

Daily News at Sibos

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THE INDEPENDENT NEWSPAPER

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Instant payments momentum gathers pace globally as Swift strengthens its role

By Heather McKenzie

Instant payments are set to be one of this year's hot topics at Sibos. Last week, Swift and EBA Clearing announced that users of EBA's instant payments system, RT1, will be able to access the platform via SwiftNet Instant, Swift's instant payments messaging solution, from next month. Elsewhere, Australian consumers have been told they will be able to make instant payments from January next year.

Together with 39 funding institutions, EBA Clearing has been developing and implementing RT1 since April 2016. A pan-European infrastructure platform, it will be used for the 24x7 settlement of real-time payments in line with the Sepa instant credit transfer (SCT^{inst}) scheme developed by the European Payments Council. The objective was to provide payment service providers across the single euro payments area (Sepa) with a real-time payment processing facility.

Erwin Kulk, head of service development and management at EBA Clearing said RT1 will provide the European payments industry with a pan-European infrastructure platform for real-time payments in euro from day one of SCT^{inst}. "We expect to see close to 30 joiners for the go-live on 21 November 2017 and more than 50 users in the system by mid-2018," he said. The accessibility via Swift's

solution will provide this user community with additional choice in connectivity, he added.

SwiftNet Instant is designed to work anywhere in Europe and around the world, enabling Swift members to connect seamlessly to multiple instant payment clearing and settlement mechanisms. For Sepa, Swift will offer connectivity not only to RT1, but also to the Eurosystem's Target Instant Payment Settlement (TIPS) platform. Swift is supporting the Eurosystem's aim to create a single gateway into its market infrastructure services and access to other clearing and settlement mechanisms.

Alain Raes, chief executive of Europe, Middle East and Africa at Swift, said: "Europe is taking important steps to ensure its lead in the instant payments area and we are pleased to be able to connect our customers to such critical infrastructures. Our solution is future-proofed to meet the current and future messaging needs of our customers in Europe and those in the rest of the world."

The solution for European customers is the next step in Swift's global instant payments strategy, which began in 2015 when the co-operative was awarded the contract to build the messaging infrastructure to underpin Australia's new payments platform (NPP).

Earlier this month, the 13 local banks that set up the NPP announced that faster payments would start around the end of January. It is expected that four out of every five bank accounts will be eligible for faster payments, with some accounts held at international and smaller banks to qualify later.

In August, Swift announced that it will provide US financial institutions with a gateway to The Clearing House's (TCH's) real-time payments platform. TCH's platform is a new clearing and settlement system to support domestic instant payments in the US. It will enable consumers and businesses to send and receive payments in real time and directly from their accounts at financial institutions. It will also include data and non-payment messages that financial institutions can use to build digital commerce solutions. "Given its reach and expertise in payments, Swift is a great collaborator as we bring a wide-scale real-time payments system to the US market," said Steve Ledford, senior vice-president product and strategy at TCH. "Achieving our vision of broad adoption of real-time payments will only be possible when the majority of US institutions are able to participate, and Swift will be instrumental in helping us meet this goal."

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Swift is providing a similar solution to participants in Hong Kong's Faster Payments System.

RT1 will be open to any account-servicing payment provider adhering to the SCT^{inst} scheme. The platform is network-agnostic, meaning that users can rely on different network solutions, provided they have been introduced at platform and user level in line with the necessary security requirements.

The industry's move to instant payments and the European single market infrastructure gateway will require significant infrastructure and operational change, says Swift. Carlo Palmers, head of market infrastructures, Swift, said: "We will make instant payments simple and seamless for our customers, who will be able to reuse the investment they have made already. For new customers, we will offer complete on-boarding services to reduce risk and manage costs."

The recent *World Payments Report 2017*, published by Capgemini and BNP Paribas, predicted instant payments (along with open application programming interfaces, blockchain and mobile wallets) would become the leading technological advancements in the payments industry. "These technologies will drive payments innovations in areas including networking with different stakeholders, accelerating the immediacy of payments, and ensuring security of transactions," stated the report.

Mike Steinharter, chief commercial officer at global payment network operator Earthport, says with populations growing, markets becoming ever more global and business increasingly complex, the need for a faster payments routine has never been more crucial, needed or appreciated. "The introduction of real-time payments is inevitable and is being driven, in part, by client demand for speed and convenience. Consumers have been given a taste of the real-time experience through point of sale debit and credit card transactions, as well as e-commerce purchases – and now businesses are asking for the same swift service."

One of the main challenges for real-time cross-border payments is the multitude of systems currently deployed, he adds. "The success of an instant cross-border payment event relies on these various systems being fully automated, as a minimum requirement and, preferably, synchronised with each other." The overall performance of any real-time payment process – which should involve data transfer, screening, validation, authorisation, posting, clearing, settlement and notification – is driven by the sequencing, pace and effectiveness of the slowest links in the chain.

There are also regulatory hurdles to overcome with real-time cross-border payments. "The faster the payment, the less time there is to screen a transaction and many financial institutions are nervous

about issues such as anti-money laundering. At the moment, instant payments are, in some cases, restricted to domestic payments, which do not require the same degree of vigilance as international payments. Multi-bank collaboration, however, can go some way towards ensuring the upper hand against criminal activity."

One of the consequences of the open account access provided by the reviewed Payment Services Directive in Europe is that real-time payments may be offered by alternative providers, potentially bypassing banks, says Steinharter. In fact, innovative technologies and shortened processes well suited to faster, more transparent and more cost-efficient payments are being developed by new providers such as fintechs. "Technology will provide one of the key drivers for the growth of real-time payments. There are numerous schemes in progress and some countries have already pursued a path of real-time for domestic payments – including, for example, the UK, US, Europe, Singapore, Denmark and Australia. Some banks and payment service providers are thinking of completely redesigning the landscape by adopting distributed ledger technology or blockchain-type technologies."

