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Sibos Issues

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sibos

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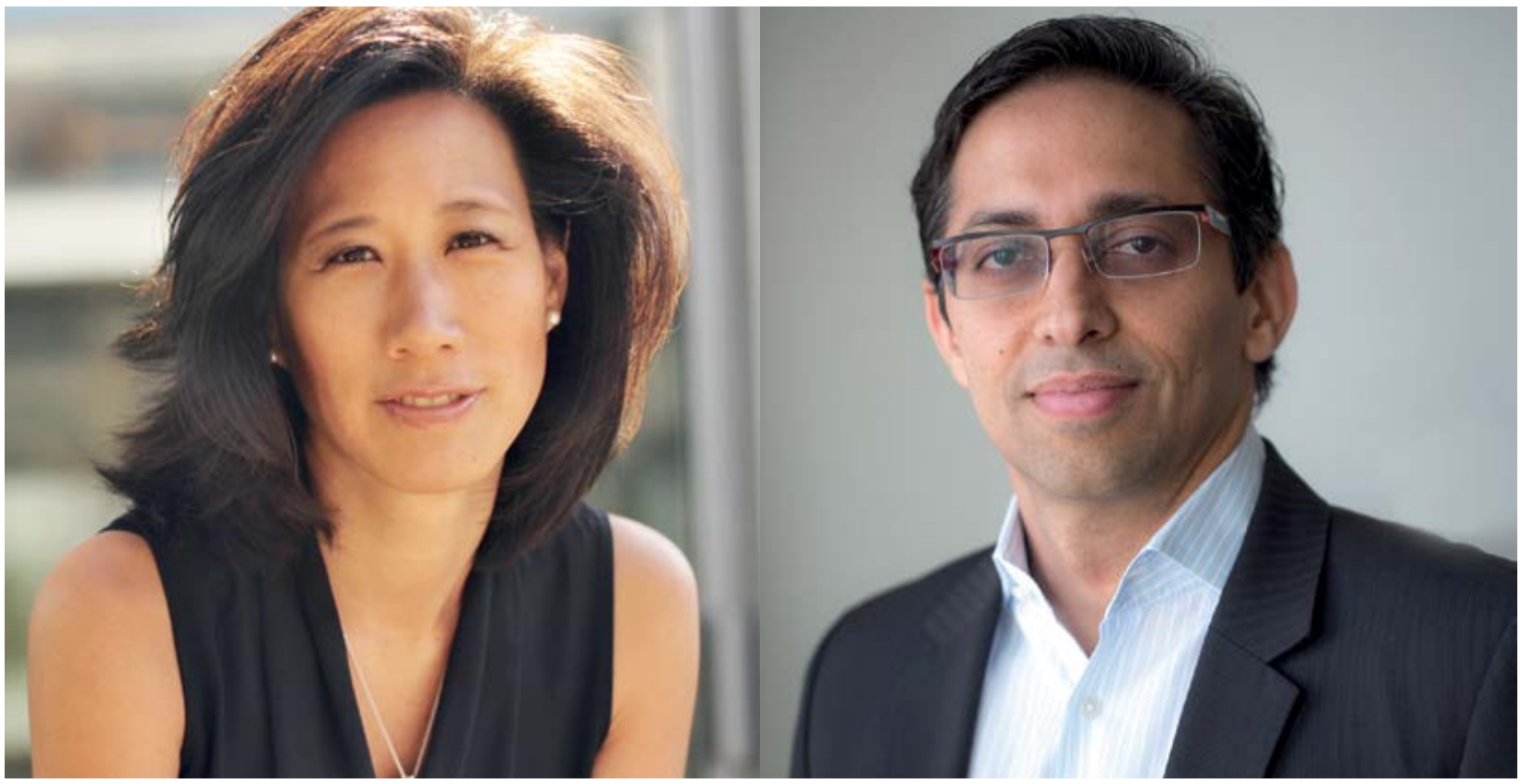
BIG ISSUE DEBATE

Beyond disruption

Are banks and FinTech firms competitors, collaborators or both? Today's big issue debate explores an evolving relationship.



Banks and FinTech firms are working together and I expect their relationship to continue to be symbiotic.

Eileen Burbidge, special envoy for FinTech, HM Treasury

True innovation requires open collaboration and deep access to knowledge and technology.

Sanoke Viswanathan, chief administration officer and interim chief information officer, corporate and investment bank, JP Morgan

Innovative technologies have not only brought about changes to business models, but also, in some cases, enabled new entrants to usurp incumbents. What Amazon did for bookstores, Airbnb might, for instance, do to hotels. Are banks ceding ground to FinTechs or is there a more complex dynamic at work?

Today's big issue debate will explore the relationship between new entrants and established players, while also providing insights into the scale and the nature of the technology-driven changes currently impacting the financial services market. Are the changes being brought about by innovations such as blockchain, big data and device-neutral digital delivery so profound as to require new types of providers, as we've seen in retail, telephony and consumer electronics? Or will banks and FinTechs establish a new equilibrium, finding that they need each other in order to deliver maximum value to end-users?

Banks understand the impact of the digital revolution on customer expectations. "The fact that nearly everyone walks around with a super-powerful, easy-to-use handheld device has permanently changed the user experience paradigm," says Sanoke Viswanathan, chief administration officer and interim chief information officer at JP Morgan's corporate and

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BANKING

Europe opens up to new players

#Payments
#Data

Banks can thrive in the new European payments market created by PSD2, but they may need to change radically to do so.

Europe's second Payment Services Directive (PSD2) has generated intense speculation and activity among both banks and non-bank payment services providers. An update of the European Commission's (EC's) original directive, announced in 2007, PSD2 paves the way for new entrants into the payments market and new innovations for customers.

Any such sweeping reform of Europe's payments landscape is by necessity complex; the region contains many and diverse countries, distinct business cultures and processes. "There are so many different elements in PSD2, but you can spend days talking about just one aspect of it," says Gareth Lodge, senior banking analyst at research company Celent.

The regulatory technical standards (RTS), a draft version of which the European Banking Authority (EBA) issued in August, will ultimately determine how PSD2 is implemented. The RTS cover strengthened customer authentication and improved protection of users' security credentials (e.g. demanding use of two-factor authentication protocols for all payments, and even stronger verification via 'dynamic' elements for

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Beyond disruption

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investment bank. "Institutional clients demand the same simplicity on their phones and desktop that retail consumers can get. Clients can do pretty much anything they want on their phones, but when they get into the office, they've often been forced to use antiquated technology. That just doesn't make sense."

Apps with attitude

Continued investment flows into the sector mean that there is significant potential for FinTech firms to stake a long-term presence. According to KPMG and CB Insights' latest quarterly report, overall global investment in FinTech was US$9.4 billion in the second quarter, keeping 2016 investment levels on track to exceed 2015's total. But while venture capital has been a large source of investment for FinTech firms to date, this may be changing. An IDC/SAP survey of more than 250 banks, published in September, claimed a quarter of responding banks would consider a FinTech acquisition, while one in three (34%) were open to collaboration with their tech-savvy rivals. Tellingly, the report found that few banks had yet to achieve full business-wide digital transformation, concluding that they needed to do more to implement lessons learned from FinTechs.

While the FinTech boom has been driven in no small part by technological innovation, it is the model at least as much as the technology that is enabling new entrants to meet customers' digital demands so effectively and challenge the existing order. As 'digital natives', it is second nature for startup founders to source skills, materials or infrastructure from the cloud rather than purchase or build them. Similarly, the new generation of developers are well-suited to design highly personalised, responsive and collaborative tech-driven services that mirror the functionality of the apps they already use to run and share their lives. Add to this the freedom of working in a creative, can-do ethos and a flat management structure in which fear of failure – not to mention the weight of legacy constraints and regulatory burdens – is absent, and one begins to appreciate the appeal for banks to collaborate with FinTech firms is as much for their attitude as their apps.

As HM Treasury special envoy to the FinTech sector, not to mention early-stage venture capitalist and former Skype, Yahoo! and Apple executive, Eileen Burbidge knows more than most about what FinTech can offer. She believes the relationship between banks and FinTech firms is evolving in a positive way that will benefit consumers. In fact, Burbidge does not see banks and FinTech firms as adversarial or even separate groupings. Burbidge regards banks, start-ups and their various suppliers as all being part of the same eco-system.

"Whether we're talking about lending clubs, payment aggregators or challenger banks, they all have needs that can only be met by traditional banks, such as settlement, compliance or connectivity to payment market infrastructures. Similarly, those incumbent banks would not be re-evaluating their value propositions quite so intensively if it wasn't for the presence of those newer FinTech firms. They are working together and I expect their relationship to continue to be symbiotic," she says.

FinTech firms might need banks to deliver the back-office processes, while they're busy winning hearts and minds with the sticky functionality built into their apps and user interfaces. Does this suggest a division of labour in which banks are pushed out of the clients' field of vision? Burbidge does not see banks easily yielding their current control of the customer relationship.

"FinTech firms might have focused on front-end consumer applications at first, but the sector is becoming increasingly diverse and we're now seeing more entrants focused on back-office solutions, for example in the security or RegTech sectors," she remarks. "At the same time, banks are innovating to deliver greater value to end-users. As such, I don't necessarily see a long-term shift for banks away from consumer-facing services to only providing back-office capabilities."

> **Banks need to develop flexible hybrid technology models.**
>
> **Eric Pradier,** general manager, consulting, EMEA, Hewlett Packard Enterprise

Flexible models

Banks may be showing signs of the flexibility that has enabled them to thrive for so long, but Eric Pradier, general manager for consulting in EMEA at Hewlett Packard Enterprise, believes they must learn faster from FinTechs, changing their own models to keep pace with innovation and to maintain client relationships. In particular, Pradier emphasises the growing importance of data aggregation and analytics techniques that leverage social media and other sources of unstructured data to help banks customise and personalise their services.

