AST AssetServicingTimes

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Blockchain Latest
Why, how and when?

Start-Up, Start-Up
Six fintechs discuss the future

Big Banks
Tech heads talk innovation

Sums and Roundabouts
Solid data strategies prevail

AST
AssetServicingTimes

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Tools of the trade

Home to the world famous Swiss army knife, Switzerland is perhaps the most apt of countries for Sibos 2016.

Banks may have little use for tiny scissors and saws, but the concept of the multi-tool remains a helpful metaphor for the modern world of financial technology.

Many tools are required, each designed for a particular purpose, but all stemming from the same fixed point and working towards a common goal. In extreme cases, that goal is survival.

The industry is undoubtedly moving away from a siloed and disjointed model. Tasks such as data management, regulatory reporting and reconciliation are made unequivocally more difficult without one clear view of activities firm-wide.

'Spreadsheet' and 'fax' have become dirty words, while 'blockchain' and 'machine learning' are phrases hailing a revolution, and '-tech' has itself become a legitimate suffix.

That said, as one of our contribwutors to this issue notes, there was a time when the abacus represented the height of fintech innovation. Technology has existed forever, and will inevitably continue to evolve.

Inside this Sibos conference special, you will, predictably, find an update on distributed ledger technology, which is starting to attract the attention of institutions and regulators alike.

We also catch up with some of the industry's biggest players to find out how they're marrying legacy tech with innovation, while a handful of fintech start-ups describe their journeys so far.

Keep an eye out for the Asset Servicing Times team around the conference, and once all the hard work of the day is over, we look forward to catching up over a glass of wine or two. Because, after all, some things never change.

Stephanie Palmer
Deputy Editor
Asset Servicing Times

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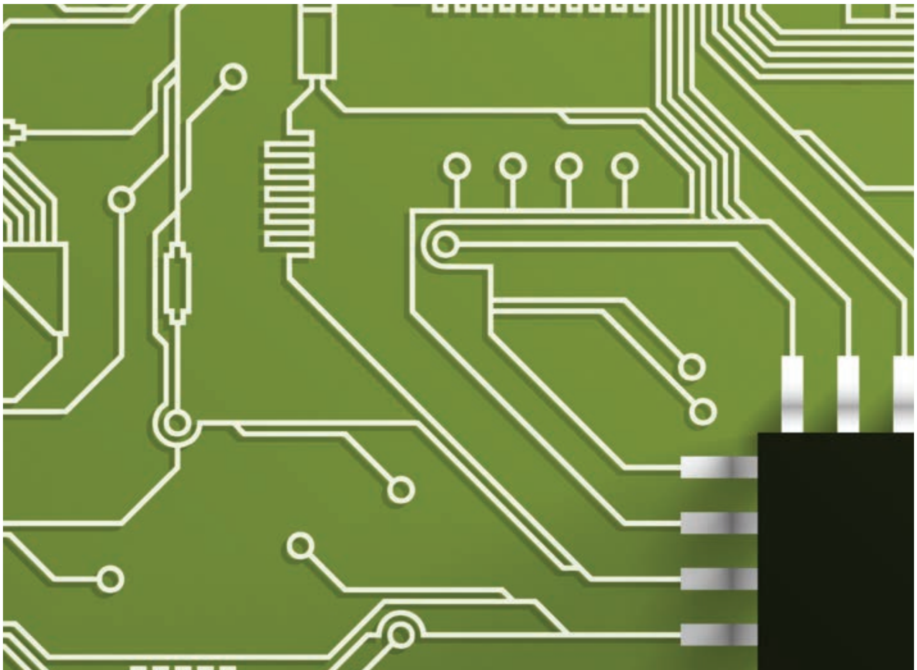