In tomorrow's *Daily News at Sibos*, we will publish the views of leading payments bankers on where they think instant payments are headed.

Ovum survey reveals bank shortcomings

By Heather McKenzie

Banks are not responding quickly enough to the rapidly changing requirements of corporate treasurers, according to new research from Ovum that will be released today. Corporate requirements are expected to change further as real-time payment infrastructures are further rolled out in the main economies in Europe and the US.

Commissioned by Temenos, the research was undertaken during the second quarter of 2017 and included data from Ovum's corporate treasurer survey, for which 100 corporate treasurers were interviewed globally. In parallel, 100 corporate bankers globally were interviewed.

Among the key findings, 18 per cent of corporate respondents said managing multiple relationships was a growing

concern – up from 12 per cent in 2016. Corporates are also increasingly concerned about their ability to access bank data for decision-making. The percentage citing this as their top challenge rose from 1 per cent in 2016 to 13 per cent this year.

Ovum says banks do not have a good picture of client needs. Forty-three per cent of corporate treasurers interviewed said increasing FX risk was their biggest challenge, yet only 24 per cent of banks cited this as a concern.

Worryingly for banks, corporate treasurers are increasingly willing to change service providers. In countries that have yet to implement real-payment infrastructures, 80 per cent said they have considered moving their main banking relations in the

past year. This figure falls to 75 per cent in countries that have real-time payments. However, both figures are considerably higher than the 52 per cent that gave the same response in 2016.

High on the agenda for banks are virtual accounts, with 53 per cent of corporate banks planning to provide virtual accounts in the next 12-18 months. This rises to 57 per cent among banks operating in countries with real-time payments infrastructures in place, compared to 40 per cent in other countries.

"Banks are listening, but are slow to change," says Ovum. It warns that corporates will move to banks that have integrated solutions that make data access, product development and regulation easier, cheaper and faster to achieve.

The Temenos and Ovum research will be discussed in a presentation today at 12:15 in Open Theatre 2

Real-time nostro time?



As part of its global payments innovation initiative, Swift and a group of banks have been trialling distributed ledger technology in the reconciliation of nostro databases in real-time.

Heather McKenzie
reports

In total, 33 global banks have taken part in Swift's blockchain proof of concept (POC), designed to validate whether the technology could help banks reconcile their international nostro accounts in real-time. The POC is part of Swift's global payments innovation (GPI) service for cross-border payments. Swift will present the findings from the POC during a SwiftLab session tomorrow at 10:15.

Preliminary conclusions indicate that the Swift-developed distributed ledger technology application delivers the business functionalities and data richness required to support real-time liquidity monitoring

and reconciliation. Issues remain, however, including data confidentiality, governance and identification framework.

"While significant progress has been made on the technology side, one must realise that it is still early days for the newer generation of blockchain and that it will still take some time before it is ready for mission-critical applications," said Damien Vanderveken, head of research and development at SwiftLab and of user experience at Swift.

Banks hold nostro accounts with each other, usually in a foreign country and in a foreign currency. Typically, the banks receive nostro account information at the end of the day. The information is often from disparate >>

sources and must be aggregated overnight. This means reconciliation of accounts is done using end of day statements. From a liquidity management perspective, this is far from optimal.

Attempts to bring real-time to nostro accounts started more than a decade ago. Back in the early 2000s, a group of banks chose the Cable & Wireless Real Time Nostro product as a standard infrastructure for sharing nostro account information. Later, the product became Gresham Computing's Clareti Cash Reporting Services, and was ultimately integrated with SunGard's Real Time Liquidity Management solution. (SunGard was acquired by FIS at the end of 2015.)

Fast forward to today and developments are continuing apace. In July, Swift and the Liquidity Implementation Task Force – a group of large and medium sized custodian banks and global brokers – released an industry standard for intraday liquidity. The standard is designed to help banks comply with intraday liquidity regulatory frameworks and optimise liquidity monitoring of their correspondent banking accounts positions, through the provision of debit and credit confirmations at transactional level in real time.

Swift says around 35 per cent of the cost of an international payment transaction is related to nostro-vostro reconciliation and liquidity, including the opportunity cost related to trapped liquidity. To manage their positions more efficiently – avoiding liquidity excess or unnecessary overdrafts – financial institutions first need better visibility of their liquidity positions on those accounts, on an intraday basis. The intraday liquidity standard is a “crucial component” to allow banks to exchange this information on a transactional level in real time, says Swift.

The standard was developed by Swift in consultation with more than 20 liquidity users and providers, providing a common set of business rules and technical specifications applying to cash reporting in the interbank space. It includes nostro and custodian cash accounts. It supports real-time transactions by transaction liquidity reporting and resolves data challenges caused by the lack of real-time reporting, timed confirmations and data accuracy.

At the launch of the standard, David Gaselee, head of agency and intraday liquidity, financial institution product management at Barclays Corporate



“If banks could manage their nostro account liquidity in real time, it would allow them to accurately gauge how much money is required in each account at any given point, ultimately enabling them to free up significant funds for other investments”

Banking, said the standard would help the bank's clients to manage their liquidity positions more efficiently. “Through more streamlined and standardised reporting across the industry, we hope to be able to make real-time reconciliation much simpler and reduce costs.”

The standard is also used as the basis for Swift's GPI distributed ledger POC, which leverages the common rulebook provided by the intraday liquidity standard. It explores the use of distributed ledger technology to help banks manage their intraday positions and reconcile those nostro accounts more efficiently and in real-time, optimising intraday liquidity, lowering costs and reducing operational risk.

Didier Balland, head of marketing for correspondent banking, at Société Générale,

which is a participant in the POC, says standardisation will help to reduce costs and build the necessary base for new services. The bank will adopt the standard during 2018, he said.

