014) 5, pp. 926-957.

RESEARCH PAPER: FINANCIAL LITERACY AND THE DEMAND FOR FINANCIAL ADVICE

The low level of financial literacy across households suggests that they are at risk of making suboptimal financial decisions. In this paper, the authors analyze the effect of investors' financial literacy on their decision to demand professional, non-independent advice. They find that non-independent advisors are not sufficient to alleviate the problem of low financial literacy. The investors with a low level of financial literacy are less likely to consult an advisor, but they delegate their portfolio choice more often or do not invest in risky assets at all. The authors explain this evidence with a highly stylized model of strategic interaction between investors and better informed advisors with conflicts of interests. The advisors provide more information to knowledgeable investors, who anticipating this are more likely to consult them.

Von Calcagno, R.; Monticone, C.
In: *Journal of Banking & Finance*, 50 (2015), pp. 363-380.

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 or mail your business card with the note “please printed newsletter” to

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The Internet-type newsletter uses short teaser texts complemented by hyperlinks to further information resources in the Internet. To subscribe, please send an E-mail to

newsletter@efinancelab.com.

Further information about the E-Finance Lab is available at
www.efinancelab.com.



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