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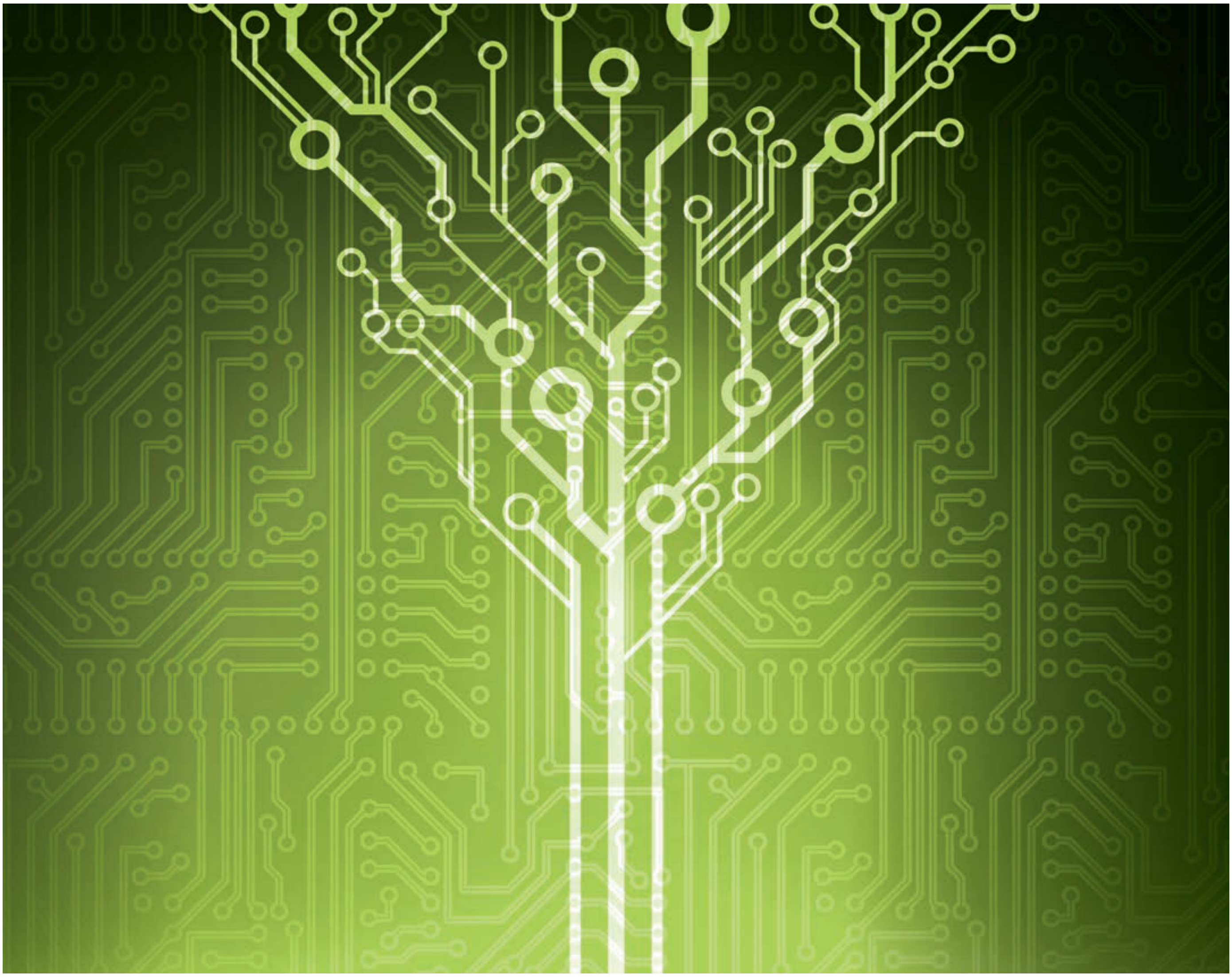

The long arm of the law

Whether disruptive or delightfully progressive, blockchain is a force of nature that's growing fast, and attracting the attention of the powers that be

Some call it a revolutionary, come to transform financial technology for ever more, some call it a troublesome disruptor, and others tip it merely as a passing fad, bringing interesting theories, but ultimately unable to make the monumental changes that it promises. It is, of course, distributed ledger technology, or, going by its street name, the much-discussed, much-revered and still little-understood blockchain.

For all the excitement and glamour around the technology, which promises real-time totally transparent information sharing, there are still many unknowns.

Questions around security, reliability and scalability raise their heads again and again, and how it will, or can, be regulated is a perpetual question that regulators, law makers and industry participants—big or small—are yet to answer.

Trevor Belstead, partner and head of transaction banking at Delta Capita, notes that with big game-changing ideas, there are always hurdles to overcome, "especially for something as radical as blockchain, which seeks to transform various established business models from trading to settlement".

For some firms, Belstead says, business models will be turned upside-down, challenging ability to create value in long-standing business and deliver profit to shareholders—the very things they rely on for survival.

Now, banks should really be re-evaluating these business models and architectures, starting to reduce the complexity therein.

He says: "Companies need to effectively address today's challenges in order for investors to reap the rewards in the future."

Saket Sharma, chief information officer for treasury services technology at BNY Mellon, notes that, while the technology is promising, blockchain is not a viable solution for financial services just yet.

He says: "Interoperability will be crucial for successful adoption and that poses a challenge today because the technology is still fluid and standards have yet to evolve. Also, risk and regulatory frameworks need to evolve."

Start-up fintech provider RISE, however, offers blockchain solutions focused on securities safekeeping and settlement. CEO Thorsten Peisl suggests that for blockchain to live up to its hype, the technology has to be re-imagined and re-designed, so that its attributes are matched to the particular needs of the post-trade space.

The RISE solution focuses on decentralised ledger qualities and permissioned transparency, allowing investors complete sight and control of their own assets, but not of the assets of other participants.

Peisl explains: "It enables issuers to have a view but no control into final beneficiaries; financial institutions—ledger operators or validators—to have access to client information; and regulators to have a complete view of the information in their jurisdiction in real-time but no direct control over the assets."

In this way, he says, "investors can continue to put trust in regulated institutions to provide settlement with better functionality, transparency and risk management".

However, there are also security concerns remaining. Jeremy Taylor, strategy owner for capital markets at GFT, points out that making sure records are secure and tamper-proof is "paramount".

"Any security breach would seriously undermine confidence in the whole blockchain approach," he says, adding: "These challenges must be solved before blockchain is economically viable."