Launched in January 2017, the GPI POC aims to help banks overcome significant challenges in monitoring and managing their international nostro accounts, which are crucial to the facilitation of cross-border payments. At present, banks cannot monitor their account positions in real time because they lack intraday reporting coverage. The POC recognises the need for banks to receive real-time liquidity data to manage funds throughout the business day. At its core, the POC builds on the rulebook defined by Swift as part of the intraday liquidity standard. >>



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“The potential business benefits ensuing from the POC are clear,” says Vanderveken. “If banks could manage their nostro account liquidity in real time, it would allow them to accurately gauge how much money is required in each account at any given point, ultimately enabling them to free up significant funds for other investments.”

Carolyn Burke, head, enterprise payments at Royal Bank of Canada, agrees. She says blockchain’s ability to enable all partners to see data in real time should bear fruit in liquidity management. A POC, she adds, is a “learning tool” that enables participants to determine which tools work best in which areas.

In developing the POC, Swift leveraged Hyperledger Fabric v1.0 technology, and combined it with key Swift assets, to ensure that all the information related to nostro and vostro accounts is kept private and seen only by the account owner and its correspondent banking partner. The POC application used a private permissioned blockchain in a closed user group environment, with specific user profiles and strong data controls. User privileges and data access was strictly governed.

Nigel Dobson, general manager, transformation projects at ANZ, says the POC leverages a bilateral trial the bank did with Wells Fargo in the third quarter of 2016 for cross-border payments. “That trial showed how DLT can be used for real-time nostro reconciliation to make payments

Nostro and vostro accounts lend themselves to DLT because they are ledgers between banks of what they have on account with each other

more efficient. A wider multilateral trial was then tested through Swift’s GPI, which aims to help banks improve their liquidity, as well as make payments faster, more transparent and more traceable.”

While other technologies could be just as effective, says Dobson, distributed ledger technology “covered the items on our checklist” balancing the need for security, scalability, transparency and protecting confidentiality.

The POC is just one of a series of phases planned for GPI. More than 110 transaction banks from Europe, Asia Pacific, Africa and the Americas have signed up to the GPI initiative, which opened for live payments in January 2017. The first phase of the initiative is focused on business to business payments. A second phase will encompass digitisation of cross-border payments, followed by an exploration of the potential

of new technologies such as distributed ledger, in the third phase.

Wim Raymaekers, head of banking markets and GPI at Swift, says in its initial phase, GPI uses existing payments rails, which enabled the initiative to be rolled out quickly. “Now that GPI is up and running, we can assess other technologies such as blockchain for related activities like settlement.”

Nostro and vostro accounts lend themselves to DLT because they are ledgers between banks of what they have on account with each other.

For the POC, a smart contract application has been developed on top of a DLT protocol. This is connected to debit and credit events and passes through the relevant parties allowing banks to determine their exposures and balances at any time.

GPI is very much the start of a journey, adds Raymaekers. “We will bring more value over time like blockchain, DLT and rich payments data. We will respond to each challenge banks face in a significant way.”

Paula Roels, head of market infrastructure and industry initiatives, institutional cash management at Deutsche Bank – another institution involved in the POC – agrees GPI is a journey that is just beginning. “But this initiative shows that, although banks compete with each other in the correspondent banking business, collaborative efforts are indeed vital to benefit international trade as a whole.” **DNS**



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Into the data breach

Cyber security has become a significant issue as attacks are increasing. In the new payments ecosystem, where third-party developers can directly interact with banks' customers, data privacy and security become paramount, according to the *World Payments Report 2017*

A significant issue to address as the new payments ecosystem evolves is that of cyber security. During the past few years, cyber attacks and crimes have increased across the globe, with corporate and financial institution entities, large and small, targeted.

The price of increasing collaboration among industry stakeholders in the new payments ecosystem could be an increase in cyber security vulnerabilities. To alleviate this risk, corporates are increasingly turning to their banks for advice on how to strengthen their infrastructures against cyber attacks. To ensure the highest levels of cyber security and the security of infrastructures in the new payments ecosystem, each stakeholder must assess security across all the data sources and points of collaboration.

The need for robust cyber security solutions to cater to all forms of cyber threats has never been greater for corporate treasurers as new technologies proliferate and collaboration increases. Of prime importance for corporates in developing defence mechanisms is awareness of potential cyber security risks, regular updating of security profiles and continuous training of employees. This is because attacks perpetrated by cyber criminals are unpredictable in both timing and nature.

The vulnerabilities stakeholders face include cyber security, data privacy, data breaches and payments fraud. The utmost vigilance is required to protect organisations against cyber attacks and all stakeholders,

including regulators, must be more proactive regarding cyber security, with ownership of the issue taken to prevent attacks.

In the new payments ecosystem, third-party developers can directly interact with a partner banks' customers, raising questions about data privacy and security. In an increasingly networked ecosystem, identifying the source of an attack will be a challenge.

Verizon's *2017 Data Breach Investigations Report* found that security incidents and data breaches affect both large and small financial organisations almost equally. However, the security of larger banks is difficult to compromise as they invest more in cyber security solutions. Smaller banks,

which do not have the same access to resources, are more prone to cyber attacks.

A fraud survey by the Association for Financial Professionals and JP Morgan found that the highest levels of fraud in 2016 were perpetrated via cheques. However, there was a surge in wire transfer fraud, from 27 per cent in 2014 to 46 per cent in 2016.

An increasing number of cyber security breaches are causing significant losses for banks and corporates across the world. Among recent incidents, in February 2016, a cyber heist at Bangladesh Central Bank resulted in a loss of \$81 million and prevented another \$850 million worth of transactions from being processed on the Swift network. Similarly, in May 2016 cyber

While banks are investing significantly in cyber security solutions, there are still many risks at the corporate level that they cannot manage

This group is much less likely to view DDOS attacks as a threat; data breaches due to hacking attacks was of more concern, as was internal fraud.

