

April 2014



Welcome to the first issue of Velocitates for 2014. One of the core tenets of the SWIFT Institute is the dissemination of knowledge and information, and through this quarterly newsletter that is exactly what we will do.

2014 is shaping up to be busier and more exciting than last year. As we put the first quarter behind us we have already issued a new working paper, a new research grant and four new calls for proposals, held our first conference, have planning underway for our next conference, and an exciting new programme ready for Sibos Boston.

In January we published new research on the Interbank Lending Market. You can download the paper [here](#). We have recently given a new grant to look at domestic and cross-border clearing and settlement systems in Asia. And new calls for proposals have been issued focused on operational risk in investment management institutions; securitisation in China's capital market; transformation in payment and securities system infrastructures; and cross-border low value payments regional integration.

Last week we held our first event of the year, *The Future of Financial Standards* conference, on 25th March in London. Hosted in partnership with SWIFT's Standards Forum and The London School of Economics and Political Science, the day attracted more than 200 people to listen to and engage in debate on the gap between regulatory intent and regulatory outcome, and how standards might just be able to play a role in helping to bridge that gap.

Planning for our second conference in 2014 is underway. It will be focused on cyber security, and held in Genval, just outside Brussels, in November. Our academic partner for this event is Belgium's KU Leuven.

Sibos takes place in Boston this year, and the SWIFT Institute is proud to be launching a new programme for this annual gathering of the global financial industry. Sibos University will be run on Monday 29th September, with further events carrying on throughout the week. It will feature leading academics giving 30-minute lectures on a wide range of topics impacting the financial industry. We will also host a special panel session debate on the Monday focused on regulation.

Our hot topic article this month looks at virtual currencies. They are in the news daily, with both strong supporters and detractors. For most people, however, I suspect they are a curiosity. One that warrants academic research perhaps. What exactly are virtual currencies? How do they work? How do they relate to traditional currencies? Or do they? And should they?

We are in the midst of another interesting year. I look forward to bringing you the next issue of *Velocitates* in the coming months.

*Peter Ware*

Topics in this issue

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## News

### New Research - A Dynamic Stochastic Network Model of the Unsecured Interbank Lending Market

#### **Authors**

- Francisco Blasques – VU University Amsterdam
- Falk Bräuning – VU University Amsterdam
- Iman Van Lelyveld – De Nederlandsche Bank

The interbank lending market, whereby banks extend loans to each other, is crucial for two reasons. First, it is essential for the banks' day-to-day liquidity management. Second, it marks the first step of the monetary transmission mechanism which allows central banks to adjust interest rates in the economy. As such, central banks typically focus on steering interest rates in the interbank lending market as a means of altering credit conditions in the real sectors.

The drop in transaction volumes in the interbank lending market may have been a contributing factor to the financial crisis of 2007/08. In particular, worries about counterparty credit risk of banks have adversely affected credit availability in the interbank lending market and conditions in the unsecured interbank segment where loans are uncollateralised. The fear of financial contagion amplified these effects.

The research developed by Blasques, Bräuning and Van Lelyveld for the SWIFT Institute contributes to the understanding of the role that credit risk uncertainty plays in the interbank lending market. In particular, their research attempts to describe how banks may pursue monitoring activities in order to increase the information they have about their partners and ultimately reduce the risk and uncertainty associated with lending in the interbank market. As such, the interbank market is modelled as a network where banks select counterparties to approach for borrowing, negotiate trading volumes and interest rates bilaterally and acquire information to mitigate credit risk uncertainty (peer monitoring). Interbank lending between two banks is only feasible if the lender's perceived credit risk about a borrower is sufficiently low.

The findings of this research are relevant for central bankers and financial regulators, and subsequently the banks themselves. The research suggests that policies that reduce credit risk uncertainty might play an important role in fostering interbank lending and in re-establishing an active interbank market. Specifically they find that repeated lending between banks may significantly reduce asymmetric information and improve credit conditions due to lower credit risk uncertainty. Reduction in credit risk uncertainty may thus be achieved by widening the interest rate corridor of the central bank (discount window) to increase the spread between depositing and borrowing money from the central bank. This will reduce the attractiveness and of outside options and the increased use of interbank lending will lead to more informed choices leading to lower rates.



