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Relying on the “Rules of the Game”
in the U.S. Options Market

Corporate Cost of Borrowing:
TRACE on Syndicated Loans

The Business Value of Colocation
as an ICT Sourcing Strategy

Algorithmic Operations



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Editorial

Relying on the “Rules of the Game” in the U.S. Options Market

Gary Katz



Gary Katz,
CEO and President,
International
Securities Exchange

Over the past decade, the U.S. options market has moved almost entirely to an electronic trading environment, following the electronic migration that was already well underway internationally. In May 2000, the International Securities Exchange (ISE) introduced the first all-electronic options exchange in the U.S. Shortly thereafter, the existing floor-based markets followed suit and many introduced a hybrid market model that offers a choice of electronic order execution or manual, floor-based trading. In recent years, scalable technology infrastructure and highly portable trading architectures have spurred the proliferation of even more electronic options exchanges in the U.S. The three most recent entrants – Nasdaq Options Market (NOM), BATS Options, and the Chicago Board Options Exchange’s C2 – are all offshoots made possible in part due to the existing technology platforms of their parent companies. As other

exchanges replicate this multi-platform model and technology further decreases the barriers to new entrants, this proliferation will continue. With nine U.S. options exchanges and counting, there are no signals that the race to launch new markets will abate.

With fragmentation of the U.S. options market has come intense competition. In a competitive electronic environment, order flow shifts rapidly among different markets in response to factors such as exchange fees, trading functionality, and technology latency. The Securities and Exchange Commission (SEC), which regulates the U.S. options and equities markets, has rules in place for a National Market System that mandates electronic linkages among trading venues. Through the electronic linkage framework, options exchanges must effectively route orders to execute against the National Best Bid or Offer (NBBO), ensuring that customers receive the best available price in the market. A similar structure exists among the U.S. equities markets.

Market fragmentation and the structure of the National Market System have come under intense scrutiny following the “Flash Crash” that occurred on May 6th, 2010. Analysts have honed in on three factors that may have contributed to

the sudden crash and recovery that the financial markets experienced that afternoon: the speed of electronic trading, the rapid pace at which orders can flow from one trading venue to the next, and the liquidity providers’ ability to jump in and out of the market in fractions of a second. However, I would argue that execution speed, automated order routing, and the absence of obligations for electronic liquidity providers are red herrings. Impeding the role that technology plays in the markets would have lasting deleterious effects, and significantly would create a false sense of security. In addition, obligations have never worked historically since market making firms are not willing to catch a falling knife by its point. The consequences of not fulfilling obligations are always small relative to putting the firm out of business.

Keeping this background in mind, it is informative to contrast the market structure of the U.S. options markets with that of the U.S. equities markets and to compare how each performed on May 6th. The options exchanges have largely uniform rules and adhere to the same standards for halting trading in a product. Each exchange also has full transparency around when potentially erroneous trades can be reviewed and broken. The rules in the options market were consistently applied, and as a result of this level playing field, the options markets performed extremely well during that very volatile day. As the joint report published by the SEC and Commodities Futures Trading Commission on the events of May 6th states, “In general, the options markets and participants reported that trading in options

did not experience similar disruptions as in the underlying securities markets.”

The real lesson we learned on May 6th is that market fragmentation, intense competition, and high-speed electronic linkages can all exist in a healthy environment like the U.S. options market as long as there is a level playing field. Exchanges and alternative trading facilities need to operate under a consistent set of rules that support and promote investor confidence. A product cannot be paused on one venue while orders continue to execute on another. A stock cannot be in “go slow” mode on one exchange while it is trading in microseconds on another. Competition to differentiate our marketplaces, or to gain a technological edge, cannot get in the way of the long-term health and growth of the industry. When investors believe markets are fair and orderly, confidence rises and is the catalyst for future expansion.

Over the past decade, the rapid growth of exchange-traded products fostered a widely held belief that liquidity is guaranteed. On May 6th, that assumption was directly challenged and proven false. In times of stress, liquidity can be mobile and fleeting – and it is by no means guaranteed. To create a market environment that promotes and preserves liquidity in all market conditions, regulators must champion the principles of market transparency, consistency, and neutrality. The “rules of the game” must be well established and consistently applied across trading venues. With this framework in place, the U.S. options markets fared well during the plunge of May 6th. Without it, we saw firsthand how quickly the markets can capsize.