"Banks need to develop flexible hybrid technology models in which their IT departments become more like service bureaux, sourcing the products and services needed by internal clients more frequently and extensively from external sources. Some services can still be delivered by legacy systems, but others can be sourced more effectively from the cloud, tapped into as and when required, rather than owned by the bank," he says.

Pradier believes banks' IT departments need to drive this hybrid model themselves, or risk becoming irrelevant, as business departments deal directly with external software-as-a-service suppliers to achieve the flexibility they need in order to respond to evolving customer demand. As banks embark on their path to digital transformation, Pradier sees three broad systems challenges: replacing legacy systems over time; maintaining mission-critical systems; and developing the new cloud-native data services and mobile apps that support and add value to client relationships. It is in this latter area that banks need to adopt an open approach, he argues.

"Small FinTech start ups are able to be nimble because they leverage a network of cloud-based service providers. Historically, banks have been reluctant to take this approach, partly because of regulatory concerns, but they will begin to lose ground if they cannot find a way to access the capabilities available in this eco-system," he says.

Inside and out

JP Morgan's Viswanathan suggests that banks need to invest in their in-house technology development capabilities whilst also working more closely and collaboratively with third parties, including FinTechs.

The firm is defining best-in-class development practices and has equipped its high-performance development environments with industry-leading capabilities, including continuous integration, automated deployment and security scanning. "The quality and productivity of our developer community has never been so important to ensuring our future," he says. "We also partner with some of the brightest minds in the industry on developing solutions."

In 2015, JP Morgan engaged with more than 300 technology startups and piloted over 100 technologies, 50% of which now are in production. "Many potential solutions will fail, but we recognise the value of experimentation and know that even if only a handful are successful, we can dramatically change the way we do business for the better."

Viswanathan sees willingness to collaborate as important to the future of the finance sector – pointing to JP Morgan's 'In-Residence' initiative, in which startups and entrepreneurs bring their ideas to the firm in exchange for access to the bank's people, knowledge and other resources. "True innovation requires open collaboration and deep access to knowledge and technology. Combining innovators who are exploring the edges of what is possible with the unique resources of a global bank can accomplish this innovation," he says. ■

TO LEARN MORE …

Are disruptive innovations transforming the financial services landscape, or are we simply in the middle of a new technology cycle?
Thursday 29 September – 11:30-12:30

THURSDAY 29 SEPTEMBER

BIG ISSUE DEBATE / PLENARY

11:30-12:30	**Are disruptive innovations transforming the financial services landscape, or are we simply in the middle of a new technology cycle?**	Plenary
16:30-17:30	**Sibos: Closing plenary**	Plenary

BANKING

09:00-10:00	**Real-time liquidity monitoring and management: Do banks still have the choice?**	Conference Room 3
10:15-11:15	**Trade digitisation: Where are we now?**	Conference Room 2
10:15-11:15	**Where is the real-time payments business case?**	Workshop B
10:15-11:15	**Enhancing the cross-border payments experience in B2B**	Workshop A
14:00-15:00	**PSD2 - The opportunity to reinvent the online payment and banking experience**	Conference Room 1

SECURITIES

09:00-10:00	**Data management - The quest of the endless journey**	Conference Room 2

CULTURE

09:00-10:00	**Learning from FinTech – Can we fail fast, and learn fast?**	Conference Room 1
09:00-10:00	**Education: Cyber 101**	Workshop A
10:15-11:15	**The spectre of cyber threats – How can the industry fight back?**	Conference Room 3
14:00-15:00	**Emerging markets: Mobile money and financial inclusion**	Conference Room 3
14:00-16:00	**Cyber crisis management workshop**	Workshop A

STANDARDS FORUM

09:30-10:30	**On the drawing board – Data ethics in the internet of financial things, with Scott Smith**	Standards Forum
10:30-11:15	**Reference data and semantics – New challenges and solutions for standardisers**	Standards Forum
13:00-14:00	**ISO 20022 for architects / ISO 20022 for beginners**	Standards Forum
14:15-15:00	**Standards Forum close**	Standards Forum

INNOTRIBE

09:00-09:30	**Innotribe day opening and Industry Challenge on Compliance**	Innotribe
09:30-11:15	**Forward compatibility**	Innotribe
12:45-13:45	**FinTech hubs - APAC**	Innotribe
14:00-15:00	**DLT and cybersecurity: Sibos week wrap-up**	Innotribe
15:15-16:15	**Innotribe closing keynote: Platform cooperativism**	Innotribe

SWIFT INSTITUTE

10:15-10:45	**Bridging the gap: Europe vs America AML / CTF and data privacy law**	SWIFT Stand

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Europe opens up to new players

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> **The industry needs to be thinking about functionality in the online space and also at the point of sale.**
>
> **Ruth Wandhöfer,** global head of regulatory and market strategy, Citi

internet-based payments), as well as common and secure open standards for communication between the various types of providers in the payments sector, including third-party providers (TPPs), which are able to access customers' bank account data. Importantly, the draft RTS imply that a bank must grant a TPP access to a client's account if that client has indicated willingness to use TPP services generically, rather than those of a specific firm. PSD2 creates two distinct types of TPP: account information service providers (AISPs); and payment initiation service providers (PISPs). The EBA says these standards are important elements in achieving PSD2's joint objectives of enhancing consumer protection, promoting innovation and competition, and improving the security of payment services across the European Union. The industry has until 12 October to respond to the draft. PSD2 is scheduled to come into force in stages from January 2018 onwards.

Different options

Ruth Wandhöfer, global head of regulatory and market strategy at Citi, points out that the recently-issued EBA draft RTS on secure communication and customer authentication are not standards in the technical sense of say, ISO 20022, but more akin to guidelines. "The draft RTS list a number of questions on open issues and in terms of technological implementation they remain neutral," she says. "So we are not really looking at a fully standardised European payments market in the technical sense when it comes to customer-to-bank communication, for example. Some markets or providers will use APIs as a means to ensure access to relevant account information for TPPs, whereas others will choose different options." As a result, many technical variations could emerge, she says, which are likely to hinder interoperability across the region.

The tightrope that the regulator must walk between enabling future innovation and providing clear operating guidelines will inevitably create technology problems for banks, says Lodge. Despite the guidelines, not every bank will operate in the same way if they have different technical skills and are starting from a different base. "The EBA is trying to be technology neutral, but it is creating something that won't produce uniformity across all banks," he says.

While there is still uncertainty with regard to the final RTS, there are opportunities in PSD2, says Wandhöfer. The lack of technical interoperability in terms of access may not be a big problem for all participants and some of the new entrants could operate apps that are flexible enough to adapt to different environments. "There is a momentum among some retail banks to be innovative and use APIs, as there is among the new players who will seek to be attractive to customers by offering digital apps," she says. Banks may also realise that if a TPP can provide account information initiation services then so can they. "This will open up the possibility of providing customers with consolidated views of their activity across accounts held at banks. The trusted position of banks among consumers will help them to think more about how they use the data that their customers generate. This could include information and advice solutions about spending patterns or financial education, for example."

Damian Richardson, head of payments strategy at Royal Bank of Scotland, agrees that the new regulatory framework offers new roles for banks as well as increased scope for competition from non-bank TPPs. "In an expanded ecosystem where banks seize the opportunity to be the payment facilitator, the advice provider and value aggregator they will continue to be pivotal to customers. This applies to all customers, be they account holders or not," he says.

Future growth

An aspect of PSD2 that hasn't yet gained much attention, says Celent's Lodge, is the splitting of payments processors into schemes and processors. This would mean that in theory Visa could process MasterCard's transactions or vice versa. There could also be an impact on card schemes if large retailers decide to become PISPs. This would enable them to bypass the card schemes and would also have an impact on banks' merchant acquiring revenues. Large-volume corporate payment processors, such as power and water utility firms, might also be interested in TPP status, for example as a means of implementing payment plans for customers or ensuring access to the accounts of persistent late-payers.

The biggest impact on banks, however, is likely to arise from the requirements governing access to accounts, which will affect many parts of their existing payments business and operating models. As Lodge points out, very few banks' payments operations are organised into a single group, in part because they serve disparate client bases. "Undoubtedly there will be duplication of effort going on across banks with regard to access to accounts," he says. "Banks need to be much more centralised in managing pay-

> **Financial institutions will have to be very flexible, keeping their costs at the lowest level possible.**
>
> **Konstantin Rabin,** head of marketing, Kontomatik

ments from a single reporting line and need to take a holistic view of payments."

But banks that overcome legacy challenges will be well placed for future growth in a real-time, digitised economy. At Citi, Wandhöfer believes that PSD2 will also create new perspectives in light of the development of the Single Euro Payments Area (SEPA) real-time payments scheme. "The industry needs to be thinking about functionality in the online space and also at the point of sale. It is all about connectivity and whether there is momentum to go further in that real-time innovation," she adds.

Payment services have always been core to any definition of a bank, but PSD2 may help to transform then from a relatively low-profile, siloed business to one that will, via the sharing of data, enable banks to design an overall experience for their customers, thus creating more value, says Lodge. "There are already providers that are delivering an end-to-end experience for customers that is in real-time or near real-time, compared with the bank process that is comparatively slow." By sharing information across processes and digitising those processes, banks can create a more valuable experience for customers.

Nevertheless, the move towards real-time payments will put pressure on banks to review existing services and processes. "In discussions about real-time payments, we used to talk about the payments being delivered over bank 'rails'," says Lodge. "But now we see that there are alternatives to move money in real-time including bilateral arrangements, APIs etc. There is more complexity for banks in how they route payments transactions. PSD2 has created these scenarios and it is not until you look at it closely that you can see just how complex it is."