> ***Regulators should be aware of technology developments in the market and be on hand to provide a framework that supports innovation***

Better together

Taylor also notes that the very nature of distributed ledger technology poses a challenge. He says: "As it is based in a distributed architecture where consensus is achieved by majority, this makes it difficult reaching a common agreement to use the technology in a public network."

Although the theory behind crypto currency has been around for about 20 years or more, and digital currencies like bitcoin have been on the scene since as early as 2008, using blockchain itself in mainstream financial services is still a relatively infant idea, but one that is developing extremely quickly. Addressing the "nascent state" of distributed ledger technology, Mark Wetjen, managing director for global public policy at the Depository Trust & Clearing Corporation (DTCC), suggests that a lack of existing industry standards and best-practice standards could be to the technology's detriment, despite the potential for transformation.

Wetjen says blockchain's youthful nature "could create an environment where solutions are developed and delivered in silos, creating the same inefficiencies and disjointed framework that exists today".

Despite industry collaboration through the likes of R3's blockchain consortium, which has more than 40 participant banks, institutions are running their own tests and experiments. This could eventually lead to distributed ledger silos, creating even more fragmentation in the market, rather than the opposite, and the desired, effect.

"The current state of the technology is immature," Wetjen says. "It has inherent scale limitations and it lacks the necessary underlying infrastructure to efficiently integrate it into existing financial market infrastructures and processes."

He adds: "Without consistent standards or an otherwise efficient means of network interoperability, the continued creation of individual, private blockchain solutions could increase the fragmentation that exists across financial market processes today."

That said, if developed properly in a collaborative manner, blockchain potentially has the power to improve the stability of the financial markets as a whole.

With regards to securities settlement, Peisl argues that blockchain can bolster resilience in the global financial system "by removing certain central points of failure".

Pointing to past failings in the industry, he suggests: "Some of the losses experienced by investors in recent cases have mainly been a result of the inefficiencies in the process of proving claims to assets which delay insolvency resolution."

Belstead, however, warns that blockchain technology could potentially threaten financial stability, albeit only if banks fail to address some of the challenges in the market today. According to Belstead, banks must address the way they tackle operational risks and failures, and how they will continue to in the future.

"It is clear that there is a lot of complicated groundwork, planning and adjustment to be done before this particular silver bullet can be fired."

Regulation games

For better or for worse, blockchain is catching the attention of the regulators. The UK's Financial Conduct Authority (FCA) has launched its Innovation Hub, a dedicated space for start-ups to test and develop products using blockchain and other innovative solutions, while the European Securities and Markets Authority has called for contribution on how it should approach regulating the new technology, outlining concerns and inviting comments from industry participants on what would help them manage emerging technologies.

Peisl notes: "Global regulators are keen to understand how this technology can be best applied for the benefit of all, and are very open to working with the industry."

Similarly, Taylor praises the FCA's efforts—the Innovation Hub is in place to spot and address any regulatory issues that may arise during blockchain testing and development. He notes that regulators should be aware of technology developments in the market and be on hand to provide a framework that supports innovation. In fact, to do so would make life easier for the regulators in the long run, too.

Taylor says: "The technology can simplify processes in banks, and regulators could have much more real-time and transparent information."

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In the same way, regulators can also play a role in the consortium discussions and experiments. As Sharma says: "They are key stakeholders in any potential industry blockchain-based solution."

He adds: "The regulators play an important role in making sure that the proper rules are being considered as we look at solutions."

The role of the regulatory authority here, however, is not quite a clear-cut as in other areas of the industry. Belstead suggests that actually, in blockchain, the regulator's place is as of yet undefined. Financial institutions should address the existing legal and contractual frameworks around their use of the technology before regulators get involved at all, he says, asking: "Where does the trust really reside in these platforms? Who owns a platform and the data?"

"All that is even before considering aspects of security, identity or cost, revenue and return-on-investment models."

The industry seems to be in a state of limbo, undecided whether regulations should be adapted to work with new technologies, or whether new technologies should be moulded to fit with existing regulation. While Peisl argues that regulatory change is probably not necessary, and that the existing frameworks can be used to introduce distributed ledger systems, he adds that regulators should perhaps embrace the tech, so that "more industry-wide benefits can be achieved".

Taylor says: "The current fintech regulatory environment is somewhat of a grey area that needs to be addressed. Fintechs that are hoping to use blockchain to provide services to compete with banks will need to comply with current regulations. This is an area under close scrutiny by the regulators."

He reiterates that blockchain has the potential to completely re-hash the market landscape, leading to the creation of new roles in the system and new types of participants.

"Regulators will need to stay abreast of developments and ensure that investors, and the wider economy, are protected."

Wetjen, however, suggests that, at least in the institutional, non-retail space that DTCC operates in, regulators are likely to expect blockchain technology users to demonstrate how their solutions fit within the current regulatory framework. The objectives of the regulations remain the same, he says, and so it is likely that the framework as a whole will remain as well.

"Existing frameworks reflect key policy objectives that have been formed over decades of market activity, such as systemic risk mitigation, improving transparency, reducing fraud and manipulation, and investor protection," he says.