Research Report

Corporate Cost of Borrowing: TRACE on Syndicated Loans

TRADITIONALLY, THE COST OF DEBT IS SOLELY SEEN DEPENDENT ON FIRM OR DEBT CHARACTERISTICS. HOWEVER, INCREASED PRICE TRANSPARENCY AS CAN BE FOUND IN THE U.S. CORPORATE BOND MARKET HAS REDUCED CORPORATE BOND YIELDS. THE OBJECTIVE OF THIS WORK IS TO MEASURE THE SPILL-OVER EFFECT OF INCREASED PRICE TRANSPARENCY IN CORPORATE BONDS ON THE COST OF CORPORATE BORROWING OF SYNDICATED LOANS BY MAKING USE OF A NATURAL EXPERIMENT, I.E., THE INTRODUCTION OF THE TRACE SYSTEM FOR BONDS.

Markus Fischer

Introduction

Does an increase in price transparency in one corporate financing source (i.e., public bonds) have an impact on the cost of corporate borrowing of another financing source (i.e., syndicated loans)? This is an important question as corporate bonds and syndicated loans are seen as close substitutes and an issuer's cost of capital is affected by an asset's liquidity. A reduction in information asymmetry by increasing transparency in the U.S. corporate bond market has improved liquidity and thereby decreased corporate bond yields (Edwards et al., 2007; Goldstein et al., 2007), which could also influence the cost of borrowing in the syndicated loan market, suggesting a kind of market efficient spill-over effect from bonds to syndicated loans. In order to examine this potential effect on syndicated loan spreads, we make use of a natural experiment with the implementation of the TRACE

system for bonds in July 2002 and by looking at a potential spill-over effect to loans of public non-financial U.S. borrowers between 1987 and 2008. TRACE (Trade Reporting and Compliance Engine) led to mandatory reporting of all over-the-counter trades in the secondary market for corporate bonds. A graphical overview of the introduction of TRACE is given in Figure 1.

Motivation

According to the life cycle theory, a growing firm emerges over its life cycle from borrowing from a single lender (bilateral bank loan) to using multiple lenders (syndicated loans), and afterwards often taps the public bond market (corporate bonds). However, Sufi (2007) finds that the majority (47%) of the syndicated loans in his sample is taken by publicly listed borrowers with a credit rating and therefore most probably with bonds outstanding.

Related to this, Hale and Santos (2008) and Altunbas et al. (2010) argue that the syndicated loan market is the most powerful substitute to the corporate bond market. Even though many studies research the effect of TRACE on corporate bonds, surprisingly no study has so far looked at a possible effect of TRACE on syndicated loans.

Firms might possibly use either public debt or syndicated loans even if they are in the "most transparent" borrower group. However, Faulkender and Petersen (2006) argue that the exist-

tence of a senior unsecured debt rating is almost always associated with public debt outstanding. This suggests that the same firms use syndicated loans as well as public debt.

Data and Methodology

We construct a data set consisting of a longterm syndicated loan database (LPC) covering the period from 1987 to 2008 (see Figure 2) and combine it with information obtained from Bloomberg and the TRACE system. The data set allows distinguishing between firms having syndicated loans and firms with syndicated loans and bonds outstanding. Since the data set offers the issuance date of both loans and bonds, we are able to separate the financing activities of the firms according to the three different implementation stages of the TRACE: i) before dissemination (before July 2002), ii) firststage dissemination (July 2002 to September 2004) and iii) complete dissemination (since October 2004).

The effect of the introduction of TRACE on loans is estimated using the conventional Difference-

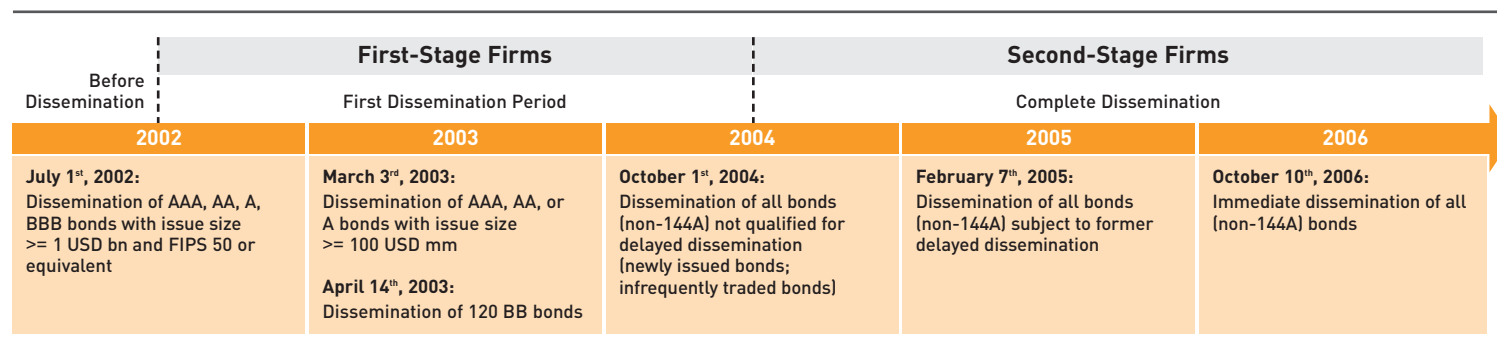


Figure 1: Introduction of TRACE: Timeline

in-Difference (DD) methodology which enables to study the spill-over effect in an analysis that measures the cost of borrowing