While banks are investing significantly in cyber security solutions, there are still many risks at the corporate level that they cannot manage. Corporates must, therefore, step up their own efforts to manage cyber security risk and not leave it all to the banks. They should upgrade their internal systems, train their staff, and review their partners' systems.

The idea of a cyber attacker as a lone figure hacking into systems is now obsolete. Cyber attacks are perpetrated by entities that are set up like companies, with project managers, key performance indicators and operations.

Attacks to compromise corporates and banks are designed to be multi-staged, with two main objectives: commercial gain and industry espionage. In general, the funds received via attacks go into the coffers of the organisation, while the intelligence gained during an attack will be used by perpetrators to gain a business advantage. Attacks can happen at any time, and over time, therefore all corporates should be vigilant and on constant guard against attacks.

So serious are the growing cyber attack and data breach problems that regulators across the globe should move from their present reactive approach to a more proactive one. Stringent regulations and fines to strengthen cyber security laws are required from regulators. Many regulations related to this are, however, still in the inception stage. Europe has relatively the most mature cyber security and data privacy laws, with recent initiatives including the Electronic Identification and Trusted Service, which was launched in 2016.

Effective cyber security requires organisations to efficiently and quickly identify, mitigate and manage cyber risks and incidents. All stakeholders are taking

measures to strengthen the security of transactions against potential cyber threats. Banks and other stakeholders have three options available to them: collaborating with financial technology companies, making investments in advanced technologies and monitoring tools, and strengthening internal governance to ensure seamless compliance.

■ **Collaboration with fintechs:** This is occurring in several areas including secure authentication and authorisation, account onboarding, identity verification and anti-money laundering. Examples include India's YES Bank and FortyTwoLabs' development of multi-factor authentication tool PI-Control, which enables users to apply for internet banking access, pay bills, transfer funds, seek loans, make remittances and undertake other card transactions. Rabobank in the Netherlands is working with Signicat to provide digital identity solutions that can be easily integrated using API technology. As banks increasingly collaborate with fintechs and regtechs, due diligence, adherence to industry standards and participating in the development of new industry standards has become critical.

■ **Investment in advanced technologies and monitoring tools:** Blockchain technology is in a nascent stage, with its potential as an enabler of digital identity and payment transaction security still being tested. Banks can leverage the technology to differentiate themselves in the provision of digital identity, authentication and know your customer services. Banks are investing in projects that combine advanced cryptography that supports private or permitted use of blockchain technology with transaction security elements that provide greater transaction visibility. To ensure the highest levels of cyber security and transaction security, all the ecosystem participants must assess security from multiple sources in the network. Common security standards and >>

criminals hacked the Swift system and stole \$9 million from Ecuadorian bank Banco del Austro.

In May 2017, the WannaCry ransomware attack affected more than 150 countries and 200,000 computers, as attackers demanded each of those affected to pay up to \$300 worth of bitcoins to unlock their systems.

In a survey for *World Payments Report*, bank executives ranked distributed denial of service (DDOS) attacks and customer payments fraud as the main security challenges they face. Also of concern were the high levels of card fraud, which place a significant cost burden on banks. The increasing adoption of digital offerings in transaction banking is also giving rise to higher levels of payments fraud, making cyber security a top priority for banks and corporates.

Customer payments fraud is the top ranked concern for financial technology companies and other survey respondents.

protocols when developing and investing in new technologies and monitoring tools will be increasingly important as collaboration increases. With a common network governing the interfaces between banks and third-party providers, various groups are developing network-based security standards to ensure a secure environment is built around the dynamic payments ecosystem. The ability to respond to cyber threats or attacks in real time is hampered by legacy security systems. Traditional security monitoring typically identified and reacted to cyber threats in isolation. A modern approach identifies specific unusual patterns or behaviour and alerts operational teams to anomalous activity. Advanced machine learning algorithms are the logical next step as response mechanisms in the event of a threat. Artificial intelligence (AI) systems are being piloted globally, yet legal issues regarding accountability for the actions of such systems persist. Contextualisation of threats (linking the threat to the business

and not just to technology) is needed to identify the source and understand the objective behind any attack. Another useful approach is risk-based authentication (RBA) to detect the risk profile of transaction banks and retailers. Using RBA and analytics processes, banks can create a

Artificial intelligence systems are being piloted globally, yet legal issues regarding accountability for the actions of such systems persist

threat matrix of fraud profiles to triangulate the threat instances to their origin and be able to proactively block fraudulent traffic. Behavioural analytics, AI, machine learning and a threat matrix can help to continuously monitor the ecosystem network and provide threat intelligence. Banks can undertake various activities such as continuously checking all systems for possible threats, observing markets, scenario simulation, examination of previous attacks, monitoring activities and applications, and establishing a payments control centre to permanently monitor payments and identify exceptional situations.

■ Robust internal governance:

A robust governance model and standards are imperative for seamless functioning of the new payments ecosystem. Banks and treasurers need to interact with central authorities and regulators to share feedback, which in turn will help to improve compliance. Banks and treasurers are increasingly collaborating with regtechs to ensure compliance. Industry stakeholders must establish common data, technical, legal, functional, and security standards for robust governance.

Firms will be well served if they can ensure that security systems have multiple layers to withstand 'flood' attacks. To ensure a foolproof system, firms should identify the data needs of all stakeholders before finalising the controls to put in place.

With the onset of the General Data Protection Regulation and the revised Payment Services Directive in the EU, the focus on compliance with data privacy and security has increased. Firms must install a dedicated team to continuously review and update security policies. Additionally, stakeholders should work with the local regulatory authorities to understand the complexity of different regional legal requirements and expectations for each country.