"These objectives are nearly universal and have been effectuated by the current rules. It is very likely that global regulators will want to ensure that these key objectives continue to be realised, regardless of what technology is being used by market participants."

It is possible, Wetjen says, that current regulation could become "inapplicable", because of the changes in use of technology, in which case, updates could be on the cards. However, despite this, key policy objectives are likely to remain set in stone.

Help or hindrance?

Wetjen's view of the regulatory objectives could be considered fairly rigid, therefore making it more difficult for blockchain technologies and solutions to grow, develop and thrive. However, Peisl suggests that the opposite is the case.

"On the contrary," he says, "regulators are excited about the opportunities DLT could create. The technology's ability to provide transparency and self-enforcement of regulation in a way that was not possible before is proving particularly interesting."

Proactive regulation could encourage developments, providing support for start-ups and established institutions alike. Taylor argues, in fact, that actually neither party really poses any particular threat to the other.

He says: "If the distributed ledger technology simplifies the lives of all stakeholders, the regulation and the technology will find their way."

Sharma even goes a step further, saying that, especially in this business, regulatory considerations can act as a springboard for new innovation. He says: "Regulatory compliance is a critical component of any technology solution in the financial services industry, and always has been."

"While it may present an additional layer of challenges that other industries don't face, it's an important part of our business."

And this innovation is set to continue. Where blockchain has sprung into the forefront of the industry's collective agenda, there is no knowing what could be the next topic of debate, the next mind-boggling innovation and the next big thing to get regulators in a tizz.

Although for Belstead, "it is hard to look beyond blockchain", which may be "the ultimate goal for a common platform", Sharma looks towards a future of "multiple emerging technologies," particularly focusing on "the internet of things, machine learning and robotics".

High quality technology is widely available, and relatively affordable. This means new business models are emerging fast

Peisl and Taylor, however, see blockchain as a stepping stone to a bigger technology future. In the modern world, high quality, scalable and resilient technology is widely available, and relatively affordable. This means new business models are emerging. And fast.

Peisl says: "The new blockchain will transform securities settlement by combining the best of traditional database technology, such as performance and data privacy, with key benefits associated with de-centralised ledgers such as resilience, data integrity, or immutability."

Considering the emergence of the 'sharing economy', ever-improving artificial intelligence and machine learning, and the effects this has on predictive analytics, Taylor suggests: "The concept of distributed ledger is another step towards a wider democratisation of technology."

He says: "The winners will be those who can leverage this cocktail of new business models and advanced technologies to help our society in evolving and sorting out the challenges and needs we have." **AST**

Big fish and microchips

They may be resource rich, but the biggest financial institutions are also laden with legacy technology and reputed to be somewhat set in their ways. The assembled heads of technology reveal some of the ways in which they try to stay innovative

Any core processing platform—modern or old—will require extensive planning and testing as it is replaced or upgraded. This necessitates significant collaboration between multiple teams within the bank

Stephen Bayly, Chief information officer
HSBC Securities Services

Whenever we talk about big banks, we also talk about legacy tech. Can systems really become so entrenched that replacing and upgrading them can damage operations?

Stephen Bayly: Banks operate in an evolving technology environment, in a continuous cycle. New technologies are constantly being introduced, while older systems are replaced or upgraded. Any core processing platform—whether modern or old—will require extensive planning and testing as it is replaced or upgraded. This necessitates significant collaboration between multiple teams within the bank, as well as third party vendors and consultancies.

Modern technology is now able to isolate and decouple core processing platforms from their users, through the use of micro-services or application programming interfaces (APIs), to provide a buffer between the platform and the users.

Provided a contract can be maintained between the user and any upgraded platform, change becomes easier and faster to implement. Older technology platforms were not built with change in mind, whereas more modern approaches buffer the users from significant change.

In order to benefit clients, banks will continue to push technological boundaries. Likewise, digital agendas and regulatory change keeps the technology change cycle constant. These drivers ensure technology consistently remains a core focus for banks.

Philippe Ruault: The concern around replacing legacy systems is not that it will damage operations, but that it can be extremely costly—this is particularly of concern at a time when managing costs is a top priority for banks.

However, technology is the backbone of the banking system and so it is important that it is updated.

Replacing legacy systems, even if it is painful at the time, can bring immediate profit-and-loss benefits. And, even in areas where banks are unable to fully replace legacy systems, new technology such as artificial intelligence—for example, natural language processing—can help complement existing systems, filling in gaps that have been left.

Susan Dargan: Upgrading systems does not equate to damaging operations. It's important for firms to break the 'legacy trap' and replace out-dated systems that are locking up their data in silos, in order to get control over existing data. To do this, they need to strengthen data governance, stewardship, and quality processes.

By attacking manual work that drives up costs, these savings can then be ploughed into helping an institution become a 'data innovator', allowing it to truly profit from the benefits that technology can offer.

Saket Sharma: Replacing or upgrading legacy technology is certainly not a trivial thing, particularly if you are a large bank running critical business applications that the world's economies quite literally depend upon.