- i) for firms with bonds outstanding compared to firms without bonds and
- ii) for bond issuing firms whose bonds are captured by TRACE at two different point of times.

Results: Bond Access

Our results indicate that the implementation of TRACE reduces the loan spreads for firms with bonds outstanding (with a credit rating of either 'A' or 'BBB') but has no effect for firms with no bonds outstanding.

The DD estimate suggests that the implementation of TRACE relatively reduces the loan spread for 'A' rated firms by 8 basis points (bps) compared to firms with no bonds outstanding but with similar Altman Z-Scores. For 'BBB' rated firms, we obtain a DD estimate of -15 bps. Both DD estimates are significant to the 1% level. In a multivariate regression setting the DD estimates of TRACE are also negative (between -12 and -25 bps, dependent on the set-up specification) and significant to the 1% level.

Overall, our findings indicate that TRACE helps firms with bonds outstanding to reduce their corporate cost of borrowing in the syndicated loan market.

Results: TRACE Dissemination

Since TRACE was implemented in two stages, it is an interesting question to study whether the corporate cost of borrowing in the syndicated loan market is different for those firms

	Rated Firm	Not-Rated Firm	All
Before Dissemination Period	8,250	11,891	20,141
First Dissemination Period	2,397	2,395	4,792
Complete Dissemination Period	3,654	3,693	7,347
Total	14,301	17,979	32,280

Figure 2: Syndicated Loan Issuances over the Dissemination Periods

whose bonds were included in the first-stage than for 'second-stage firms'.

For firms rated 'A' or above, we find that the average spreads of syndicated loans to first-stage firms and second-stage firms show no significant difference prior to the implementation of TRACE. For loans issued since October 2004 (complete dissemination) the spreads are also close to each other for the two groups (30 bps to 28 bps). However, a significant difference (to the 5% level) for the first-dissemination period which spans from July 2002 to September 2004 exists. First-stage firms pay lower spreads for syndicated loans (36 bps) than second-stage firms (44 bps). The results for the average loan spreads for the other two rating categories, namely 'BBB' and non-investment grade rating ('BB' and below), support the findings for 'A' or above rated firms. The multivariate set-up confirms the bivariate findings that firms whose bonds are captured by TRACE from the beginning pay lower spreads compared to firms with bonds not first applicable to TRACE. But after the full implementation of TRACE (since October 2004) this

effect vanishes suggesting that increased transparency in one source of corporate financing beneficially influences the cost of borrowing of another corporate financing alternative.

Conclusion

We can conclude that a positive spill-over effect of TRACE is not only present for firms with bonds compared to firms without bonds, but has also been visible among firms with bonds outstanding. Specifically, the paper contributes to the literature in three important ways.

First, by focusing on the two major corporate financing alternatives, we find evidence that corporate bonds and syndicated loans are not only close substitutes but also impact each other.

Second, our findings provide evidence for market efficiency because since the complete introduction of TRACE in 2004, the difference in loan spreads vanishes as all bond issuers are covered by the TRACE system.

Third, our findings might also offer some implications that are of particular relevance in the

context of the current debate about increasing transparency in the European bond market.

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Research Report

The Business Value of Colocation as an ICT Sourcing Strategy

ESPECIALLY IN THE FINANCIAL SERVICES INDUSTRY, FAST ACCESS TO COMMUNICATION NETWORKS AS WELL AS THE AVAILABILITY OF A HIGH-PERFORMANCE INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) INFRASTRUCTURE IS INDISPENSABLE TO ACCELERATE DIGITAL BUSINESS TRANSACTIONS BETWEEN GEOGRAPHICALLY DISPERSED ORGANIZATIONS. SINCE COLOCATION AS AN ICT SOURCING STRATEGY MAY LEAD TO INCREASED OPERATIONAL AGILITY, WE CONDUCTED AN EMPIRICAL STUDY TO INVESTIGATE THE POTENTIAL BUSINESS VALUE GENERATION.