The SWIFT  
Institute



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE

## The Future of Financial Standards

25th March 2014 at Level 39, London

### Partners

- The SWIFT Institute
- SWIFT's Standards Forum
- The London School of Economics and Political Science

Our first event of 2014 was *The Future of Financial Standards*, in partnership with SWIFT's Standards Forum and The London School of Economics and Political Science. Held on 25th March at Level 39 in London, it was a resounding success, attracting more than 200 people.

CFTC (Commodity Futures Trading Commission) Commissioner Scott O'Malia gave the opening keynote [speech](#), followed by academic presentations and panel discussions. The day featured great insights, dialogue and ideas on bridging the gap between regulatory intent and regulatory implementation.

Finextra attended and did a live blog throughout the day, the best of which you can find [here](#). Finextra also conducted several interviews throughout the day, two of which are available below:

- Commissioner [Scott O'Malia](#), CFTC
- [Andrei Kirilenko](#), Professor of the Practice of Finance - MIT Sloan School of Management



## Sibos University

Launching at Sibos 2014 in Boston

***Better than a thousand days of diligent study is one day with a great teacher***, so says a Japanese proverb. The SWIFT Institute aims to bring that proverb to life at Sibos 2014 in Boston, where we will launch Sibos University.

The SWIFT Institute is proud to bring an exciting new programme to this year's Sibos. The inaugural Sibos University features leading academics giving 30-minute lectures on a wide range of topics

impacting the global financial industry. We will also host a special panel session debate on regulation.

You will have the opportunity to listen to and meet with academics from universities in the greater Boston area, as well as further afield in the USA, Canada, the UK, the Netherlands and Australia.

Sibos University will run all day on Monday 29th September, from 9am through 5:30pm, followed by a cocktail reception. Throughout the remainder of Sibos week we will also feature one lunchtime lecture per day on Tuesday, Wednesday and Thursday.

Topics to be covered include:

- Big data
- Cloud
- Data privacy
- Fund flows and performance
- Gender diversity
- Market infrastructures
- Mobile Money
- Productivity
- Regulation
- Standards
- Virtual currencies

Confirmed participants include:

- Renée Adams, Professor of Finance and Commonwealth Bank Chair in Finance - University of New South Wales
- Michael Barrett, Professor of Information Systems & Innovation Studies - Judge Business School, University of Cambridge
- Ron Berndsen, Endowed Professor of Financial Market Infrastructure and Systemic Risk - University of Tilburg
- Susan Christoffersen, Associate Professor, Finance - Rotman School of Management, University of Toronto
- Peter Cowhey, Dean, School of International Relations and Pacific Studies, Qualcomm Chair in Communications and Technology Policy - University of California San Diego
- Michael King, Assistant Professor of Finance and Bank of Montreal Faculty Fellow - Ivey Business School, Western University
- Tom Kirchmaier, Lecturer in Business Economics and Strategy - Manchester Business School and Senior Fellow, Financial Markets Group - The London School of Economics and Political Science
- Andrei Kirilenko, Professor of the Practice of Finance - MIT Sloan School of Management, and Co-Director - MIT Center for Finance and Policy
- M. Lynne Markus, the John W. Poduska, Sr. Professor of Information and Process Management - Bentley University
- Hester Peirce, Senior Research Fellow - Mercatus Center, George Mason University
- Robert Pozen, Senior Lecturer - Harvard Business School and MIT Sloan School of Management, and Senior Fellow - Brookings Institution
- Wanda Orlikowski, Alfred P. Sloan Professor of Information Technologies and Organizational Studies - MIT Sloan School of Management
- Doug Shulman, Senior Fellow - Harvard Kennedy School, Mossavar-Rahmani Center for Business and Government
- Stuart Weinstein, Professor of Practice Informed Legal Education, and Head - Coventry Law School
- JoAnne Yates, Sloan Distinguished Professor of Management - MIT Sloan School of Management

[Sibos 2014](#) will take place at the Boston Convention & Exhibition Center from 29 September to 2 October. You can register for Sibos [here](#). You can keep up to date with the latest agenda [here](#).

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## Hot Topic

### Virtual Currencies: A Question of Trust

The dramatic rise and fall of Bitcoin in recent times has brought the existence of virtual currencies into the eyes of the wider public.