But this doesn't mean that you can't, or shouldn't, do it. You need to be even more mindful in how you approach it and also in how you prioritise these sorts of projects so that you don't negatively impact your clients or overextend your resources.

Are you investing in start-ups, enlisting third-party providers, or researching and developing in-house? How do you strategise innovation?

Ruault: We do all of the above, weighing up which approach to take on a case-by-case basis.

In some instances we may co-design with a start-up (and then invest), whereas in others, we may partner with them to design an entirely new business model, as we have done with SmartAngels, who we partnered with earlier this year. We are also conducting research with universities, particularly on data projects.

The majority of this work is being organised by our recently launched Innovation & Digital Lab, which has been set up specifically to accelerate the digital transformation of our business.

Our digital development is extremely important to the business, with our innovation teams reporting directly to Patrick Colle, securities services general manager.

We are particularly focused on innovation that brings business benefits and improvements on client experience and, as a result, our innovation process involves business owners in each and every step.

Sharma: Our innovation strategy is focused on providing new or enhanced services to our clients, finding ways to improve operational efficiency and collaborating with industry colleagues and financial technology companies to collectively advance financial services.

We have six innovation centres strategically located around the world in Silicon Valley, Jersey City, London, Pittsburgh, Pune and Chennai, with several more coming soon. At each centre, teams

We are in a high-change period within the industry, fueled by technology innovations, new regulations, disruptive business models and changing consumer expectations

Susan Dargan, Head of global services offshore
State Street

are actively building relationships with promising fintechs and identifying potential opportunities to collaboratively build solutions, share knowledge, or possibly offer their services to BNY Mellon clients through our NEXEN ecosystem's app store.

BNY Mellon's technology and business teams work closely together to identify and evaluate potential new solutions, whether they are internally developed, developed in collaboration with a fintech or client, or developed by a third party.

Bayly: We believe that there is a strong opportunity to collaborate with fintech companies to increase the pace of innovation, so that customers can benefit from better solutions and services.

We have established an innovation lab in Singapore, where we invite fintech partners to work with our customers in a safe and controlled environment to explore transaction services use cases.

We have also established a $200 million strategic investment fund to invest in innovative companies with technologies that align with our strategy and can be implemented at scale.

Our investments so far include: Symphony, a cloud-based messaging service and technology platform for financial market terminals; Kyriba, a leader in treasury solutions helping treasury departments to plan for volatility, regulations and opportunities; and Tradeshift, a cloud-based supply chain solution.

HSBC is also a member of the R3 CEV Consortium, which focuses on distributed ledger technologies in global financial markets, as well as the industry working group the Post-Trade Distributed Ledger Group.

Dargan: We are in a high-change period within the industry, fueled by technology innovations, new regulations, disruptive business models and changing consumer expectations.

These shifts have sparked a vibrant fintech environment that feels reminiscent of the .com era of the late 1990s.

So it's no surprise that many members of the financial industry—including ourselves—are embracing innovative fintech start-ups through acquisitions, investments, partnerships, and involvement in industry accelerators like London's Level 39.

We view the fintech start-ups as a font of fresh insights and talent, as well as a credible source of innovations to help bring new and enhanced services to our clients.

How do you assess the viability of a new technology or invention? With blockchain, for example, how do you envision it helping your organisation?

Sharma: Assessing the viability of a new technology or solution for our clients is a joint effort by the appropriate BNY Mellon technology team and business team. The business team is critical to ensuring that the possible solution will provide business value, either to our clients or BNY Mellon.

Our exploration of blockchain is a great example of this. We have people on both the tech side and the business side working closely together as we evaluate possible use cases for blockchain and seek out new use cases.

Our payments business is actively looking into blockchain as a possible method to move funds in real time, specifically in cross-border payments and payments between internal systems, to bring efficiencies to existing workflows.

We are also exploring in businesses like custody, syndicated loans, bilateral repos, and cross border payments, and looking at how blockchain could potentially impact the business model in the future. In each of these instances, the business side and technology are in close collaboration.

Ruault: We have dedicated teams, and a dedicated sandbox IT environment, to test the viability of technologies. With start-ups we perform detailed due diligence, involving our IT experts.

Blockchain is still very much in its infancy, although we have been looking at it since 2011, designing prototypes with business experts and participating in many consortiums and workgroups to test the technology.

Blockchain will bring value when it solves problems—so in areas where we have inefficiencies, and where you can reduce the number of intermediaries. So far, niche markets look quite appropriate, for example precious metals and crowdfunding.

Dargan: Speak to nearly any market participant and they will acknowledge that blockchain is going to have an impact on financial services in some shape or form.

Most likely starting with inefficient areas that are manual, that require a lot of stakeholders to engage, align and sign off, and that have intermediaries that create a single point of failure and add cost to the system.

> ***We're looking at start-ups and digital native companies, learning how they approach innovation and then adapting practices to work within our company***

Saket Sharma, Chief information officer of treasury services technology
BNY Mellon

Some have suggested blockchain might disintermediate custodians. However, there will still need to be on and off ramps to the blockchain, meaning a 'digital custodian' will be needed to enable this 'tokenisation' and for the creation and maintenance of smart contracts. Also, for a system based on encryption, there may be a need for secure maintenance of personal encrypted keys.