Immanuel Pahlke
Roman Beck

Jens Vykoukal

Introduction

Today, nearly all industry sectors and companies use the internet as a backbone for their business applications and processes operating in globally connected value chains and markets. Consequently, the competitiveness on an internet-based, global market increasingly depends on a fast and highly reliable ICT infrastructure. For example, electronic trading platforms for financial securities (i.e., algorithmic trading platforms) benefit from direct access to central internet exchange points which provide low network latency to stock exchanges world-wide. Since machines can react to changes in the market instantaneously, the speed of execution and prompt availability of real-time market data have become key success factors for traders

and investment bankers (Gsell, 2009). This is not only important for the financial institutions, but also for companies from other industry sectors, such as Internet Service Providers (ISPs), network carriers, wide area network (WAN) providers, e-commerce and logistics firms, as well as many other businesses which require fast access to communication and data networks and a reliable ICT infrastructure. In general, the ability to react quickly to market developments is becoming more and more important for many business models and their success (Sambamurthy et al., 2003).

While the internet is globally accessible, there are only a few major internet nodes in the world that are located in areas where high data

center capacity, reliable power supply, and high-performance ICT infrastructures, etc. are available, such as in New York, London, or Frankfurt (Tier 1 Research, 2009). Therefore, specialized colocation centers strategically located close to these locations provide basic data center services, such as space (e.g., for server racks), high internet bandwidth, reliable power supply, sophisticated cooling systems, and fire extinguishing solutions for customers who manage and operate their ICT systems themselves. The combination of being located at a major internet hub together with the availability of data center capacities attracts even more network carriers, WAN providers, and ISPs which, in turn, make these locations even more interesting for other customers due to network effects. This creates a competitive digital marketplace for ICT services for companies demanding redundant, high-speed internet access for their latency-critical business processes.

In this context, a colocation strategy is defined as the decision of companies to use colocation centers to leverage the ICT infrastructure made available by infrastructure providers and to utilize ICT services offered by the residing services providers. Moreover, colocation strategy adoption refers to the extent to which specific business activities of an organization are facilitated by the use of ICT infrastructure and services provided within a colocation center.

Colocation as an ICT Sourcing Solution for Financial Services Providers

An industry that benefits most from services provided by colocation providers is the finan-

cial services sector (especially in the areas of commodities and securities trading). The speed and reliability of the ICT infrastructures have become a critical element for the financial services sector since they accelerate the execution of trades significantly. Therefore, being under the same roof just a cross-connect away from relevant business partners may provide competitive advantage. In this context, the colocation sourcing strategy can help financial institutions to design, develop, and deploy ICT infrastructure solutions to meet the following challenges:

Speed and Scale – As the need for low-latency market data access and trade execution grows, colocation providers offer multiple high-performance interconnection points with close proximity to major liquidity providers in the world, like, e.g., New York, London, or Frankfurt. Scaling is another challenge for which colocation centers can provide an effective solution since they allow responding to increases in trade and market data volumes driven by financial volatility and regulatory authorities.

Ecosystem Access – Successful electronic trading operations are facilitated by the access to the right markets and liquidity providers. Due to this, colocation providers often house a large number of network carriers, WAN providers, ISPs, managed service providers, and specific extranets. These service providers improve the connection with the ecosystem of trade and post trade providers as well as the sell-and-buy side communities in leading financial markets.

Reliable and Cost-Effective – Colocation providers can also offer specific services to design and configure the data center space and power specifications to support the unique infrastructure needs of the customers. This customization ability helps to optimize capital expenditures. In an industry where downtime equals lost revenue, remote technical support for deploying, maintaining, and troubleshooting customers' IT equipment is crucial for their business success. Certified processes and procedures for security and monitoring, scheduled infrastructure testing, fast incident response, and proactive communication provide resilience and reliability for customers' operations.

Empirical Investigation

In order to empirically analyze the business value of a colocation strategy on an organizational level, a questionnaire-based field study was conducted. The study aimed at strategic decision makers from different German companies and industry sectors that have adopted a colocation strategy for at least one of the following business activities:

- (1) hosting of business-critical applications and platforms,
- (2) hosting of storage or storage area networks,
- (3) hosting of web pages, internet portals, e-business infrastructures, and
- (4) access to external ICT infrastructures (Point-of-Presence).

These four different business activities were identified by an expert panel as being especially appropriate and vital for the investigated industries.