Konstantin Rabin, head of marketing at FinTech and API developer Kontomatik, says agility will define the PSD2 era. "Banks now have the time to think out their strategies for the inevitable: fighting smart competitors and customers always [being] able to pick the best deals on the market," he wrote in a recent article. "Financial institutions will have to be very flexible, keeping their costs at the lowest level possible. When clients' data start to move freely among banks and third parties, the last stand of old-fashioned banking will be over." ■

TO LEARN MORE ...

PSD2 - The opportunity to reinvent the online payment and banking experience
Thursday 29 September – 14:00-15:00

New methods, new models

#Data #Technology

Banks are watching the working practices of their FinTech rivals closely, but they're not about to adopt all their ideas.

It has been near impossible to ignore the rise of the FinTech sector or ignore its claims about forcing change across the banking and finance industry. Agile start-ups have been emerging at every turn, rushing to identify – and meet – changing customer expectations, in their bid to disrupt traditional banking services and business models.

"Across capital markets and banks today, people are pointing to the success of disruptive startups. FinTech's influence on the industry can be felt as others mimic their success and their methods – it is acting as a driver for change," says Scott Mullins, head of worldwide business development for financial services, Amazon Web Services.

According to Mullins, the rapid emergence of FinTech has resulted in greater emphasis on customer service, with many new market entrants able to adapt to changing regulatory environments much quicker than banks. "But the main driver for change is elevated customer expectations; FinTechs are just responding to the challenge more rapidly and enthusiastically," he argues.

Stepping up

Faced with nimble and diverse sources of competition and innovation, have incumbents been galvanised by FinTech into reviewing their value chains, development cycles and operating models, in order to adapt to a more digitised world?

Evidence suggests large banks and financial service providers have been stepping up their efforts to learn from startups and other FinTech companies. According to a 2015 report by Accenture, investment into FinTech ventures tripled from US$4 billion in 2013 to US$12.2 billion in 2014, with much of the money coming from banks and insurance firms, via incubator labs, venture investments or outright purchases.

One example of a large incumbent financial services provider investing in, and then learning from, a FinTech rival, is US-based asset manager Fidelity Investments' 2014 investment in Betterment, an online investment platform or 'robo-advisor'. Through this partnership, Fidelity was able to gain new insights into the evolving role of technology in financial planning, which could be used to hone its retail market strategy.

In February 2015, Fidelity also made a US$250 million acquisition in eMoney Advisor, providing the global money manager with access to some of the industry's most popular financial planning software. But in November, Fidelity ended its alliance with Betterment in order to build its own automated investment platform.

What can be learnt from these and similar experiences? Timothy Bosco, head of Brown Brothers Harriman's innovation strategy, believes banks can learn from FinTech startups' approach to product development.

"The real reason established banks are looking to model FinTech strategies these days is actually because of the way startups deal with uncertainty and efficiently mitigate their risk of failure," says Bosco. "Large companies recognise that many of the same factors that threaten a startup's success can impact their own product strategies to the same degree – technology can evolve overnight, customer preferences are fickle, funding is always limited, and new competition can spring up from anywhere at any time."

> **Large companies recognise that many of the same factors that threaten a startup's success can impact their own product strategies.**
>
> **Timothy Bosco,** head of innovation strategy, Brown Brothers Harriman

Balanced approach

To some extent, banks are already starting to adopt methods that have driven FinTech successes. With cyber-security an increasing concern to governments, financial institutions and global corporations, hackathons have proved to be a successful tool to address security bugs. Further, hackathons demonstrate a change in banking culture by improving business agility and openness to new ideas.

However, organisations that use hackathons as 'one-off' projects, as opposed to incorporating them into on-going programmes, may find their impact counter-productive, argues Christophe Chazot, group innovation head at HSBC. "A hackathon is a very good way to motivate staff and find new ideas, but if it is not followed by action, then it really does not serve any purpose. Certain organisations use hackathons and incubators as a marketing exercise, but these tools need to be part of the overall strategy in serving clients, because if they are left to serve no purpose, the exercise could demoralise the people who participated," says Chazot.

"Internal core change at banks is going to take time, and can be motivated by the success of FinTech. In the meantime, incubators and hackathons are ways for banks to be more open to new ideas and new ways of doing business."

Adopting new methods and increasing openness is one thing, but banks may still prefer an arms' length relationship with the new kids on the block. While it has become widely accepted for banks to collaborate with FinTech, direct investment in specific startups is not always economically viable. "Not every bank or financial services company sees the benefit of direct and often costly capital investment into FinTech. Of course, that doesn't mean that those firms choose to ignore the phenomenon altogether," adds Bosco.

Nor will banks easily write off legacy infrastructure and technology to compete with FinTech innovation. "The legacy systems are reliable and have been subject to years of testing. You should not mix up convenience with security; the challenge is how you modernise infrastructure while also keeping up the same level of security and reliability," says Chazot.

Rather, Bosco argues, it is the lessons that can be learnt on the sidelines – by observing the evolution and methods of startups – that can influence banks' innovation and development strategies. "When it comes to working with start-ups, the decision to jump in should really only be about one thing – uncovering new ways to create value for your client via new products and services that can generate additional revenue opportunities, protect market share, or uncover material cost savings."

New expectations

FinTech will continue to influence banking culture – both directly and indirectly – especially as the millennial generation reaches maturity, and if current levels of investment in the sector continue. To maintain market share, banks are going to have to find new ways to entice a new generation that is heavily entrenched in digitisation and which has a different work-life perspective from its predecessors.

"New customer bases such as millennials, which have different expectations from what is currently being delivered, offer FinTechs the opportunity to come in. Over the next 10-15 years, there is going to be a big focus on end-user experience," says Mullins.

"As demographics continue to change, the makeup of the banking sector and the way it approaches customers will also change. That will be driven by FinTech and innovations that will come out between collaborations between start-ups and larger organisations."

> **Incubators and hackathons are ways for banks to be more open to new ideas and new ways of doing business.**
>
> **Christophe Chazot,** group innovation head, HSBC

TO LEARN MORE ...

Learning from FinTech – Can we fail fast, and learn fast?
Thursday 29 September – 09:00-10:00

Are you ready for the next big thing?

#Blockchain #Technology

The ability to integrate new systems and technologies is critical to sustained competitiveness.

One of the most frequently-cited challenges around embracing innovation is the ability of potential users to integrate new technologies with legacy systems and infrastructure.

How can banks and financial institutions formulate a forward-thinking approach that helps them harness the potential of new technology on an ongoing basis? The problem is as much structural and organisational as it is technological, and as such the solution is likely to need multi-disciplinary – indeed board-level – buy-in. Should firms be exploring how they can divorce themselves from legacy platforms, for example, rather than attempting to integrate disruptive technology with existing systems?

Blockchain is an obvious catalyst for this conversation. Its adoption could have ramifications across securities services, payments and many other sectors inside and outside the financial services industry. But the exploitation of blockchain is somewhat constrained by legacy technology. From a pure implementation perspective, migration from legacy processes to blockchain-based processes will prompt variations on the traditional choice between a 'big bang' switch to a totally new platform and a more gradual stage-by-stage approach, perhaps involving a period of operating parallel architectures. But the bigger question focuses on the kind of operating model that most readily enables adoption of any new innovation.

"If we hypothesise about the world of tomorrow, which for argument's sake is blockchain-enabled, we need to comprehend how we would get to that point. Firms need to assess their current operating model, and then start from a blank page, and ask themselves how they would implement their existing architecture and systems from scratch. What would they need to deliver to allow efficient processes to prevail, and how could they attain usage of blockchain or another viable disruptor?" says Philippe Denis, chief digital officer at BNP Paribas Securities Services.

Back to the drawing board

Although Denis suggests firms should go back to the drawing board in order to envisage their ideal operating infrastructure, and considers it a useful exercise in forward planning, he recognises that most will have little choice but to accept that they are building in a 'brownfield' site. "Some legacy processes in securities settlement and payments will need to integrate with blockchain to ensure it works properly. One way firms could enable blockchain to succeed is by replicating legacy data onto the blockchain well in advance of implementation," he says.

> **One way firms could enable blockchain to succeed is by replicating legacy data onto the blockchain well in advance of implementation.**
>
> **Philippe Denis,** chief digital officer, BNP Paribas Securities Services

Achieving forward compatibility around any disruptive technology cannot be done in silos or in isolation, according to Brian Behlendorf, executive director at the Hyperledger Project, a collaborative initiative aimed at advancing the use of blockchain technology, in part by promoting use of open standards. Collaboration should encompass regulators as well as financial institutions, he asserts. "Collaboration around standards and open source software for building and managing blockchains and smart contracts is key to driving their adoption. This has been true for similar foundational technologies, such as Internet protocols, web technologies, big data and the internet of things," says Behlendorf. "Every major new segment of the technology landscape depends upon companies, which are often in brutal competition with each other, working together to create just enough of a shared floor of technology upon which to build a whole ecosystem, while preserving competitive advantage. Without such a floor of common technology, we might never have seen new companies like Google and Amazon emerge from the web, nor the vibrant startup FinTech ecosystem we take for granted today."

> **Every company is, to some degree, an information technology company now. It is incumbent on them all to start thinking like one.**
>
> **Brian Behlendorf,** executive director, Hyperledger Project

For firms across the banking and financial services industry, the challenge is to ensure their operating models are sufficiently agile to deploy technology innovation as quickly and effectively as new entrants from the FinTech space. Behlendorf says: "Every company is, to some degree, an information technology company now. It is incumbent on them all to start thinking like one, which means thinking about the future more often than you might have – the future of the external technologies you depend upon, and the technologies core to your competitive differentiation. This is the only way to stay ahead of changes to the landscape. The first companies to see those opportunities will have an advantage."