All these are new components in the value chain. A trusted advisor, such as State Street, could play such role, however, we recognise the need to evolve from our current state—hence our focus on emerging technology.

For example, we have started to experiment with blockchain in three ways: internally, as part of core software development; through selectively partnering with vendors and other partners in this space to conduct private trials; and as part of a handful of consortia of the world's biggest banks and technology companies.

Bayly: At HSBC, once we've determined that a new technology addresses a strategic purpose, such as benefiting our clients, driving efficiency or increasing security, our business and IT teams work together to review potential applications.

We will often conduct a proof-of-concept in conjunction with inventors to road test the suitability of a new product or technology. This involves defining some representative use cases and testing these within the relevant parts of the business.

With blockchain, or distributed ledger technology, we have identified many use cases where it can deliver tangible benefits, particularly in terms of driving down risk and cost while increasing efficiency.

Example use cases include regulatory reporting, post-trade settlement, corporate action processing or data sharing with our clients. We are actively engaged in the industry consortia and we are having active discussions with our clients to further develop our plans for adoption.

In terms of in-house innovation, do you encourage a culture of invention? How does this work in practice?

Dargan: Encouraging a culture of innovation is a core part of our business. Last year we launched Beacon, which provides an overall framework for how we think about digitising our organisation. In an increasingly competitive environment, we must be on the cutting edge of technology and innovation. Data management is one of our clients' biggest challenges and they want to know they have the right strategic partner that can deliver the information and insights they need, in real time. Beacon enables us to be that partner.

In addition to this, we also recently established our Emerging Technology Centre, which looks at how technologies can impact the financial industry and how we can bring these changes into State Street.

The group comprises idea generators, business analysts and technologists looking to fit new solutions and ways of thinking into our current business and client needs.

Sharma: We have a long history of innovation at BNY Mellon—232 years, in fact. We strive to feed and grow that culture through our people, our processes and our technology.

We've built a network of global innovation centres that provide inspiring environments for our tech employees, business employees and clients to come together and explore new solutions.

We're looking at start-ups and digital native companies, learning how they approach innovation and then adapting practices such as agile development and lean start-up to work within our company.

We've also built our NEXEN platform to be an enabler of innovation through the use of APIs and by making our services into components that can be reused to more easily create new solutions. Accessible through a one-stop-shop digital portal or able to be integrated into a client's own portal, NEXEN integrates solutions from BNY Mellon, select third parties and clients seamlessly onto one platform.

This breakthrough innovation will be the biggest technology-based transformation in BNY Mellon's history, and is designed to enrich the client experience, providing flexibility, security, efficiency and end-to-end analytic insights.

Bayly: We actively encourage a culture of innovation. As one example, we have held 'hackathons' all over the world enabling our colleagues at all levels to contribute and develop their ideas.

We hold internal innovation-focused events, which encourage our colleagues to work together to create new and better ways of working and servicing our clients.

We also encourage our teams to share ideas through the use of wikis and 'idea jams', and the collated ideas are then investigated for suitability. Similarly, we use social media platforms to help promote the ideas and to look for teams who want to get involved. Some of the best ideas are also put forward for a patent.

> ***We are increasingly involving our customers in our technology design process, to ensure what we deliver fits their needs, and working closely with them until we are certain it will deliver value***

Philippe Ruault, Head of the Innovation & Digital Lab
BNP Paribas

Business and IT teams work closely together and use agile methodology to collaborate across the business and to deliver against objectives with short timespans.

In doing this, we are able to identify best practices in one area that can then be applied to another business area, in order to drive improvements and further foster a culture of innovation.

Ruault: Banks have needed to be innovative in many ways for years in order to meet the challenges presented by financial markets such as the financial crisis, regulation and new infrastructure.

Nevertheless, we specifically encourage innovation through training and education—new technologies and methodologies—through regular business hackathons and focused challenges, and in collaboration with the open innovation spirit of the BNP Paribas group.

Ideas adding value to the business are incubated and accelerated in our dedicated lab.

Other industries, such as the pharma and automative sectors, can be a source of inspiration, as they are sometimes further down the line with development.

Finally, what can the banks do ensure that financial technology helps rather than hinders business in the future?

Sharma: A sound innovation strategy that includes proper exploration and vetting of new technologies by both business and technology teams will help to ensure that the technologies are applied in ways that benefit clients, shareholders and the company.

Also, collaboration across our industry is important. Many of these new technologies, like blockchain, will require standardisation and a network effect in order to offer benefit.

So we should work together to solve common friction points and challenges that don’t undermine our competitive advantage.

Bayly: It’s essential that our digital agenda is business-led and designed to address business needs that will ultimately deliver benefits to our clients. While the business side of a bank needs to own this agenda, the significant stakeholder is the IT function, which will deliver the transformation.

Banks also need to continue with their journey in changing how financial technology is implemented, as well as what financial technology is implemented.

IT departments are using the latest IT development and change methodologies to reduce project timelines and implement functionality in smaller, safer and more frequent doses.

This new functionality then becomes available in a predictable and safe manner and at lower cost.