In order to measure the business value of a colocation strategy, we identified operational agility as an appropriate dependent variable for our investigation. Therefore, based on the work of Dove (2001), we define operational agility as an *effective response ability in order to rapidly, efficiently, and accurately adapt to any unexpected (or unpredictable) change in both proactive and reactive business/customer needs and opportunities without compromising with the cost or the quality of the product/process*. Based on this definition, we operationalized "operational agility" as a dependent variable in order to capture the agility creation momentum of colocation strategy adoption primarily attributed to the operational level. For this purpose, the changes in agility of the four identified business activities introduced above were measured with regard to changes in responsiveness, cost-efficiency, speed, flexibility, quality, and effectiveness.

As discussed before, a colocation strategy provides several benefits for companies (i.e., for financial service institutions) in terms of improvements in agility on the operational level. Therefore, it is reasonable to assume that there is a positive relationship between the extent of colocation and operational agility. Hence, we propose:

Hypothesis 1: A higher extent of colocation leads to higher operational agility.

Moreover, we posit that in turbulent environments, which are characterized by rapid technological changes as well as a high hetero-

geneity and variability of the preferences and demands in the market, companies can further profit from colocation as a flexible ICT sourcing strategy. The capability to assess and respond appropriately to sudden changes is especially vital in turbulent environments as the variety of threats and uncertainties that can emerge is enormous. Organizations will need to leverage their ICT infrastructure in environments where their liquidity and therefore survival depends on the ability to anticipate the unexpected and react accordingly in uncertain conditions (Sambamurthy et al., 2003). Accordingly, environmental turbulence (measured by technological turbulence and market turbulence) can be considered as a moderator of the relationship between the extent of colocation and the agility realized by colocation strategy. A company needs to focus on the development and alignment of its resources and to apply them to the changing environmental conditions in order to be able to produce innovations and respond to environmental change in a cost-efficient and timely manner. A colocation strategy can be considered to be a means of supporting those adaptabilities through capacity and capability adjustments. Thus, the following hypothesis is proposed:

Hypothesis 2: In turbulent markets, colocation strategy adoption leads to higher operational agility compared to stable market environments.

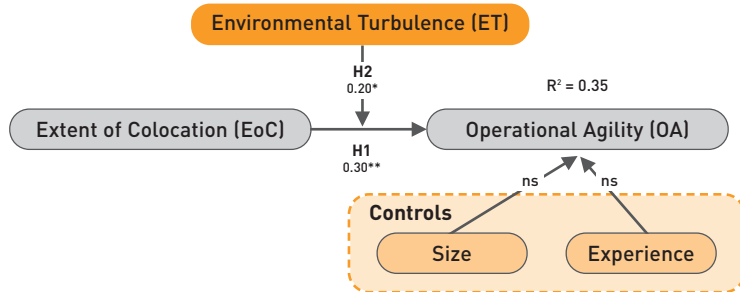
In order to account for differences among the investigated companies, different control variables, such as "company size" and "experience", were included.

Discussion of the Results

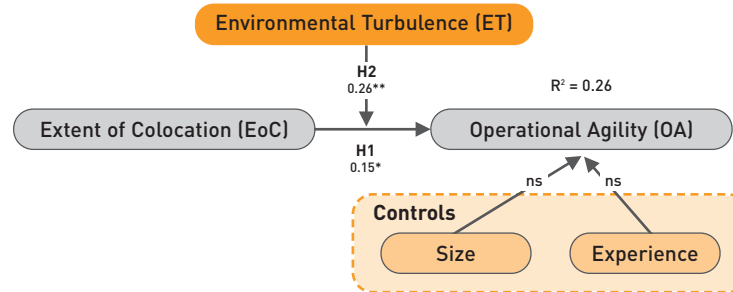
In October 2009, 1012 potential participants of a German business panel were invited to respond to a survey by filling out the questionnaire administered online. After one week, an email reminder was sent out to non-respondents. The potential participants were asked to completely fill-out the questionnaire to avoid missing values that can cause bias due to systematic differences between observed and unobserved data. In total, 142 responses were returned, indicating a response rate of 14 %. In order to investigate the adoption of colocation strategy in the different business activities, we divided the total sample into four sub-samples. Each subsample contains data of companies that have adopted colocation as an ICT infrastructure strategy for one specific business activity described above.

The results of our empirical investigation (depicted in Figure 1) clearly illustrate how the organizational adoption of a new ICT infrastructure strategy (i.e., sourcing of colocation services) leads to increases in operational business agility. Moreover, the survey data suggests that this relation is positively moderated by environmental turbulence. Accordingly, this study discovered that the adoption of a colocation strategy has a significant and positive impact on the agility of business activities in digital networks, resulting in increases in responsiveness, cost-efficiency, speed, flexibility, quality, and effectiveness of application, storage, and Web hosting, as well as access to external ICT infrastructure.