Firms must ensure mandatory data privacy and security training is conducted at regular intervals. Educating employees on potential threats and ensuring they keep their systems updated would have prevented, or greatly reduced the impact of, events such as the WannaCry ransomware attack. [DNS](#)

This is an edited extract from World Payments Report 2017, which is available from the BNP Paribas and Capgemini stands





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The IX in Trade

In an exclusive interview with trade finance specialist TradeIX, co-founder and CEO *Robert Barnes*, explains how banks' senior management is focusing on one goal and why product siloes simply do not work.

The best way to describe TradeIX is an "end-to-end platform for global trade finance powered by distributed ledger technology (DLT)." It was Rob Barnes' experience working with numerous commercial banks as well as with PrimeRevenue, which he founded in 2003, that led to the creation of TradeIX.

"Today there is a myriad of disparate applications used for trade finance, which are not connected and which are narrowly addressing one or two problems for financial institutions and their corporate clients. My decision to start TradeIX was the belief that an overreaching flexible platform connecting all parties with their existing and new trade finance applications through standard APIs and leveraging DLT could change and solve a lot of problems."



Robert Barnes, TradeIX

ONE GOAL

Barnes explains how trade finance departments within banks, from the CEO down to senior management, have one common goal.

"Think about it today – every single bank is trying to originate more open account trade finance business and generate more revenues with their clients, while reducing operational costs and risk weighted assets."

"On the other side, traditional ways of offering trade finance to clients are changing and creating additional costs. Customers are requiring banks to work with fintech, B2B technology companies and other enablers developing flexible and connected solutions for trade finance. At the same time, customers expect bank solutions that are able to digitise and automate transactions, are open, adaptable to changes, user friendly, similar to consumer apps and easily to interface with getting data in and out. That is what TradeIX is solving!"

As *Banking Technology* reported in June, TradeIX unveiled the TIX Platform, the "first open platform" for trade finance powered by blockchain.

The open TIX platform allows financial institutions, B2B networks, and corporates to manage multiple trade finance programmes, while reducing complexity and eliminating the settlement and counterparty risk.

There was also another interesting development last month, when enterprise software firm R3 and TradeIX announced the development of an end-to-end open account trade finance business network which will be powered by TradeIX and R3's Corda DLT platform.

"This is a groundbreaking initiative and supported by over 12 banks. The initiative is focusing on the rewiring of an end-to-end trade finance infrastructure, providing cutting-edge open account trade solutions, trade specific APIs, and DLT."

REWired

"Our solution is a platform versus a destination application. We find that most providers are doing point solutions – with many single product orchestrations. All that is doing is replacing one silo with another. TradeIX is rewiring and connecting all these applications through an open, scalable, cost effective platform."

Right now, TradeIX is globally engaged at various stages with over 20 banks and contracts are being currently negotiated for the licencing of our TIX Platform."

For financial institutions that want to future proof their trade finance infrastructure and change the way they connect with their clients and offer their solutions, TradeIX is the right partner.

"We're not going to get in the way of the banks' transaction business. We are a facilitator, working through models which align with the banks' goals. We seek to enable and enhance the client relationships, not to get in the way of them. The banks can leverage some or all of the TIX Platform components as their own solutions and applications and with the banks branded user interface."

"Our platform is decentralised so each bank can run their platform and applications and create their own eco-system. As we start to move our platform out, platforms will interconnect with one another."

ONWARDS

Growth forecast remains optimistic and the future is looking good for TradeIX.

The company is in the process of building out its Dublin Global Support Centre as we speak and expanding its team of developers. There are also plans to add more people to its US and UK operations and put people on the ground in Asia. "We have a very experienced team, probably one of the most experienced teams of any start-up in the market. We are hiring and are looking for smart people who want to join a winning team to design and develop innovative solution to solve real problems.

"The motivation to do this – and what gets me out of bed in the morning – is that we are driving a paradigm shift in the trade finance industry. We are delivering a platform that dramatically reduces the costs for our customers, increases transparency and actual revenue, and has a huge potential to grow business."

The shape of things to come

Many financial services industry firms are examining the potential of distributed ledger and artificial intelligence technologies. Is it too early for any meaningful deployment? **Heather McKenzie** investigates

If distributed ledger and blockchain was the flavour of the week at last year's Sibos in Geneva, this year artificial intelligence (AI) looks set to take the technology hype crown. In the wider world, there is plenty of interest in AI, with some warning of a dystopian future in which machines rule the world. In the here and now, AI in financial services still has some way to go and most of the developments are more focused on using AI as a supplement to human activity.

There is a focus on AI now because three elements have come together and created an inflexion point: computing power, sophisticated algorithms and vast amounts of data, says Matthew Davey, managing director, global head of business solutions, Société Générale Securities Services.

However, there is a danger that AI is a "solution looking for a problem", he says. "Financial institutions need to focus on the business requirements of clients. There is a risk that with all the hype surrounding AI, people will view it as a solution to everything."

There are areas where AI could be particularly useful, such as fraud detection. AI can identify patterns in vast amounts of data and recognise potential fraudulent transactions more quickly and accurately than human staff. AI can also be applied in customer support, adds Davey, synthesising data across multiple systems internally and

producing cross-selling opportunities or client sentiment analysis.

Industry analyst Celent's August 2017 report, *Artificial Intelligence in Banking: Where to Start*, advises that relatively few banks have begun production or even full-blown research into AI. "For those who think they're lagging, the good news is that they're not – there's still some time. But make no mistake: lack of progress today doesn't mean that banks can afford to ignore AI; they must formulate a strategy to deal with the opportunities that it promises to them and to their competitors," the report states. The principal business justification for AI lies in cost reduction, but it can also mitigate risks and increase revenues (primarily through the indirect route of improving customer experience).