Test cases

Integration of any new or innovative technology is a challenge in developed markets, which have decades of legacy systems to build upon. However, some believe emerging markets – which might not yet even possess functioning market utilities and infrastructures – are ideal test cases for disruptive technologies.

"Emerging markets are often in an excellent position to trial new technologies, like blockchains and smart contracts, that could be called 'disruptive' in more mature markets," says Behlendorf. "We saw this with cell phone adoption in Africa and Asia, where there was simply no need to bear the cost of wiring up the nation with landlines to every home. Instead, Africa and Asia jumped directly to wireless networks and inexpensive smart phones. In a similar way, less mature financial markets, by virtue of having fewer pre-existing, expensive legacy systems to replace, may be more willing and capable of implementing 'disruptive' tech, simply because there is less to disrupt; fewer egos to crush or jobs to displace, and less sunk cost to depreciate."

Despite this, deploying disruptive technology in an emerging market is not likely to be an entirely straightforward affair. Across Latin America, Asia and the Middle East and North Africa region, many emerging markets have recently invested significant sums into building market infrastructures, such as central securities depositories or central counterparties. Angus Scott, director for product strategy and innovation at Euroclear, sees the pace of adoption of new technologies being set by replacement cycles in mature markets.

"Disruptive technology – whether it is blockchain or anything else – must make commercial sense. In most jurisdictions, there is already a well-established legacy business model that exists in parallel with new platforms for a period of time," says Scott. "A better parallel may be the roll-out of mobile networks in developed markets, where they had to co-exist alongside fixed line incumbents, and so offer their own USPs. Arguably, developed markets are better placed to adopt new models as they start to replace old technology systems." ■

TO LEARN MORE ...

Forward compatibility
Thursday 29 September – 09:30-11:15

A journey of discovery

#Payments

With limited regulatory guidance, how are banks responding to requirements to implement intra-day liquidity management and monitoring?

The actress Mae West once put it succinctly: "He who hesitates is a damn fool!" Facing a full and never-ending schedule of deadlines for regulatory compliance, not to mention shrinking budgets and balance sheets, banks can hardly be blamed for waiting for greater precision and detailed local regulatory requirements before developing mandated capabilities for real-time – or at least intra-day – liquidity management, monitoring and reporting. But there comes a point when a perceived lack of consistency in regulatory requirements can no longer justify inaction. That point is rapidly approaching.

"Regulatory issues notwithstanding, it is important for organisations to start planning sooner rather than later. We have enough information to start investing in the foundations," says Mark Trivedi, managing director, firm-wide intra-day liquidity, JP Morgan, and a panellist in this morning's session.

Dennis Sweeney, managing director, global liquidity and collateral management, relationship management at Société Générale, agrees that there is nothing to be gained by waiting for further clarity on exactly what regulators expect, since 2017 will be a watershed year for intra-day liquidity reporting. "We've struggled to reduce the ambiguity in regulatory expectations, but we have to get on with it; we shouldn't be hoping for more detailed information to come through," he says.

Sweeney regards the recent trend towards de-risking – scaling back on particular correspondent relationships, typically in high-risk markets – as linked to the need for banks to provide comfort to regulators that intra-day exposures are being effectively monitored. "Banks withdrawing services from institutional customers or not taking them on in the first place is a derivative of intra-day liquidity, which hasn't dried up, but has become much more precious," he says.

Common elements

As session moderator, Sweeney will ask his panel to comment on the progress the industry has made over the past year. "At one level, it has been an individual process, we've all had to engage with our various regulators about what they were looking for," he says. At the same time, elements of the core task at hand are common. For example, the granting of intra-day credit has not traditionally led to an accounting entry based on the assumption that the requisite funds would be received by the end of the day. "Wholesale banks have had to devise a way of recording the fact that they are allowing institutions to borrow money intra-day in their bilateral relationships," explains Sweeney.

While exact requirements will vary by organisation, Trivedi suggests that all banks will be looking to ensure there is sufficient flexibility in their new systems and structures to meet a variety of requirements and objectives. "Even though reporting may be done on a local basis, intra-day liquidity spans jurisdictions and may have implications across the organisation," he says. "Regulation is not the only factor in designing platforms. It is important to have a comprehensive understanding of liquidity factors beyond cash transactions."

> **You need to understand your intra-day flows across three different elements: market infrastructures; participants in those infrastructures; and your own internal client base.**
>
> **Tom Halpin,** executive vice president, global head of payments, HSBC

How banks build the necessary flexibility and functionality into their intra-day liquidity monitoring and reporting capabilities will depend on their starting point. As such, many decades of correspondent banking relationships, M&A activities and internal restructurings may all play their part in shaping individual banks' projects. "It's not just a question of market infrastructure, but also of the underlying IT within each of the individual banks and the level of capabilities they have," says Tom Halpin, executive vice president, global head of payments, HSBC.

Notwithstanding the individual challenges for each institution, a lot can be done collectively, says Trivedi, such as the promotion of standards around data definitions and time stamps. The Liquidity Implementation Task Force (LITF), a group of large- and medium-sized clearing banks, custodian banks and global brokers, released its Global Market Practice Guidelines last year. These are designed to address the challenges of data collection required to comply with BCBS 248, the Basel Committee framework document which calls for banks to implement monitoring tools for intra-day liquidity management by January 2017.

> **We have enough information to start investing in the foundations.**
>
> **Mark Trivedi,** managing director, firm-wide intra-day liquidity, JP Morgan

The case for automation

The guidelines – available on the website of the Payments Market Practice Group – have been widely used as a reference document to inform banks' bespoke strategies. "You need to understand your intra-day flows across three different elements: market infrastructures; participants in those infrastructures; and your own internal client base," says Halpin. "Whether or not you need to do that every second, every ten seconds or every minute is, up to a point, going to be a subjective assessment of each bank, because banks have different client bases and participate in different systems with varying liquidity requirements and payments settling at different times of the day."

Société Générale's Sweeney suggests that the processes and solutions being implemented by banks today to be compliant by the January 2017 deadline will be refined and automated over time, as both banks and regulators become more familiar with the new framework.

"The baseline capability to provide the reporting is there, but what isn't there is the level of automation needed to meet the words in the guidelines," he says. "We are very familiar with reporting from a central bank account perspective, but interpreting the actual rules for reporting in each country is not so straightforward. Compliance can be handled manually, but really, what's needed is an automated solution where the result comes out at the right time of the day, according to the particular regulatory requirements."

Halpin expects a fair degree of consensus among panellists on the nature of the related challenges, but not necessarily on how each institution should meet them. "There is likely to be broad agreement on the monitoring, reporting and capturing of information required to meet regulatory obligations," he says, "but the questions then become: what do these changes mean to the industry and how will banks change their behaviour as a result? Will costs be absorbed or passed on? Understanding the cost of this new paradigm outside of the reporting and the processing of the data becomes key. This is really going to be a journey of discovery on the part of the banks, the participants and the market infrastructures. We need an open dialogue to ensure that we get this right." The time for hesitation, it seems, is well and truly over. ■

TO LEARN MORE ...

Real-time liquidity monitoring and management: Do banks still have the choice?
Thursday 29 September – 09:00-10:00

Know Your Challenges!

#Innotribe #Technology

KYC due diligence continues to require high levels of manual processing for banks. Can collaborative innovation deliver new efficiencies?

Thursday at Innotribe is going to be "very interesting", says day anchor Leda Glyptis, director at financial markets consulting group Sapient. "I participated in the Industry Challenge on Compliance in London in July, and I'm very excited by the discussions we'll have today about it. The winning solution was a really interesting product – it was visually impactful, it was innovative, and it solves a problem we have today," Glyptis continues.

The first session of today's programme will include a detailed account of the motivation and process behind Innotribe's Industry Challenge on Compliance, before revealing the successful participants and explaining next steps. To help delegates gain a deeper understanding of the potential benefits of technology innovations in the compliance space, the session's core themes will include: the need for a collaborative approach to compliance challenges; the crucial role of technology – and innovation – in securing banks and their clients against fraud and money-laundering in particular; and the need for standardisation across know-your-customer (KYC) and anti-money laundering (AML) due diligence processes, and compliance function in general.

Joining Glyptis on stage for the 'Innotribe Day Opening and Industry Challenge on Compliance' session will be Anju Patwardhan, Fulbright visiting scholar at Stanford University and former chief innovation officer at Standard Chartered Bank, as well as Kevin Johnson, head of Innotribe innovation programmes at SWIFT.

Identifying need

The overall objective of Innotribe's Industry Challenge programme, launched this year, is to bring a collaborative approach to developing practical solutions for business areas with outstanding needs to be addressed. To find and meet the most pressing needs, the Innotribe team works closely with SWIFT customers to identify the specific business areas that could benefit most from collaborative solutions. From this follows an exploration of potential opportunities in specific business areas, typically leading to the development of proof of concept and thence, ideally, to new and tangible solutions for the industry.

> **The aim of the Industry Challenge is to foster innovation through collaboration, and thereby reduce the cost of compliance.**
>
> **Bart Claeys,** head of KYC compliance services, SWIFT

In the compliance space, The KYC Registry, a SWIFT utility that supports the financial crime compliance efforts of correspondent banks, had already demonstrated the value of collaboration. However, both SWIFT and Innotribe wanted to explore the potential benefits further, in response to growing industry need.

According to Patwardhan, the regulatory climate has done much to shape banks' need for more cost-effective compliance solutions. Fast-evolving KYC and AML rules have placed financial crime compliance high on the agenda of senior managers across the banking sector, while new restraints on capital, leverage and liquidity are forcing banks to manage and contain, where possible, the rising costs associated with compliance.