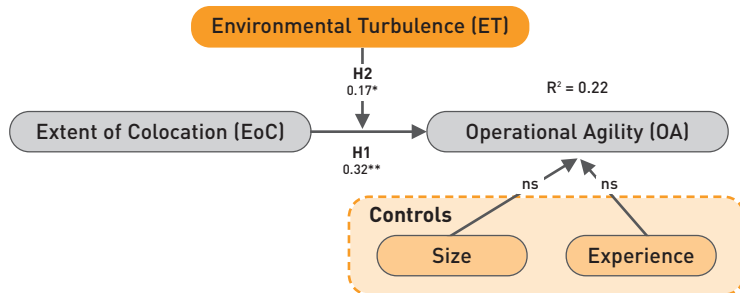
Application Hosting (n = 82)



Storage Hosting (n = 68)



Web Hosting (n = 92)



Access to External ICT Infrastructure (n = 86)

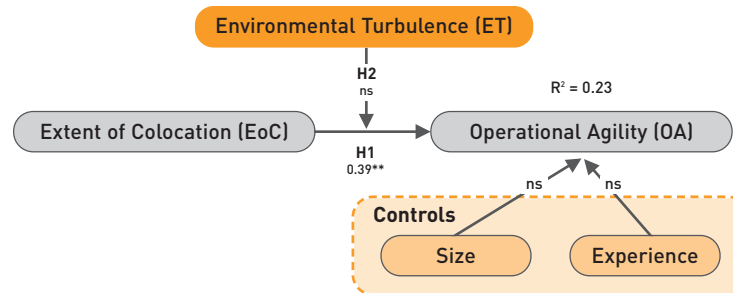


Figure 1: Empirical Results; ** p < 0.01, * p < 0.05 (two-tailed)

Exploring the relations more closely, the empirical results indicate that, in particular, a higher extent of colocation activities for the *access to external ICT infrastructure* leads to operational agility improvements due to efficient connectivity opportunities (direct access to different carriers, WAN providers, and ISPs). Moreover, Figure 1 shows that especially business *application hosting* benefits from colocation activities with respect to agility improvements. Flexible and scalable capacity adjustments as well as efficient and situational access to computing resources and a reliable

ICT infrastructure are of central importance for different kinds of business applications. Examples are electronic trading platforms (for commodities and securities), business intelligence applications (e.g., for risk management), as well as distributed (web-based) applications for mailing, messaging, and collaboration that need to be readily accessible from anywhere and anytime. This might also be an explanation for the comparably high path coefficients of the research model analyzing the hosting of Web pages, Internet portals, and e-business infrastructures (*Web hosting*). In contrast to this,

the relative low path coefficient for storage hosting indicates a lower positive impact from colocation sourcing activities on the operational agility of *storage hosting*. This might be due to the fact that outsourcing of business-critical data increases strategic risk (e.g., risk of industrial espionage) as well as operational risk (e.g., risk of intensified attacks on the “single point of failure”) that may lead to administration and security overhead, thereby lowering the operational agility of storage hosting.

With regard to the financial services industry,

the results indicate that companies operating in highly innovative and turbulent markets significantly benefit from colocation services compared to companies in stable market environments. The market turbulences are therefore beneficial for colocation service providers since potential customers are re-thinking their IT strategy and cost structure and might decide to use colocation services to reduce costs while improving their flexibility in terms of ICT infrastructure adjustments and collaboration opportunities. Especially as the need for low-latency market data and trade execution grows in financial markets, colocation providers offer an advantage by operating multiple high-performance interconnection points to strategic business partners.

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Insideview

Algorithmic Operations

INTERVIEW WITH TILL GULDIMANN

Over the past 20 years, business process management focused primarily on straight-through-processing (STP). Recently, a novel concept referred to as Algorithmic Operations (Algo Ops) has entered the picture. What is the difference between STP and Algo Ops?

STP is about organizing business operations into well-defined sequences of steps with a standardized transmission of data between them. The principal goal is to have business units transmit data between themselves without human intervention and translation. Algo Ops represent the next step in automation: repetitive human decision-making is replaced by algorithms programmed into computers. STP designs take a long time, but once implemented usually last years without major modifications. In contrast, algorithms replacing human decisions need to be fine-tuned and adapted to new circumstances and conditions all the time.

Can you please give us examples of where Algo Ops are being used?

Auctions on Ebay, the placement of advertising on websites or the detection and blocking of spam in e-mail are the most obvious examples.

Interestingly, none of these businesses would exist today without algorithms because human decision-making would make the operations far too slow and too expensive.