Celent is pragmatic in its definition of AI as technology that makes inferences and decisions that previously required direct human involvement. A series of fundamental and interrelated technologies around machine learning and natural language underpin all AI. Building off the fundamental technologies to apply them in a banking context yields four main AI applications: analytics; bots; robotic process automation; and report generation.

As daunting as AI may seem for many banks, Celent believes that most institutions should be exploring at least the basic forms of the many technologies that fall under its umbrella. The main and most basic benefit >>

is reducing cost, but firms shouldn't ignore risk mitigation and increased revenue.

AI will have an impact on front, middle and back offices at banks. In the front office, direct customer interactions can either be addressed by AI directly (via chatbots and virtual agents), or by enabling humans to do their job better, or by augmenting their capabilities. While the benefits are tangible, there are risks in exposing AI directly to customers. If the implementation is not flawless, the mistakes may earn the bank public ridicule or damage its reputation among customers. AI that helps front-line employees, but is hidden from the customer via employee mediation, lessens this risk.

In the middle office, AI can be applied to report generation, underwriting and credit decision making, and risk and compliance monitoring. Identifying exceptions (and becoming better at doing so) is one example of AI helping employees become both better and faster at their jobs. The risks of middle office AI are relatively low from a consumer standpoint if outcomes (such as false positives) aren't degraded. Celent says for any middle office AI-based activity, human intervention is critical. "Internal reports generated via natural language processing, for example, should only be considered first drafts; the responsible analyst should sanity-check them, revise them for tone and voice, and ensure that he or she knows the substance of the report."

Processing and reconciliation, typical back office functions, can use AI to detect anomalies and exceptions, says Celent. Layered on top of non-AI robotic process automation, they can serve as a backup and a second set of eyes to ensure that processes are proceeding as they should. The biggest risks in back office implementations lie in over-reliance on AI and in the cost associated with putting initiatives in place.

Joshua Satten, director at Sapient Consulting, says finance and securities industry firms have set up innovation labs and proofs of concept to test distributed ledger and AI projects to "varying degrees of success". He believes the future success of these technologies will be in utilising both in coordination to deliver optimisation to a firms' operational model and risk management abilities.

Distributed ledgers have three use case scenarios, he says: interoperability with other companies as a shared peer to peer ledger; internally across subsidiaries



“Financial institutions need to focus on the business requirements of clients. There is a risk that with all the hype surrounding AI, people will view it as a solution to everything”

Matthew Davey, Société Générale Securities Services

and regions as a basis for enterprise architecture; and in conjunction with external permissions and provisioned access to facilitate the release and request of data and other information with counterparties, clients, investors, regulators, and more.

"Artificial intelligence on the other hand is emerging on multiple levels across multiple use cases, including from the basic aspect of replicating manual people-driven activities, to the next step of continued advancement with machine learning, and ultimately to deep learning where giant data sets and differing semantic layers are combined for wholly unique aggregation and predictive analytics abilities," he says. Natural language processing, virtual assistants such as chat bots, and robotic process automation are beginning to reach some level of maturity within financial services.

An example of bringing together distributed ledger and AI would be contract review and execution management whereby a bank would employ some AI using natural language processing to read, reconcile, and accept or reject documents. This would be used in conjunction with an internally distributed ledger allowing for approvers in different groups or entities within a financial firm, including compliance and procurement, to subsequently reject, approve or review the documentation. Also subsequent processes, such as vendor notification, payment release, and notification to internal project management groups, can be automated. Controls and Chinese walls could be maintained despite automation being embedded within each group and all groups being connected and sharing a single ledger.

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“DLT will be an enormous step forward from the complex financial ecosystem that exists today, which requires continuous reconciliation and re-validation of financial transactions”

Rob Palatnick, DTCC

“As with other emerging technologies, it will probably be two to three years before we see either come to any disruptive fruition, whereas the application of these technologies in tandem is most likely to be five to ten years out,” he says.

Securities industry technology firm Broadridge has made significant investments in and has been experimenting with distributed ledger for some time, says Vijay Mayadas, head of global strategy and fixed income at Broadridge Financial Solutions. “We have evolved from testing of the technology to developing minimum viable products that can be integrated to production systems. For the most part, throughout most of our use cases, we concluded that distributed ledger has the potential to deliver a step change in process

improvement.” In some cases, such as the emergence of digital securities native to the blockchain, the potential impact of the technology could be “even more dramatic” than the improvement of current processes and lead to the re-imagining of the entire ecosystem, he adds.

Earlier this year, Broadridge successfully executed a blockchain pilot focused on proxy voting in partnership with JP Morgan, Northern Trust and Banco Santander. “As it relates to proxy voting, we proved during our first phase of the pilot that DLT has the potential to drive significant benefits for all participants in the process, including shareholders, boards of directors, corporate issuers, regulators, and broker dealers,” he says. These benefits included increased efficiency by reducing the complexity of

the reconciliation process; enhanced security via encryption and increased transparency around vote confirmation. Additionally, for corporations, DLT can provide data and analytics about key drivers of voting behaviour, which can have a significant impact on the corporate governance landscape.

“One of the keys to unlock full potential of DLT and drive wide adoption, not just in proxy voting but in all areas of capital markets, is the development of industry standards to ensure harmonisation of the new processes envisioned via this new technology. The main driving force behind the setting of these standards will be the

key participants in the particular industry, such as Broadridge, in the case of proxy voting,” he says.