**Ron Berndsen, Head of Oversight Department, Cash & Payment Systems Division, De Nederlandsche Bank and Endowed Professor of Financial Market Infrastructure and Systemic Risk at University of Tilburg**



And with this attention has come questions, specifically from regulators, with regards to the functionality of the virtual currency. How does it work? Who backs it? What is its worth based upon? How should it be regulated? What all of these questions come down to in the end is people's general relationship with money, be it in paper or digital form. It boils down to a question of trust. A more pertinent question perhaps is will people's trust towards virtual currencies dramatically increase in the future?

Professor Dr. Ron Berndsen, Head of the Oversight Department of De Nederlandsche Bank and Endowed Professor of Financial Infrastructure and Systemic Risk at the University of Tilburg, is in the process of examining the role of virtual currencies in today's world. In 2011 he created the concept of a Payments Warehouse entitled "What is happening in Scrooge Digiduck's Warehouse?" to describe the interlocking methods of modern payment systems. He is currently working on where virtual currencies sit in juxtaposition to his Payments Warehouse, a challenge considering how rapidly the landscape of Bitcoin has altered during the first few months of 2014.

#### **In the beginning...**

Having launched in 2009, Bitcoin is an experimental, open-sourced, decentralised, digital currency currently made up of processed data blocks to facilitate near instant payments for real-world goods and services. Bitcoin is currently the most popular, but one of many similarly styled crypto-currencies. The elements of Bitcoin that have boosted its popularity are the fact that payments are considered faster and cheaper than traditional methods of payments, and that payments are designed to be anonymous. Existing traditional payment systems created before the development of the Internet, such as credit cards, do not sit well with the real-time payment environment that is required to conduct financial transactions over the World Wide Web. Modern payment systems need to be available 24/7 and on a worldwide basis – Bitcoin answers this need. Bitcoin also removes the pivotal duties of the central bank including the issuance of currency as legal tender, as well as monitoring and backing of payments. Payments via Bitcoin are considered anonymous because they are made through peer-to-peer technology, meaning they are made directly from one private individual's computer to another with no organisation (such as a bank) residing in the middle of the two parties. Berndsen explained, "There is no official government authority overlooking Bitcoin, therefore there is no central authority responsible for regulation or providing a lender-of-last-resort or liability regime. Bitcoin is essentially governed by CPU units."

[Read full topic discussion](#)

The rise of virtual currencies continues unabated as a leading FX exchange announced it has added Monocoin (MON) to its existing list of over 70 traded instruments. This trend reflects the impact of virtual currencies in today's

Did you know...



increasingly virtual world.

One to watch, Monocoin is based on Monopoly, the fast-dealing property trading game. With the daily turnover of FX reaching \$5.3 trillion in 2013, a 35% increase from 2010, it is set to grow in 2014 and beyond. This growth is widely believed to be driven by virtual currencies.

From Monopoly's Park Lane headquarters, Milburn Pennybags explained, "At Monopoly, we believe that players need to take a chance on FX trading, reaping benefits not only for the players themselves but contributing to a global community chest."

Central bankers and regulators alike are believed to be watching the virtual currency market with interest. Pennybags cautioned that any regulatory intervention must be made with the best interests of the playing community in mind and that they welcomed all efforts to help market players to pass Go. Insiders report that "Get out of jail free" agreement cards for Monocoin speculators are just one of its many appealing qualities. It is also a safe currency to trade, providing hours of fun for the whole family.

For more on this story, click [here](#).

Posted April 1st, 1914

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## Research

### New Working Paper Published

#### ***A Dynamic Stochastic Network Model of the Unsecured Interbank Lending Market***

- Francisco Blasques – VU University Amsterdam
- Falk Bräuning – VU University Amsterdam
- Iman Van Lelyveld – De Nederlandsche Bank

***Our sincere thanks to the researchers, for their efforts and hard work in conducting and completing this research. You can download the paper [here](#).***

### New Grant Issued

#### ***Analysis of Domestic / Cross-Border Clearing & Settlement Systems in Asia***

- Carol Hsu – National Taiwan University
- Sia Siew Kien – Nanyang Business School, Singapore

Carol and Sia's research objective is threefold. First, to identify the set of institutional and technology conditions that facilitate or inhibit the diffusion of STP in Asia. Second, to develop a full

Did you know...