And where in the financial services industry can Algo Ops be found?

The best known examples are around trading: order routing and high-frequency or algorithmic trading in equities which now represent close to 70% of all equity trading volume in the U.S. Another example is market making in foreign exchange, which for major currencies is today 100% algorithmic. Algorithms are also increasingly used in reconciliation of payment instructions, identification of fraud in credit cards, post trade processing and other operational tasks.

What are the challenges resulting from Algo Ops in terms of IT infrastructures on the one hand and workflow management on the other hand?

Algo Ops, which require continuous fine-tuning, reside within an STP environment, which is relatively stable. Furthermore, algorithms and their continuous improvements need to be



Till Guldemann,
Vice Chairman,
SunGard Data Systems

tested in live parallel environments before they can get deployed. This is like changing the jet engines in a flying airplane.

Will human decisions be replaced by algorithms some day? Which job will humans perform in this “new world”?

Not exactly, remember it's humans who design and optimize the algorithms in the first place and its humans again who deploy them. But once deployed, they replace humans who made repetitive decisions. In this new world humans are tasked with constantly improving the algorithms instead of wasting their time making the same operational decisions over and over again.

The now famous “Flash Crash” of May 6th, 2010, when the Dow Jones Index dropped nearly 10% within minutes, is blamed on algorithms spinning out of control. What measures are taken to prevent Algo Ops to get out of hand?

Academic and official reviews of the events indicate that it was probably the complex interaction of different trading algorithms deployed by many market participants coupled with perhaps outdated trading rules and regulations

which caused the crash. The U.S. equity trading system as a whole had become unstable. The obvious first reaction was to blame it on the new kids on the block: the trading algorithms. The first proposed solution was to ban them or to make high-frequency trading uneconomical by introducing transaction taxes. With a little more time the market realized that adapting the trading rules to the new environment and reintroducing circuit breakers may be a better solution. With even more time most participants improved their algorithms so that next time they could benefit from the distortion by stepping in and take the opposite position, i.e. make the market function properly. The lessons are: First, we need more market transparency coupled with diversity of algorithms – open competition is the best panacea against market distortions. Second, we need more sophisticated circuit breakers which automatically contain and prevent a local instability from spreading and bringing down entire systems. Others have solved a similar challenge before when they made national high voltage power nets more resilient.

Thank you for this interesting conversation.

Infopool

News

Team Members

As a new member of the cooperative Ph.D. program Dipl.-Kfm. Christoph Seebach joined the E-Finance Lab. After completing his studies in business administration at Goethe-University Frankfurt, Mr. Seebach has started to work as a consultant in the core banking division of IBM Global Business Services. Within the E-Finance Lab, Mr. Seebach is assigned to the IT infrastructure layer and is supervised by Prof. Dr. Roman Beck. In his dissertation, Mr. Seebach deals with the question of how the phenomenon of "collective intelligence" may be used for business foresight.

M.Sc. André Miede (layer 1), member of the cooperative Ph.D. program, has received his doctoral degree on November 26th, 2010 with a dissertation on "Crossorganizational Service Security – Attack Modeling and Evaluation of Selected Countermeasures". Congratulations!

EU Project Crawls the Web for Hidden Financial Expertise

The new research project FIRST, co-funded by the European Union, aims at extracting relevant financial information from the vast amounts of unstructured data present in the World Wide Web. Its goal is to use methods of artificial intelligence to support financial decision making. The project started in October 2010 and will be conducted over the course of three years. The FIRST consortium consists of eight European partners from Germany, Italy, Slovenia, and Spain, including the Chair of e-Finance at Goethe-University Frankfurt (layer 2). With our expertise in the domain of financial decision support systems, we will contribute to the requirements analysis and the development of financial decision support models. Please visit www.project-first.eu for further information.

E-Finance Lab Spring Conference 2011: Financial System Stability – Can Cloud Computing Contribute to a Solution?

The annual Spring Conference on February 22nd, 2011 (starting 2 p.m.) will deal with the topic "Financial System Stability – Can Cloud Computing Contribute to a Solution?" International experts from science and industry will exchange information and opinions about current developments and challenges of risk management, decision support, market transparency, and appropriate technical innovations. We would like to invite you to the conference on the Campus Westend. Attendance is free of charge.

Further information on agenda and registration is available under www.efinancelab.de/events/conferences/spring-conference-2011/

Selected E-Finance Lab publications

Bruggen, van G. H.; Spann, M.; Lilien, G. L.; Skiera, B.:

Prediction Markets as Institutional Forecasting Support Systems.
In: Decision Support Systems 49 (2010), pp. 404 – 416.