Rob Palatnick, chief technology architect, DTCC, says DLT’s promise of a distributed and shared ledger with built-in integrity, security and resiliency would be “an enormous step forward from the complex financial ecosystem that exists today, which requires continuous reconciliation and re-validation of financial transactions”. But it will take time for the technology to mature, for the range of needed standards to emerge and for the industry to adopt them, he warns. “DTCC is working with the industry to move forward on those objectives and the progress to date is probably commensurate with similar technology innovations such as database technologies in the mid-1970s, the internet and network standards in the mid-1980s and mobile technology in the 1990s. The timetable for those technologies to move to widespread use and adoption is likely a pattern that will be repeated here.”

In terms of AI, DTCC has been working on initiatives to collect sufficient data that can be leveraged for machine learning and AI tools. There are opportunities with repetitive operations in support of daily processing of millions of trades, and to support risk management functions, but it is still too early, says Palatnick, for DTCC to determine how it can leverage those tools to provide benefits to its owners in the financial industry. **DNS**



Return to

TORONTO

Sibos was last held in Toronto in 2011, so it will be fresh in the minds of many delegates. For those who have yet to visit, **Heather McKenzie** has some tips

Home to 2.8 million people, Toronto is Canada's largest city and the fourth largest in North America. It's rather indistinguishable from any other developed-nation city and is unlikely to provide Sibos-goers with an exotic experience.

However, there are some gems to be discovered, including one of the most famous tourist spots in North America,

Niagara Falls. The Falls, which comprise three waterfalls that straddle the Canadian and US border, range in height from 21 to 57 metres. During peak flow (not during Sibos week), 6400 m³ per second cascade through the Falls.

Niagara Falls are only a 90-minute drive from Toronto and coach company Gray Line (www.grayline.com) operates trips from Toronto. Once at the Falls, there are plenty of options to explore the natural wonder in

more detail (short of going over the side in a barrel).

Hornblower Niagara Cruises (www.niagaracruises.com) offers a variety of options including a 'full mist' experience of 20 minutes for \$25.95 through to an extended 40-minute night time cruise with illumination of the Falls for \$39.95. If you fancy your Niagara experience a little racier, white water jet boat tours are available from Whirlpool Jet Boat (www.whirlpooljet.com).

The busy and important may not have time to take in Niagara and will have to make do with Toronto. But they won't miss out on a tower experience as the city boasts one of the world's tallest, the 553.33 metre high CN Tower



available in 12 languages. Prices are around \$144 for an adult. A more comprehensive flight is available at National Helicopters (www.nationalhelicopters.com), whose services leave from both Niagara and Toronto. National operates 20-minute flights over the Falls, historical landmarks and the surrounding wine country. The cost for a single passenger is \$200 and falls depending on the number booking in one group.

The more cautious can view the Falls from the 236 metre-high Skylon Tower. The Tower also hosts two restaurants, one revolving.

Closer to base

The busy and important may not have time to take in Niagara and will have to make do with Toronto. But they won't miss out on a tower experience as the city boasts one of the world's tallest, the 553.33 metre-high **CN Tower** (www.cntower.ca/en-ca/home.html). The website features a live camera that gives exciting views of a motorway, among other sights. The **360** restaurant at the top of the Tower offers two fixed price menus of \$65 and \$79 or an a la carte menu. The restaurant specialises in Canadian food and wine. Judging by the menu, vegetarians and vegans should seek other options.

No delegate is an island

You could spend a week at Sibos and not realise Toronto is situated on a lake – Lake Ontario. That's thanks to the genius urban planners who stuck an enormous road in front of it. But it is there and a 13-minute ferry ride from downtown Toronto will take you to **Toronto Island Park**. Boats to the Island leave from the Jack Layton Ferry Terminal at the foot of Bay Street and Queen's Quay. The Park is a group of 15 islands connected by pathways and bridges. About 15 kilometres long, you can walk, run or cycle (there are bikes for hire) from one end of the Island to the other. There are beautiful swimming beaches (brrrr), sports facilities, bike, canoe and kayak rentals, a boating marina, large grassy fields for picnics, a theatre, nature paths and an amusement park. That's not all! There is also a 200 year old lighthouse (that's old for the New World), a trout pond and restaurants. www.torontoisland.com

Fine dining

In Toronto's fine dining category, one of the top restaurants is **Alo** (alorestaurant.com), which offers tasting menus. Diners can also eat at the restaurant's bar. Alo is >>

com). These boats speed along at 80 kilometres per hour, guaranteeing passengers get very wet and probably quite queasy.

If your expenses are easily signed off, try a helicopter tour of the Falls. Niagara Helicopters (www.niagarahelicopters.com) is quick, offering a 12-minute experience that includes boarding time. Passengers are given headsets to hear a taped commentary





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	Monday 16 October	Tuesday 17 October	Wednesday 18 October	Thursday 19 October
10:00	Integrated Financial Crime Compliance	The Real-Time Challenge	Innovation Hub Solutions	Payment Fraud
11:00	Payment Fraud	STP Revenue Opportunities	The AI Advantage	The Real-Time Challenge
14:00	API and Open Banking	The AI Advantage	Payment Fraud	STP Revenue Opportunities
15:00	The Real-Time Challenge	Innovation Hub Solutions	Integrated Financial Crime Compliance	API and Open Banking

open Tuesday-Saturday from 17:30-22:30 (the bar operates from 17:00-01:00) at the third floor of 163 Spadina Avenue, tel: +1 416 260 2222.

Scaramouche (www.scaramoucherestaurant.com) is a more traditional, refreshingly unpretentious (if its menu is anything to go by) a la carte restaurant. Starters range in price from \$23 for warm white asparagus through to \$29 for a foie gras terrine. Main courses include roast duck breast at \$42, halibut \$45 and grilled filet mignon for \$49. There are more than 200 wines from which to choose and the restaurant is famed for its coconut cream pie dessert (\$14). A Pasta Bar & Grill, which offers a more casual (and cheaper) dining experience, is on the same premises. Scaramouche is at 1 Benvenuto Place, tel: +1 416 961 8011.