"Due to regulatory changes in parameters for credit risk-weights, for many of the same risk profiles as before, banks need more capital today. They also need more liquidity. Essentially, they need to find ways to become more capital and cost-efficient," says Patwardhan.

Effective compliance is thus key to the future, and the effective deployment of innovative new technologies and new ideas is becoming ever more crucial.

Effective and efficient

For Innotribe's Industry Challenge on Compliance, the first step was the initial collaborative work on articulating the challenge itself. "We decided to concentrate on new compliance products around the KYC marketplace," says Johnson. The focus was on developing new CDD (customer due-diligence) and EDD (enhanced due-diligence) products to complement The KYC Registry. "Until now, CDD and EDD processes, within the overall KYC function, have typically required significant manual effort, and thus cost," says Bart Claeys, head of KYC compliance services, SWIFT. "The aim of the Industry Challenge on Compliance was to foster innovation through collaboration, and thereby to reduce both the cost of compliance and the time-to-implementation of new efficiencies. This was in response to the urgent need, expressed by the correspondent banking industry in particular, for utility solutions that increase effectiveness and efficiency, eliminate manual processes, and provide global standards and processes where possible.

> **Banks need to find ways to become more capital and cost-efficient.**
>
> **Anju Patwardhan,** Fulbright visiting scholar, Stanford University

Having established the product focus for the July event, Innotribe team members identified relevant vendors. Once that point was reached, Innotribe brought SWIFT customers and internal teams together with solution providers and FinTech start-ups. In effect, a multi-disciplinary team was assembled that could address a challenge from all angles within a workshop environment - the third stage in the Industry Challenge process. "This was developed specifically because banks and customers have expressed the view that they are no longer satisfied with traditional procurement processes that stifle rapid innovation and delay deployment of new products and systems," says Johnson.

Typically, the workshop stage telescopes much of that process into a period of (very intense) days, demonstrating the value of collaborating around a clearly articulated goal. "The workshop replaces the lengthy and costly process of scheduling and conducting numerous pitch meetings," says Johnson. The Industry Challenge on Compliance took the form of two distinct workshops. The first, for established firms, was a one-day 'marketplace challenge' for vendors wanting to build products that would form part of a marketplace linked to The KYC Registry. The second challenge, for start-ups, ran over two days and was broader in scope, with five start-up vendors pitching to work on new products in the KYC and compliance space in general.

After the workshop comes the nitty-gritty of collaborative development. "We selected two vendors from the marketplace challenge to work with us on developing new solutions linked to The KYC Registry, and two start-ups to develop proofs of concept around new ideas in the compliance space," says Johnson.

What new and tangible solutions does the Innotribe Challenge on Compliance give us? Find out on Thursday morning. ■

TO LEARN MORE ...

Innotribe day opening and Industry Challenge on Compliance
Thursday 29 September - 09:00-09:30

Moving in the right direction

#Trade Finance #Corporate Treasury #Technology

Digitisation is a bigger challenge in trade finance than elsewhere in wholesale banking, but progress can be seen on many fronts.

Trade finance has lagged other financial services in moving from paper to digital. This is because of the number of players and stages in the trade transaction flow, and because standardising processes and practices is particularly challenging when multiple industries are involved as well as multiple geographies.

Historically, there has also been a lack of awareness of the role of trade finance in senior management and public policy circles, suggests Alexander Malaket, president of specialist consultancy Opus Advisory Services and session moderator. "That all changed following the financial crisis," he says. "As a matter of public policy, banks were encouraged to invest in 'real economy' activity and we started to see a focus on trade finance, leading to the search for efficiency and to valuable innovations." He mentions, for example, the development of the Bank Payment Obligation (BPO) by SWIFT and the International Chamber of Commerce, as well as the introduction of electronic bills of lading and corporate-to-bank trade messages over SWIFT (MT 798).

Making real-world change

While progress has certainly been made in innovating digital products and services for use in the trade finance transaction chain, adoption has proved challenging. Many banks have signed up to new initiatives in principle and then waited to see if demand would follow, says Malaket. "It soon became clear that awareness needed to be built with corporates, to create demand that would pull the banks toward active adoption."

Rüdiger Geis, head of product management for trade at Commerzbank, says some banks perceived BPO as a threat to the more lucrative letters of credit (L/C) business, and suggests this may stem from a lack of understanding about the benefits. Commerzbank is actively promoting the BPO to corporate customers and bank counterparties, with its business case built on the BPO's suitability for invoice-based financing of open account transactions as well as risk mitigation and efficiency. "BPO gives our customers speed and efficiency, payment certainty and financing possibilities. For us, in addition to customer service and market differentiation, there are also new revenue opportunities," he says.

According to SWIFT[1], some 60 corporates are live on BPO and 18 of the top 20 trade banks are available to process BPOs, while some 20 corporates and 13 of the top 20 trade banks are live or implementing MT 798 messages.

Microsoft is among the firms soon to go live with MT 798 messages. The company uses standby L/Cs to secure its ongoing sales, but the amount of manual work and paper involved in putting facilities in place has sometimes proved frustrating. "It was taking up to several weeks to get a standby L/C in place," says Jayna Bundy, director of treasury operations. Having appraised their internal processes and the available solutions, Microsoft decided to automate its trade processing with banks over SWIFT (the company was an early adopter of SWIFT for multi-banking). As well as improved efficiency and resource savings, Bundy expects greater transparency across the business, an auditable workflow and significant benefits from business intelligence. "We'll be able to capture data and build a clear picture of our exposures," she says.

1 SWIFT for Corporates Trade Digitisation Market Adoption Report, July 2016

Although Bundy thinks the business and the industry are moving in the right direction, the speed of adoption remains an issue. "When we started to drill down, we found many banks are not fully ready to send MT 760s (for guarantees and standby L/Cs)," she confirms.

The promise of blockchain

Innovative technology, meanwhile, continues to offer new solutions to familiar problems. Some FinTechs and banks see much potential in distributed ledger technologies to facilitate the secure exchange of digitised data across multiple parties in a trade transaction flow. In August, Bank of America Merrill Lynch, HSBC and Infocomm Development Authority of Singapore announced they had demonstrated a blockchain-based process to replace paper-based L/Cs, for example. Bank-backed consortium R3 is also working on proof of concepts for trade finance. Microsoft's Bundy believes that distributed ledger solutions offer great potential in this area. "We've been close to proof of concepts and we're watching this with interest," she says.

> **We've been close to proof of concepts and we're watching this with interest.**
>
> **Jayna Bundy,** director of treasury operations, Microsoft

But Malaket believes the development and implementation of comprehensive blockchain solutions for trade finance is currently some way off. "There are so many aspects we haven't figured out," he says.

And John Ahearn, Citi's global head of trade, thinks it's important to keep a cool head, in terms of making the right technology investments. "It's a very interesting time, but it's also a slightly dangerous time – not all FinTechs completely understand the complexity of trade finance and given the cost pressures of the current markets, banks don't have huge budgets for proof of concept projects which might, or might not, succeed," he suggests.

Ahearn isn't expecting a digital revolution in trade finance in the next 12-24 months. "The reality is that use of L/Cs continues to decline, and most large corporations have negotiated good pricing on the documentary credits and other trade instruments they are using," he says. But he does expect incremental progress toward a more efficient trade finance environment, through increasing use of MT 798 messages, for example, which allow corporates and banks to exchange trade data, including documents and files in a range of formats, over SWIFT. "I think MT 798 has a bright future," says Ahearn. "Corporates can exchange their trade finance messages with all their banks, in the same way as their payments."

> **BPO gives our customers speed and efficiency, payment certainty and financing possibilities.**
>
> **Rüdiger Geis,** head of product management for trade, Commerzbank

Halfway house

Citi is investing in optical character recognition (OCR) technology to process non-digital inputs, such as scanned documents, and in back-end systems to handle the resulting machine-readable data. "Whatever you think about blockchain, banks will still need to process a lot of data for compliance reasons," says Ahearn. "When the world goes digital we'll be ready, but while it's still paper-intensive, OCR will help to drive the efficiencies we need in our back offices."

While banks are having to deal with the imperfect reality of scanned trade finance documents, they are also witnessing growth facilitated by technology innovation. Ahearn expects most growth to come in areas such as receivables and pre-shipment financing. For receivables financing, Citi is partnering with C2FO, an online market in which buyers can upload future-dated approved invoices. Suppliers can then request early payment of their approved invoices at a dynamic discounting rate, achieving better use of working capital for both parties. The service is gaining good traction in the current low-interest rate environment, he says.

Malaket notes an increased focus on supply chain finance, including payables financing and distributor financing solutions. He also points to the growing importance of sustainability and product traceability in the physical and financial transaction flow for commodities[2].

Commerzbank's Geis thinks it will take a decade or more to move to a fully digitised environment. Like other banks, Commerzbank is monitoring a number of initiatives to find the best use cases for the new digital technologies, including distributed ledger, while also helping corporate clients to use tools that are available here and now. "The technologies, technical standards and legal agreements are all to be decided," he says. "Meanwhile we have the BPO which is underpinned by ICC rules. And we're also seeing more parties keen to move to digitisation." ■

TO LEARN MORE ...

Trade digitisation: Where are we now?
Thursday 29 September – 10:15-11:15

2 See The Banking Environment Initiative, Cambridge Institute for Sustainability Leadership.

Mobilising services for the good of all

#Financial Inclusion #Technology #Payments

Banks, FinTechs, telcos and regulators all have a role to play in turning mobile money innovation into financial inclusion.