Fischer, M.; Steffen, S.:

Bank Capital Ratios, Competition and Loan Spreads.
In: Financial Management Association Annual Meeting, New York, USA, 2010.

Fischer, M.:

Corporate Cost of Borrowing: TRACE on Syndicated Loans.
In: 18th Foro de Finanzas, Annual Meeting, Elche, Spain, 2010.

Groth, S.; Meyer, A.; Muntermann, J.:

IT-gestützte Automatisierung in der Fonds-administration.
In: Zeitschrift für das gesamte Kreditwesen, Ausgabe Technik 3 (2010), pp. 20 – 23.

Lampe, U.; Siebenhaar, M.; Schulte, S.; Steinmetz, R.:

A Graphical Evaluation Tool for Semantic Web Service Matchmaking.
In: Proceedings of the 9th International Semantic Web Conference. Shanghai, China, 2010.

Lewandowska, O.:

Is a Full Scale Straight Through Processing of OTC Derivatives Possible?
In: FinanceCom, 2010.

Messerschmidt, C. M.; Lilienthal, M.; Skiera, B.:

Integration of Technology Perceptions in Discrete Choice Experiments: Connecting CBC and TAM via the No-Choice-Option.
In: Proceedings of the Australia and New Zealand Marketing Conference, Christchurch, New Zealand, 2010.

Miede, A.; Lampe, U.; Schuller, D.; Eckert, J.; Steinmetz, R.:

Evaluating the QoS Impact of Web Service Anonymity.
In: Proceedings of the Eighth IEEE European Conference on Web Services, Ayia Napa, Cyprus, 2010.

Skiera, B.; Eckert, J.; Hinz, O.:

An Analysis of the Importance of the Long Tail in Search Engine Marketing.
In: Electronic Commerce Research and Applications 9 (2010), pp. 488 – 494.

Wolf, M.; Beck, R.; Vykoukal, J.:

An Integrated Perspective on IT Project Alignment in Highly Dynamic Environments – A Multi-Level Analysis.
In: Proceedings of the 31st International Conference on Information Systems, Saint Louis, Missouri, USA, 2010.

Vykoukal, J.; Beck, R.; Wolf, M.:

Impact of Pressure for Environmental Sustainability on Grid Assimilation – Empirical Results from the Financial Services Industry.
Forthcoming in: Australasian Journal of Information Systems, 2010.

For a comprehensive list of all E-Finance Lab publications see: <http://www.efinancelab.com/publications>

Infopool

RESEARCH PAPER: A SERVICE SCIENCE PERSPECTIVE ON STRATEGIC CHOICE, IT, AND PERFORMANCE IN U.S. BANKING

Financial services play a key role in today's information-based economy. Especially in banks, information technology (IT) acts as an enabler for successfully pursuing business strategies. By employing a service-oriented business strategy (customer intimacy), small banks with less than USD 100 million in assets continue to report higher profit margins than larger banks, which are mainly focused on productivity and throughput (operational excellence). The challenge by moving toward customer intimacy is to grow without undermining service quality. In his research article, the author uses a balanced panel data set from 43 U.S. banks and finds that banking strategies are becoming more customer-focused, especially in small banks with less than USD 100 million in assets. Yet for large banks in particular, IT remains resolutely operations-focused, which could have a negative effect on future performance. In this way, the paper shows how a misalignment could restrict future banking performance and contributes to the service science literature by using size to dissect banking strategies and performance.

Tallon, P. P.

In: *Journal of Management Information Systems* 26 (2010) 4, pp. 219 – 252.

RESEARCH PAPER: IMPACT OF MAD MONEY STOCK RECOMMENDATIONS: MERGING FINANCIAL AND MARKETING PERSPECTIVES

Using an event study methodology to uncover the size of abnormal market reactions to stock recommendations on Mad Money, an American finance television program on CNBC with Jim Cramer, the authors investigate persistent variations in investor response to stock recommendations targeting naive investors. Although Mad Money viewers are actively looking for recommendations, the findings show that every individual recommendation is still subject to many of the same communication challenges as traditional advertisements. They find that message length and source credibility have a positive influence on the size of the market reaction to a "buy" recommendation. If the number of total recommendations in the show increases, the market response to a recommendation decreases. The primacy (first recommendation) and the recency (last recommendation) effect of stock pick order are associated with a stronger market response, whereas the primacy effects are stronger.

Karniouchina, E. V.; Moore, W. L.; Cooney, K. J.

In: *Journal of Marketing* 73 (2009), pp. 244 – 266.

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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For more information about the House of Finance, please visit www.hof.uni-frankfurt.de.

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