*The name of the SWIFT Institute newsletter, Velocitates, comes from the Latin velocitas meaning swiftness, and in our case the plural therefore swiftnesses. Velocitates appeared in print in the early 1700s in the world's first scientific journal; The Philosophical Transactions published by the Royal Society of London for Improving Natural Knowledge. The journal's aim was, and continues to be, to inform readers of the latest scientific discoveries. A worthy aim, and a goal the SWIFT Institute will strive to emulate.*

and rich understanding regarding the development and challenges associated with the linkage for cross-border trade, clearing and settlement, with a particular interest on the recent launch of the ASEAN Exchanges. Third, to produce practical recommendations in addressing the diffusion of STP for both domestic and cross-border linkage in Asian countries.

## **Research Underway**

Unit Cost of Financial Services  
Network Liquidity Effects  
Impact of the Development of FMI on Economic Growth in Developing Countries  
Cybercrime  
Gender Diversity  
Regulatory Compliance - Extraterritorial Challenge  
Standards & Big Data - 1  
Standards & Big Data - 2  
Clearing & Settlement Systems in Asia

### **Four New Calls for Proposals Issued:**

- The Role of Securitisation in China's Capital Markets - [download](#)
- Assessment and Management of Operational Risk in Investment Management Institutions - [download](#)
- Transformation in the Payment and Securities Settlement System Infrastructure - [download](#)
- Cross-border Low Value Payments and Regional Integration: Enablers and Disablers - [download](#)

For more details visit our web site.

## **Completed Research**

Can mobile money be used to promote savings? Evidence from Northern Ghana  
Common Language in Wholesale Financial Services  
The Internationalisation of the RMB: New Starts, Jumps and Tipping Points  
New Regulations and Collateral Requirements – Implications for the OTC Derivatives Market  
Financing the SME Value Chains  
A Dynamic Stochastic Network Model of the Unsecured Interbank Lending Market

To download the working papers visit our web site.

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## **Conferences**

Every year we will host at least two conferences where we will bring together academia and the financial industry to engage in dialogue on a specific topic. Some of these conferences will be intimate gatherings by invitation only, whilst others will be much larger in scale for which you can register to attend. Visit the [SWIFT Institute](#) regularly to find out about upcoming events.

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## **Future**

- 19/11/2014
- **Cyber Security in the Financial Industry**  
**Venue - Château du Lac, Genval (near Brussels), Belgium**

The SWIFT Institute and KU Leuven (Belgium) will host a one day conference focusing on cyber security issues impacting the global financial industry.

Today's cyber threat is a very real and persistent one. Cyber-attacks are growing ever more sophisticated, and the landscape is becoming increasingly complex. As cyber criminals become better organised and funded, there are also state actors focussing both on snooping and disruption. Cyber security is the issue that keeps most CEOs awake at night, not least of which within the financial industry.

Cyber threats to the financial industry are not only external, but also internal. Amongst all reported cybercrimes, those committed by malicious insiders in financial services are amongst the most significant threats to networked systems and data. Financial institutions face the ongoing challenge of securing legacy systems that are linked together in an often less than ideal way. Online banking has become commonplace, whilst new digital currencies are regularly appearing (but little understood). In the post-Snowden world, cyber security has never been more crucial.

At a country and regional level cyber security is taking centre stage (e.g. the European Union's Cyber Security Strategy). In the world of cryptography, new developments are appearing aimed at protecting your data. What more can and should be done? What do you need to do to protect your financial institution? In this one day event you will hear from and have the opportunity to engage with leading cyber academics and experts from the financial and technology industries as well as from those in law enforcement.

*Agenda:* The full agenda along with speaker details will be available soon [here](#).

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## Coming Soon

### Here is what you can look forward to from the SWIFT Institute in the months ahead...

- Full details of the Cyber Security in the Financial Industry conference - *May 2014*
- New working papers published on Network Liquidity Effects, Unit Costs of Financial Services, Macro-prudential Oversight and Currently Used Standards - *Mid-2014*
- Full details of Sibos University - *Mid-2014*
- Next issue of *Velocitates* – *July / August 2014*

[Visit the website](#) to see what else is happening at the SWIFT Institute.

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