Mobile money transfer service M-Pesa is synonymous with financial inclusion. With more than 22 million subscribers transacting US$150 million daily, M-Pesa, which is operated by Kenyan telco provider, Safaricom, uses mobile money agents across the country to enable subscribers to send and receive money via their mobile phone. Its use of ubiquitous mobile phones helps M-Pesa to

> **You couldn't build Alipay in Africa.**
>
> **Zennon Kapron,** founder, Kapronasia

provide a user-friendly and cost-effective alternative to traditional money transfer providers.

Mobile banking has demonstrated great promise in overcoming geographic, demographic and institutional constraints to financial inclusion in sub-Saharan Africa. But can M-Pesa's success be replicated in other parts of the world? How should mobile money ecosystems be developed in order for financial inclusion initiatives to succeed? What role could potentially be played by FinTech companies, banks, regulators, telcos and retailers?

These are some of the questions that an esteemed panel of experts – spanning central bankers, regulators, analysts and academics – will debate at a panel discussion on mobile money and financial inclusion this afternoon.

The promise of mobile money and digital channels as catalysts for universal financial inclusion is widely recognized and advocated, says Finn Erik Kolnes, panel session moderator and lead for financial inclusion strategies for Accenture Development Partnerships. "Digital lowers cost to serve, enables reach beyond branch networks and makes sources of big data available for assessing the credit of low-collateral customers," he states.

Success factors

However, Kolnes says M-Pesa's success has yet to be widely replicated outside Kenya. Even within Africa, its expansion has proved challenging. M-Pesa recently closed its South African operations, having failed to attract a critical mass of customers. However, its Tanzanian operations remain profitable, says fellow panellist Jay Rosengard, director of the Mossavar-Rahmani Center for Business and Government's Financial Sector Program at Harvard Kennedy School, Harvard University. "South Africa had more differences than similarities to the Kenyan market – whilst Tanzania had more similarities than differences," explains Rosengard, who recently published a research paper, 'A Quantum Leap Over High Hurdles to Financial Inclusion: The Mobile Banking Revolution in Kenya', funded by the SWIFT Institute. He points to a number of factors in the Kenyan market – the lack of a viable alternative for transferring money, security issues, growth in payments traffic – which contributed to M-Pesa's success.

Kolnes highlights the part played by the regulator – the Central Bank of Kenya – which took a pragmatic approach, making it more straightforward for Safaricom to branch out into the provision of financial services. "That would be so much more difficult for other regula-

> **When it comes to asset accumulation, you really need the banks.**
>
> **Jay Rosengard,** director, financial sector program, Harvard Kennedy School

tors to do at this point in time," says Kolnes, "as digital financial services ecosystems have become much more complex." To replicate M-Pesa's success in other markets would require considerable co-operation and collaboration between multiple parties, says Kolnes. "Regulators would need to have a clear view of the benefits of mobile money and financial innovation and be encouraged to take some risk to allow for limited pilots."

Alternative approaches to M-Pesa's telco-led model have emerged in Africa and Asia, says Rosengard. Describing M-Pesa as a 'virtual monopoly', he says Kenya's third largest bank by net assets, Equity Bank, which focuses on microfinance and small-and-medium enterprises, launched Airtel Money, a mobile banking service that enables users to pay bills and merchants for goods and services. According to Rosengard, competition from Equity Bank forced M-Pesa to change its pricing structure and to accommodate links to bank accounts. In Asia, Rosengard says Bank Rakyat Indonesia (BRI) operates one of the largest and most profitable microfinance programmes in the world, providing payments, savings and credit facilities in urban and rural areas. BRI has even launched its own satellite, and provides agency and mobile banking.

In remote parts of western China, e-commerce platform Alibaba is working with spin-off company Ant Financial's online payment service, Alipay (which does not require customers to have a bank account), to promote greater financial inclusion. Fellow panellist, Zennon Kapron, founder of Kapronasia, an independent research and consulting firm focused on the Asian financial services industry, says Alipay is taking an innovative approach providing microcredit loans to towns in rural areas. "They will identify an influential person in the town and then work with them to lend out the money," he explains. Alibaba has also made a major push into underdeveloped areas to help merchants get online, says Kapron.

The potential for promoting greater financial inclusion in China via mobile devices is significant, asserts Kapron, as there are higher levels of smartphone ownership than in Africa. The Chinese government has committed to promoting greater financial inclusion and has upgraded the telecoms infrastructure to 4G in most rural areas to facilitate mobile data provision. Other local players that could help promote greater financial inclusion include China's Postal Savings Bank, which is scheduled to launch a US$7 billion-plus IPO later this year. Kapron says the bank could use some of the proceeds to become a financially-inclusive bank as it boasts the largest branch network in China.

Work is being done, says Kapron, to determine the unique selling points of the different financial inclusion models to see if they can be replicated in other countries. "But you couldn't take Alipay and build that in Africa," he says, "as there are a unique set of circumstances that allowed that to happen in China." Kolnes points to a potential role in the mobile money 'ecosystem' for non-governmental and international development organisations like Care International, which know the low-income customers, are passionate about empowering them, and can promote financial literacy. "They could act as the last-mile partner to a commercial bank or telco," he explains.

Next phase

Whilst mobile money can reduce payment transaction costs, increasing the disposable income of poor families, Rosengard says the real pay-off comes when it is linked to other financial products such as savings, credit and insurance, which he sees as the next important phase of development for promoting greater financial inclusion. M-Pesa has launched a savings and loans product, M-Shwari, but Rosengard says it has high fees attached to it. "When it comes to asset accumulation, you really need the banks," he says.

> **Telcos may not have the balance sheet, risk management appetite or suite of financial services to promote financial inclusion initiatives.**
>
> **Finn Erik Kolnes**, financial inclusion lead, Accenture Development Partnerships

But building a business case around promoting financial inclusion among lower-income, higher-risk customers remains challenging for the banks, says Kolnes, as it typically involves smaller transactions with a longer pay horizon. Many telcos, he says, struggle to create interoperable ecosystems and to graduate customers from payments towards the full suite of services, including savings, credit and insurance. "Banks can, in some cases, be reluctant to open up to telcos because they see them as a threat to core segments of their business," Kolnes explains, "and telcos may not have the balance sheet, risk management appetite or suite of financial services to promote financial inclusion initiatives."

Rosengard foresees a greater role for FinTech firms in promoting financial inclusion, for example by providing innovative solutions around credit appraisal and small business financing. Although the term 'financial inclusion' is often equated with low-income populations in developing countries, Rosengard says small, family-run businesses in both developed and developing countries are often neglected by the formal banking sector when it comes to the provision of readily available, low-cost financing. To remedy this situation, he suggests, banks could collaborate with FinTech companies to increase their outreach to the financially excluded, including SMEs, and to lower transaction costs and risk. ■

TO LEARN MORE ...

Emerging markets: Mobile money and financial inclusion
Thursday 29 September – 14:00-15:00

Harnessing the power of data

#Standards Forum #Data #Blockchain

Challenges to the efficient use of data abound, but regulatory and demand drivers are spurring industry initiatives.

If knowledge is power, the data generated by the financial industry has the potential to make it very powerful indeed. But extracting knowledge from data is still a challenge for many institutions. Efforts are being stepped up to standardise and automate data processing to get to grips with the huge volumes being created, captured and circulated across the financial markets. Nevertheless, the key to accessing transparent, high-quality, relevant, timely and cost-effective data often appears elusive.

Financial institutions should be open-minded about working together collaboratively to improve data management, says Graham Ray, global head of product management, investor services at Deutsche Bank. The three main areas of change in data management during the past few years, he says, are: the demand for increased speed of data distribution (in part to support faster decision-making by clients); the need for more transparency of data; and the new and diverse ways in which customers are using data.

Data on demand

Against a fluid and unpredictable business backdrop, continued collaboration on common standards is the key to future progress, Ray belives. "As an industry, we need to continue to evolve standards and also recognise that we need support, for example from regulators, in the way that it is done. The securities industry has done well in improving data management processes, and achieving STP and managing exceptions. We have made progress on standardisation and automation of message types both in the securities and cash industries."

> **"Firms now understand they need to develop internal data standards.**
>
> **Mark Davies,** general manager, Avox Data Services, DTCC

There are still challenges, including those related to data transparency, he adds. One of which is ensuring that the right data is available as and when required at different stages in the lifecycle of a transaction. This typically demands a simplified approach to storage and distribution. "People are beginning to recognise that different elements of data are required at different stages in the transaction lifecycle. Institutions need to understand where these elements need to be and what they should look like," he says.

A particular area of focus is the management of reference data, i.e. the 'static' information used in multiple transactions and processes to refer to counterparties, instruments and market infrastructures, but which is not always as uniform as it should be. Yuval Millo, professor of accounting at Warwick Business School, University of Warwick, says financial institutions are not making the most effective use of automation in this area. "There are many different types and formats of reference data and little incentive to harmonise them or create bridges between the different formats," he says. "It is much easier for managers to handle something that might be clunky but works on a day-to-day basis than to ask a CEO for US$5 million to rebuild data operations. Standardisation of reference data is costly, high risk and the rewards are uncertain."

Millo, along with Markos Zachariadis, assistant professor of information systems management and innovation at Warwick Business School, and Niki Panourgias, lecturer in financial market information systems at the University of Leicester's School of Business, has been researching the use of legal entity identifiers (LEIs). These have been deployed for a widening range of uses since their original introduction for the unique identification of transaction counterparts in the aftermath of the collapse of Lehman Brothers.