Banks need to ensure they are set up to implement new products, innovations and inventions in a seamless, quick and agile way, and take advantage of the huge pool of data they hold.

The data lakes that reside within banks can be used to power analytics and robotic technologies and to provide deeper insight to clients.

Achieving this requires a strong talent pipeline of IT and digital-focused professionals who want to empower the business and our clients, and who have a strong understanding of what it takes to drive change in the securities services landscape.

Financial technology is pushing forward on many fronts and banking organisations need to be well prepared to share lessons and learnings from one part of the organisation to another.

For example, the business-to-consumer environment pushes digital channels aggressively.

Key technologies that are powering this push need to adapted, modified and re-used in the business-to-business part of a banking organisation to help leverage skills and expertise, as well as further drive innovation.

Ruault: All innovation and development has to deliver value to our customers. Everything that we do is directed at them—whether this is to reduce costs, enhance their experience with us, or to deliver new products and services.

All our technology investment has to be highly visible to our customers. We are increasingly involving our customers in our technology design process, to ensure what we deliver fits their needs, and working closely with them until we are certain it will deliver value.

Dargan: Financial institutions cannot count on business-as-usual with so much innovation and disruptive technology on the horizon.

Those that do not embrace such change and bury their head in the sand risk being left behind. **AST**

Facts and go-figures

With more data to play with than ever before, asset managers need a solid strategy if they want their sums to make any sense

The data revolution is real. And while algorithms generate custom-targeted ads and online shopping services remember our favourite foods, asset managers are also finding that this 'internet of things' means there is more information at their fingertips than ever before.

Like everyone else, asset managers are scrabbling to figure out how to make the best use of this new digital world.

And like everyone else, they're well aware that when properly managed and analysed, data can bring about business opportunities, potentially giving them that much-sought after competitive advantage.

Francis Jackson, head of global client coverage at RBC Investor & Treasury Services, says: "Good data analysis can assist asset managers in revenue generation, product development and with distribution strategies in order to add value."

"To that end, it can be used to provide useful intelligence to help, for example, identify sales patterns, distribution preferences and investor behaviour."

Jackson also draws attention to emerging intelligence tools that can analyse asset managers' data, allowing them to access the information in real time—or at least something close to it—such as RBC's own Fund Sales Intelligence Tool.

Jackson says: "They can identify the countries and distributors where their funds are selling well, as well as search consolidated data extracted from all our data flows to gain a macro view of what is happening in each country, for each type of distribution network."

Samir Pandiri, CEO of asset servicing for BNY Mellon, gets a little more into specifics, suggesting that good data analysis practices can help inform not only asset managers' investment decision-making, but also their product design and distribution priorities.

BNY Mellon is pairing with Heckyl Technologies, a fintech company that scans social media and 120,000 web-based information sources, in a bid to help asset managers better assess public sentiment around the companies in their portfolios.

Pandiri also points to Albridge, an affiliate of BNY Mellon subsidiary Pershing, which allows asset managers to analyse the products that investors are buying, and the geographical differences that these results can uncover.

"Asset managers can use this data and then talk to their teams in each city or state to determine which funds are selling successfully and why. This in turn will influence how asset managers market their products and help to ensure that they are not missing a selling opportunity."

In theory, Pandiri says, using technology like this, one management team could use the data to replicate another's successful technique, or at least gain a better view of what to market in its own area. While agreeing that good data analysis is "frankly, invaluable", Chris Ellis, senior vice president of business development at financial data service

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www.rmb.co.za/primeservices

Asset managers have to fully trust, understand, and scrutinise their sources. Bad data is not always bad simply because it is wrong

provider FactSet suggests that in order to glean any real insight from the data, asset managers have to know what they're looking for.

Ellis says: "If an asset manager doesn't have an approach or a strategy, if it doesn't really know what it's looking for in the analysis—what the question is—then big data can overwhelm them and they can get completely wiped out. It's just too much."

In fact, the sheer volume and complexity of the data at asset managers' fingertips can actually add to the confusion. For example, managers could stress test for any number of different scenarios, without what Ellis calls "a clear thesis" of what they're testing for—looking for the outcomes of a stress that they actually believe could happen.

He advises: "Don't stress test for things that have little to no chance of happening just because you have access to that data. Complexity without clear purpose and vision leads to confusion."

In fact, such issues of complexity come into play as asset managers choose which data streams and sources to prioritise and investigate in the first place. With so much data available in the ether, there has to be a strategy in place.

Jackson explains that asset managers should identify exactly how they see data as a commercial driver; a driver that "identifies the data they possess themselves, any additional information required from third parties—such as demographic or macro-economic—and how that data is to be extracted and presented".

This data should then be made quickly available, easy to access and easy to interpret. And such things are in the pipeline.

"Within big data, enhanced and predictive data management applications are being developed to provide meaningful insights and aid in prioritisation," says Jackson.

"Advances such as 'data lakes' where data is stored in its raw, unstructured form make data streams potentially more agile than when stored in a traditional 'warehouse'—where the data by definition is pre-structured and categorised—as data can be configured, changed and extracted as needed and according to differing criteria or applications."