The North American dining experience isn't the world's healthiest cuisine and steak is a big feature. **Jacobs & Co Steakhouse** (jacobssteakhouse.com) serves a comprehensive range of beef, from local North American varieties through to unfortunate beasts from as far afield as Australia and Japan. For \$200 you can dine on a 40oz porterhouse steak or you can really push the boat out and spend \$800 on a 16oz ribeye steak from Kobe Black Tajima-Hyogo Prefecture in Japan. With such prices, you can imagine what the wine list has in store for you. Open Sunday to Tuesday from 17:00-22:15 and Wednesday to Saturday at 17:00-22:45, Jacobs & Co is at 12 Brant Street, tel: +1 416 366 0200.

In the category of "they would say that, wouldn't they?" **George Restaurant**

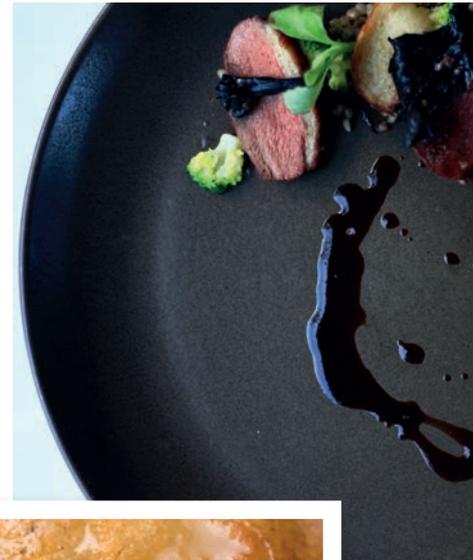
(georgeonqueen.ca) boasts that "many rave" it is the best restaurant in Toronto. It also offers an "elevated food experience", but not from the top of a tower, so what this means is anyone's guess. There's only one way to find out... George offers a tasting as well as an a la carte menu. Dishes include pheasant (\$24), wild boar (\$35) and lobster (\$26 as a starter). The restaurant is open Tuesday to Saturday from 17:30 until 21:30 at 111C Queen Street East, tel: +1 647 496 8275.

Finally, **Canoe** (www.canoerestaurant.com), which featured in *Daily News at Sibos'* 2011 entertainment guide, remains a top destination for fine diners. This is another restaurant that prides itself on a Canadian produce focus, with menu items including northern woods mushroom soup (\$16), cured arctic char (\$23), great lakes pickerel (\$39), newfoundland cod (\$40) and Quebec red stag (\$55 – probably not the whole beast). Canoe is on the 54th floor of the TD Bank Tower, at 66 Wellington Street West, tel: +1 416 364 0054.

Cheap eats

Humbler eating experiences, for those on short rations, can be found in plenty of areas of Toronto. In Downtown is **Salad King**, at 340 Yonge Street, which serves Thai food for under \$10 per dish. The **Burrito Boyz** chain of outlets (including one at 73 Dundas Street) offer a range of burritos from \$5-\$10. **Ritz Caribbean** at 211 and 450 Yonge Street, offers Jamaican food, including vegetarian dishes, for under \$10.

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Greektown, which is on Danforth Avenue, is the largest Greek neighbourhood in North America. It features many restaurants, including **Astoria**, (www.astorishishkebobhouse.com/Toronto), a shish kebob house at 390 Danforth Avenue, tel: +1 416 463 2838.

Christina's (www.christinas.ca) has all the Greek favourites along with belly dancers. Dishes range in price from \$10 to \$20. Christina's is open until midnight most nights and Zam on Friday and Saturday. It can be found at 492 Danforth Ave, tel: +1 647 503 5186.

Meze's (www.mezes.com) at 456 Danforth Ave, tel: +1 416 778 5150, has an extensive menu including seafood – whiting, anchovies and sea smelts – flown in directly from Greece. There is also a very good selection of vegetarian mezes. The restaurant is open until 11pm most days and until midnight on Friday and Saturday.

If you love the nightlife

Toronto is host to plenty of bars and clubs, many of which continuously broadcast ice hockey games, aka fights on ice.

The Loose Moose at 146 Front Street West, is very close to the Metro Toronto Convention Centre. It has an extensive collection of draught beers and features a live music bar.



Christina's has all the Greek favourites along with belly dancers

Very close by is **Jack Astor's** at 144 Front St West. Also on Front St West is **Azure Restaurant & Bar** at number 225, which is located inside the Intercontinental hotel.

If you'd like to stray further from the Metro centre, try **Amsterdam Brewhouse on the Lake** at 245 Queens Quay West, South Building. As the name suggests, the bar is on the lake, just beyond the Gardiner Highway. A restored 1930s shipping warehouse, it features an onsite brewery and 12 beers on tap.

The **CC Lounge and Whisky Bar** at 45 Front St East, is themed on the 1920s-prohibition era (without the actual prohibition, you'll be relieved to read). There are more than 300 whiskies stocked here, so there should be something for everyone.

Crocodile Rock at 240 Adelaide St West is a nightclub with DJ, dancing and cheap drinks (*no doubt also cheap drunks – Ed*). There's also a large rooftop patio, but as the building is low-rise don't expect spectacular views.

Fionn MacCool's at 310 Front St West is the obligatory Irish pub. With the decline of the Celtic Tiger, Irish *craic* isn't what it used to be, but those loyal to the halcyon days of Sibos party HQ being the nearest 'oirish' pub may want to check it out. The establishment features drinks as well as freshly prepared, authentic Irish dishes.

Lula Lounge is a bit further afield, at 1585 Dundas St West. It is Toronto's home to live Cuban, Brazilian and world music. If you are less loyal to the *craic*, Lula's is probably a party-lover's must visit. **DNS**



There are more than 300 whiskies stocked here, so there should be something for everyone

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