Legacy challenges

Standardisation of semantic data (the information that enables systems to understand the meaning of data) is also a big problem, although BCBS 239 – the Basel Committee on Banking Supervision's guidelines for effective risk data aggregation and risk reporting – is helping, according to Mark Davies, general manager for Avox Data Services at the Depository Trust & Clearing Corporation (DTCC). "Firms now understand they need to develop internal data standards. Five years ago, an organisation would struggle to arrive at one standard. While there are still different data definitions, tags and fields, organisations can now tie these together and know the difference between how data items are defined in different scenarios."

Standardisation of semantic data is a two-step process: financial institutions need to establish whether they can standardise internally; and then examine if there is an opportunity to use those mutualised standards externally. If there are slight differences in the definitions, organisations must be clear about those from the outset and understand where those nuances occur.

Davies warns however that there is some reluctance among larger organisations to use standard data models, due in part to their retention of complex and idiosyncratic legacy systems. Whether a function of size, growth or age, most large firms maintain hundreds of systems that each play a role in the end-to-end management of customer relationships and post-trade processes. "It would be difficult for these organisations to take on a new data model and apply it across the firm," says Davies. "They could, however, implement new

> **Data elements used in multiple standards, which now are documented with different notations and definitions, can be harmonised.**
>
> **Karla McKenna,** director of market practice and standards, Citi

data models in parts of the organisation where architecture is being replaced, but it can be very difficult. Not many organisations want to replace business-critical applications."

It is expensive to replace business-critical applications but there are also costs associated with inaction. Cian Burke, global head of securities services at HSBC, says a lack of qualitative data – economic, market and other information not directly related to mathematical data – ultimately leads to higher costs (in terms of both staff and data feeds), increased risks, greater complexity, slower time-to-market, reduced STP rates and process duplication. "These issues are triggered by a number of data challenges, including differing standards, which reduces the opportunity for re-use, given the difficultly in describing things correctly," he says. "For example, if you have multiple security masters across an organisation and data duplication, it will be very difficult to trace back to the original source and the data will be more susceptible to misinterpretation."

In Burke's view, the opportunity to introduce transparency throughout the lifecycle of a transaction requires three intrinsically-linked components:

- Tools to support 'visibility' into the golden source and other internal/external data sources (using APIs);
- Immediacy, allowing access to data when you require it, rather than when an organisation provides it (APIs can also help here);
- Consistency/standardisation, whereby a language is used between parties that covers all aspects of a transaction, such that any ambiguity about the transaction can be removed.

Burke believes distributed ledger technology (DLT) could play a complementary role due to its ability to hold a golden immutable record of the data. "A good example would be for a corporate action event, as DLT would eliminate the need for reconciliation or data scrubbing. There is no single source; since the data will be distributed to everyone on the blockchain," he says. Additionally, DLT offers the ability to disintermediate some information service providers, as data could be taken from more efficient sources than today. Smart contracts could be used to execute logic when data moves to a certain state – helping to increase STP, says Burke.

> **People are beginning to recognise that different elements of data are required at different stages of the transaction lifecycle.**
>
> **Graham Ray,** global head of product management, investor services, Deutsche Bank

Ensuring consistency

Growing recognition of the importance of higher quality and more standardised reference data to efficient transaction processing has led to greater collaboration across the industry. For example, the International Organisation for Standardisation's Technical Committee 68 (ISO/TC 68) has recognised the role of standards in promoting and ensuring consistency in reference data. A restructuring of ISO/TC 68 is under way, which may lead to the creation of a new sub-committee exclusively focused on reference data standards, says Karla McKenna, director of market practice and standards at Citi and chair of ISO/TC 68. "Establishing this new sub-committee would bring together cross-industry experts to provide a deeper understanding of how particular standards are used and allow input from all sides of the industry on standards that are used by many parts," she says.

It is hoped that grouping standards together by type and function rather than by business domain, as the committee is currently structured, will result in more coordinated standards coverage, development and review. "Data elements used in multiple standards, which are now documented with different notations and definitions, can be harmonised. This structure will also allow ISO/TC 68 to better assess new standards requests and to promote and coordinate re-use of what currently exists with the ISO/TC 68 library," explains McKenna.

But while the ongoing work of finance sector professionals and academics is crucial to efforts to improve data management, Millo says top-level management must also realise the importance of data. "The culture has to be that data is important right from the start. The real success of a chief data officer would be that eventually he or she will no longer be required because getting data right is deeply embedded into the organisation and is part of the culture," he says. ■

TO LEARN MORE ...

Data management – The quest of the endless journey
Thursday 29 September – 09:00-10:00

Reference data and semantics – New challenges and solutions for standardisers
Thursday 29 September – 10:30-11:15

A question of distribution

#Innotribe

Digital technology innovation not only enables new efficiencies and services, it can also challenge existing economic models.

During the Great Depression in the 1930s, there were widespread bank closures and the wealthy hoarded their capital – but none of this put an end to the transfer of value. Instead, while US president Franklin Delano Roosevelt was busy getting the banking system back up and running, local currencies and different kinds of scrips emerged, enabling value transfer.

"When there were multiple currencies, local currencies and all these other means of exchange, then the idea of having a hoard of capital didn't matter as much," says Douglas Rushkoff, author of the book 'Throwing rocks at the Google bus', and keynote speaker for Innotribe's closing session at Sibos 2016. "I am hoping we can build some of that [Depression-era] resilience into our corporate and our municipal fabric now."

> **Digital technology really promotes the velocity of money and exchange.**
>
> **Douglas Rushkoff,** professor of media theory and digital economics, CUNY/Queens

As scale develops in business, there is a temptation for executives to use abstraction to create the appearance of growth where there is none, a cycle that can generate asset bubbles in the place of real growth, preventing the efficient transfer of value through the economic system. Rushkoff believes that digital technology has been used to defend incumbent growth-based capitalism from more distributed, network-based systems that are more aligned to an increasingly digital environment. The bias of digital technology is towards the amplification of transaction and circulation, he argues.

"Digital technology really promotes the velocity of money and exchange," he says. If people and companies are creating and exchanging value themselves, then it is more difficult for players to game that system and extract that value through 'financialisation'.

"We are looking at a real tug of war now between a majority of businesses that are attempting to do revenue-based business and financial institutions and venture firms that are looking to do business by extracting value from those exchanges," says Rushkoff, also professor of media theory and digital economics at City University of New York's Queens College.

Growth redefined

Rushkoff argues that growth has become a highly abstract concept: rather than being based on the actual buying or selling of goods by individuals and companies, it is based on speculation of value – from the derivatives market to the speculative value of data ("a bubble if ever there was one", he says). In recent decades, digital technology innovation has largely been deployed to buttress existing models rather than evolve new ones, as can be seen in the commercial exploitation of the internet. But this is changing, says Rushkoff. More recent innovation has led to firms and individuals breaking free from traditional economic models. Open source technology, for example, allows existing intellectual property to be expanded beyond its initial creator's capacity.

"It's like a 21st century version of common land, where you know you have a shared resource which is managed collectively, but people can use that shared resource to grow businesses or make money," Rushkoff observes. "So while I own my cattle I don't necessarily own the pasture on which they are grazing. And the sharing of resources is really part of what the network was built for from the beginning."

Ownership of resources is being eroded, with shared accessibility replacing that ownership. This is as evident in the consumer realm as it is among the growing range of industries, including finance and technology, where collaboration, information-sharing networks and utilities are becoming more embedded. Increasingly, younger people do not buy media in the same way as their parents did; they are happy to simply have access to shared cloud resources.

> **Kids raised in an environment where ownership is no longer as important as access might develop different models.**
>
> **Douglas Rushkoff,** professor of media theory and digital economics, CUNY/Queens

"I don't have my Rolling Stones record any more, it's a community resource that I tap when I want to hear it," he says. "Kids raised in an environment where ownership is no longer as important as access might develop different models, different ways of understanding economic success."

At an enterprise level, Rushkoff notes that many CEOs currently try to please shareholders with strategies that satisfy the economics of demonstrating growth, even though they are not genuinely being more productive, for example by selling productive assets in order to show growth on the balance sheet. This approach is sometimes fuelled by incentives in executive remuneration packages, but Rushkoff notes that some firms are actively opting to push out short-term shareholders in favour of longer term investors, citing Unilever as an example.

Governments have a role in changing corporate focus to long-term value generation based on efficient exchange of value rather than abstract growth, Rushkoff suggests. Tax codes in most countries are stacked against good corporate behaviour, he argues, with management prioritising dividend growth over business efficiency, because of the high rates of tax on dividends.

"If the tax policy were changed so that dividends were taxed low, while capital gains were taxed high, all of a sudden you would see a massive push from shareholders for companies to earn money rather than just grow by artificial means," he says.

The future of work

Rushkoff recognises that technology-based changes to economic systems can be threatening to individuals, as well as to companies and financial institutions, not least because exciting advances in intelligent automation imply wide-scale job losses. As such, the growing influence of digital technology may also force us to rethink traditional concepts about the role of work in our lives.

"Jobs will be less about meeting the demand for food and shelter than about justifying someone's right to participate in the abundance of stuff that we already have," he says. "If automation actually works, then it should allow us to wind back the number of days and hours that people have to work until there is enough work to go around. If work is the thing that is scarce – not resources – then everybody works two or three days a week instead of five."

The impact of this new wave of automation on future employment levels is prompting a renewed interest in the idea of a guaranteed minimum income, with a number of pilot projects being proposed by governments. Long-discussed by economists, Rushkoff admits to mixed feelings on the idea.

"Certainly we live in a society where everyone should be able to be fed and clothed and housed," he says. "Then if you want nicer stuff or video games then figure out a way to compete in capitalism."

Ultimately, the long-term effect of advances in digital technology can be beneficial to people because it will bring forth economic models and systems that prioritise human prosperity over economic growth, Rushkoff asserts. As he wrote in a recent blog, his hope is for a world in which we "stop programming people for technology and start programming technology for people". ■

TO LEARN MORE ...

Innotribe closing keynote: Platform cooperativism
Thursday 29 September – 15:15-16:15

Time is of the essence

While fraud detection and AML monitoring display synergies, these compliance disciplines take place over different time horizons, posing barriers to a joined-up approach.

The answer was hidden in the title of yesterday's session on fraud and AML compliance, which asked whether it was 'time for a joined-up approach'. Time itself is the key challenge in joining up the two disciplines. On the one hand, fraud detection operates in a real-time environment to prevent monetary loss for customers and banks alike; on the other, AML monitoring is undertaken primarily to meet a regulatory requirement and as such exists in a world of batch cycles. While fraud detection tends to be more preventive, AML is more investigative.

Arriving at a joined-up approach "is about leveraging synergies, while respecting the differences", said Cate Kemp, group payments compliance director at Lloyds Banking Group.

> **Cross-functional training is an important element.**
>
> **Ben Hargreaves,** director, global head of anti-fraud, Credit Suisse

Common ground?

At Credit Suisse, fraud and AML are treated organisationally as a unified problem, focusing on the policy framework and trying to leverage a common understanding across the disciplines to achieve a more simplified structure from a control standpoint. "The underlying infrastructure, technology and data, and the viewpoints that you are trying to get to, are common. We are trying to leverage these similarities," explained Ben Hargreaves, director, global head of anti-fraud, Credit Suisse.

In the context of client accounts, a lot of the data points used to assess different types of financial crime activity are common to both fraud detection and AML monitoring in terms of understanding beneficial ownership, the origins of a transaction and the beneficiaries that are involved.

"The differences are around the timings of interventions," explained Hargreaves. From an AML perspective, real-time processes are not as critical. To prevent fraud occurring however, the timeliness of the decision-making process plays a significant part.

At a policy, level firms need to have a risk appetite that transcends any type of financial crime, said Kemp. It is in the timeliness of the intervention where both the challenge and the opportunity lie.

While the data is the same and the processes involved are inherently similar, whether onboarding or conducting KYC checks, most banks remain siloed in their approach to compliance, with different parts of the organisation undertaking separate checks, said Angus Wildblood, partner for enterprise risk services at Deloitte. The objectives in the different parts of the organisation also diverge. From a fraud perspective, the aim has been to manage risk and save money, said Wildblood, while AML is more focused on managing a regulatory position. One key step toward achieving a more joined-up approach would be for banks to move away from viewing AML as a compliance-driven discipline towards a financial crime risk-management undertaking, said Wildblood.

However, Jeremy Warren, head of CIB global financial crimes compliance, JP Morgan, said fraud and AML *are* connected in the area of investigations case management. Ideally, disclosures should be made through the same system, allowing staff to look at compliance issues from different angles, while retaining a holistic view across a client relationship. This is a prerequisite for taking informed decisions, said Warren.

Client dimension

Looking at fraud prevention and AML monitoring from a customer perspective, improvements will come from banks offering a 'one touch' approach, rather than maintaining separate lines of enquiry, said Hargreaves. "If we manage fraud and AML together, we then have a better chance of preventing clients from becoming victims of crime," said Wildblood. From the perspective of becoming a customer of a bank there is only one process involved in onboarding, he added, to ease the burden on the client.

"Bringing fraud and AML together passes the logic test," said Kemp. But theory and reality currently diverge. Proactively contacting clients to protect them from becoming victims of crime can result in unpredictable consequences, she noted. A practice designed to prevent harm can result in customers complaining about intervention, with banks accused of interfering or stalling legitimate payments.

It follows that client education is a prerequisite to achieve a joined-up approach, said Warren.

> **Bringing fraud and AML together passes the logic test.**
>
> **Cate Kemp,** group payments compliance director, Lloyds Banking Group

"There is a lot of synergy between fraud and AML, but client outreach and communication covering both is vital."

Cultural shift

Regulators expect banks to achieve financial crime compliance, whether sanctions screening, protecting against fraud or AML. For banks, the question of how to arrange their compliance skills to achieve efficiency and effectiveness is key. This requires an ability to leverage knowledge and experience across different compliance teams, panellists agreed. "Cross-functional training is an important element of this," said Hargreaves, in order to enable staff with broader experience to detect financial crime from a holistic viewpoint, rather than simply through the prism of AML, fraud or sanctions screening respectively. The danger that comes with too narrow a focus on one or other discipline is that illicit activity is missed because it fails to fit a specific set of criteria. "Sharing lessons learned in different parts of the organisation is critical," said Warren.

This leads to conversations at an enterprise level around transaction monitoring. The feedback loop is considerably faster in preventing a fraud than AML. "It's not the same in the AML world," acknowledged Hargreaves. Through education and sharing knowledge, the aim is that some of the embedded practices that fraud detection has brought over time, such as using advanced analytics-modelling capabilities and rapidly adapting to client behaviour changes, can be introduced to AML for the benefit of all. ■

Private bankers toast FinTech innovation at Sibos

More than 50 senior executives from Swiss private banks visited Sibos as part of an initiative to introduce these organisations to more regular attendees of the conference, including financial market infrastructures, correspondent banks and up and coming FinTech firms.

The group was invited to Sibos by Geneva Financial Center (GFC), an umbrella association representing financial institutions in Geneva, including private and institutional wealth management, commodity trading, commercial and retail banking firms. Geneva is a global private banking centre.

"Private banks may have traditionally believed that Sibos was not strictly relevant to their business. The event was an effort to highlight the synergies between market infrastructures, FinTech firms and private banks. We wanted to emphasise the interconnectedness between market infrastructures and private banks. It was also designed to showcase that Sibos is an international event, and we hope some private bankers will make the journey to Toronto in 2017," said Michael Kleiner, economic development officer in the Economic Development Office at the state of Geneva's Department of Security and Economy, speaking at an end-of-day reception at the Swiss Lounge in the Exhibition Hall.

The reception also included a presentation by Pierre Maudet, Geneva's economic minister, in which he thanked Sibos for choosing Geneva as host city for a third time.

The FinTech presence at Sibos was of particular interest to the private bankers, who were given presentations by a number of startups and early-stage firms during their visit. "The business is changing dramatically, and many of the private banking delegates found the FinTech presentations very engaging," added Kleiner.

Like larger institutions, many private banks are facing cost pressures and are looking for ways to cut overheads. As such, they are considered a natural market by FinTech firms which can reduce organisations' dependency on manual processes and increase their ability to deliver personalised services at scale.

In particular, robo-advisors – which provide wealth management clients with investment recommendations via algorithm-driven user interfaces – have been a major topic of discussion at Sibos this year, with experts predicting growth in Europe. Although private banks typically work with high net worth individuals who are used to a highly personal service, the level of sophistication achieved by robo-advisor has led to a number of deals with private banks, including at least one based in Geneva. ■

Take a trip to MaRS in Toronto

North America's fourth-largest city is perhaps best known for its thriving business and commercial district and iconic landmarks such as Lake Ontario and the 553m high CN observation Tower, which dominates the Toronto skyline.

But visitors to the Sibos conference next year in Toronto can expect more than tourist attractions. If you thought FinTech was a strong theme at Sibos this year, just wait till Toronto. The city is home to one of the world's largest urban innovation hubs (known as the MaRS Discovery District) which is also home to Canada's first dedicated FinTech cluster.

Urban innovation hubs provide entrepreneurs with access to investors and facilities to develop products and services of particular value in an urban environment. MaRS's FinTech cluster brings together 350 startups, 14 Canadian and financial institution partners and 50 venture capital firms.

Canadian bank CIBC is the lead sponsor and tenant of MaRS's C-suite, which melds commerce with 'creativity'.

> **What you're going to see next year is the next evolution of payments.**
>
> **Adam Nanjee,** head of financial technology, MaRS Discovery District

Adam Nanjee, head of financial technology at the MaRS Discovery District, has been attending Sibos this week, and highlighted recent Canadian FinTech developments during yesterday's 'FinTech hubs – Americas' session at Innotribe.

Nanjee says MaRS has attracted a number of international banks and partners, which are coming to Toronto to capitalise on the FinTech boom. PayPal Canada moved its Canadian headquarters to the MaRS Discovery District, for example, while IBM has also joined its FinTech hub.

Toronto's FinTech claims to fame, according to Nanjee, include the fact that it is home to some of the world's leading blockchain companies, including Blockstream and Ethereum. Blockstream develops 'sidechains' for improving on the blockchain, whilst Ethereum is a decentralised platform that runs smart contracts. Alternative lending platforms (peer-to-peer) and digital wealth management providers are strongly represented in MaRS's FinTech cluster, which also includes 25 insurance-related start-ups.

Canada's FinTech sector is not restricted to Toronto of course. The FinTech Association of Canada was formed in April this year. Its formation was spearheaded by the Digital Finance Institute (DFI), following a roundtable discussion between the DFI and the Canadian Payments Association in September last year. The new body will work to develop international relationships for Canadian FinTech companies and foster industry dialogue on partnerships and integration. It is also a founder member of the Global FinTech Hubs Federation, which was established in August, with the support of Innotribe and Innovate Finance.

At Sibos in Toronto, Nanjee predicts that artificial intelligence and machine learning will be major topics, which will play to the strengths of the city's FinTech cluster. He also believes Sibos 2017 will provide Canadian banks and payment providers with an opportunity to demonstrate payments innovations.

"Canada has also been a leader in mobile payments for 10 years," says Nanjee, "and what you're going to see next year [at Sibos in Toronto] is the next evolution of payments." According to Nanjee, the next generation of payment applications will feature authentication based on biometrics (facial recognition, fingerprint and iris scans). The list of reasons to attend Sibos 2017 in Toronto just got even longer. ■