However, no matter how well managed the data may be, asset managers must also consider the reliability of what they're presented with. Big data, Ellis says, implies more data, and it is a "horrible assumption" that this means clean data. In fact, it is quite the opposite.

"Bad data creates a house of cards on your analysis and undermines it as the bad data tends to stand out, obscuring the real result."

In order to prevent these kind of errors, first asset managers have to fully trust, understand, and scrutinise their sources—and, crucially, Ellis says, bad data is not always necessarily bad simply because it is wrong.

When using multiple data sources, it is equally important that the "symbology fits together".

Identifiers must be the same for securities, companies and funds, so that when married together, like figures blend, rather than creating two separate data points.

For example, one security could be titled differently in two different data sets, and so it will show in the asset manager's final figures as two different securities. While not inherently wrong, the data produced is bad nonetheless.

"First you have to ask whether it is high quality data unto itself. Then, when you marry it to another data set, do they fit together in a tight weave, or do they just bump into each other because they're inconsistent? It's not always obvious."

It is a well-worn adage that the institutional finance industry isn't known for its swift uptake of technology, or for its ability to change at any speed.

This could mean, Jackson suggests, that actually asset managers have simply been unable to get the best out of the data currently at their disposal.

However, he also points to two developments that have brought big data to the top of asset managers' priority lists.

"Firstly, the increased requirements for greater collection and management of data to enable more effective regulatory reporting has meant that asset managers and their service providers now hold more information than ever before that can potentially be used to add value."

"Secondly, the rise of fintech has meant new services and applications are in development to allow asset managers to use their data."

However, while they may have made progress, there is still work to do. Pandiri stresses: "There isn't a single asset manager that couldn't enhance its business by doing more with data."

He says: "Some asset managers are quite advanced and have sophisticated distribution analytics and performance analytics that really help them. Others are behind."

Those that are successful here, Pandiri says, are those that adopt the technologies available to them early, "ensuring best practice; and maintaining a high rate of investment in technology either internally or with a third party".

Ellis agrees with the sentiment, suggesting that the asset managers that are succeeding are those that are harnessing unique data—geographic exposures and supplier chains, which can offer a different perspective on companies that are about to thrive, or those that carry subtle, but important, risks.

"These asset managers are harnessing big data to get the results they need. It means they're able to use much more complex, much less 'vanilla' data to get there, and that's pretty exciting." **AST**

Big data to smart data

Market participants need to exploit their data in a more intelligent way, according to Mathieu Maurier of Societe Generale Securities Services

The global regulatory environment is becoming more challenging for asset managers, insurers and other financial institutions. An increasing number of regulations are emerging at the national, regional and international levels.

Failure to comply with regulation is not an option—punitive fines are imposed on financial institutions that breach compliance rules. Asset servicers play a key role in simplifying regulatory requirements for their clients and ensuring that they can focus on their core business.

The question for market participants is how they can turn a regulatory constraint into an advantage. Technology can be deployed to create more value for asset servicers and their clients, bringing more possibilities to exploit data in an intelligent way.

Often, regulations can prove to be a moving target as amendments and refinements are made along the way. The date of effect of some of the provisions of the UCITS V directive, for example, have been postponed as provisions are further specified. The Markets in Financial Instruments Regulation has been delayed as the European Commission gives market participants more time to meet technical implementation challenges.

A significant amount of data is being shared and exploited as a result of regulatory requirements, particularly with regards to reporting. For example, the Alternative Investment Fund Managers Directive (AIFMD) requires fund managers to report data and information to their regulators. Non-European managers marketing funds in Europe are required to report separately in each country in which they are marketing, and different countries have different AIFMD reporting requirements. The reporting formats and requirements are continuously changing and the workload to comply is substantial.

Typically, asset servicing providers and their clients have adopted a ‘big data’ approach to cope with the huge volumes of data that their businesses are producing and that regulators require. Big data refers to data sets that are large and complex and for which traditional data processing solutions are inadequate. The big data approach resulted in an enormous amount of data everywhere, out of which it was difficult to get implicit meaning.

Regulatory technology firms have emerged to help firms move away from the concept of big data and towards ‘smart data’. This means enabling financial institutions to exploit the data that is being requested by regulators in a much more intelligent way. At present, the industry is swamped with data, much of which has little meaning attached to it. Regtechs, which are a subset of financial technology firms will help asset servicers and their clients to have a more meaningful view on the data itself.

Asset servicing providers know a great deal about data. There is a thin line now between the concepts of asset servicing and data servicing. Investments are being made to develop tools to help clients get true meaning out of data and to help them focus on their core activities such as investment management, trade execution, or insurance advice. Asset servicing providers cannot do this alone, they need to work with regtechs to achieve smart data.

Regtechs can help incumbent asset servicing providers to be more nimble and agile in fulfilling regulatory obligations and dealing with regulatory constraints. There is a paradoxical situation when it comes to data—the more data we exploit, the higher the risk of breaching some compliance obligations. Regtechs should help here, particularly with know your customer (KYC), anti-money laundering (AML) and cheque fraud requirements, in getting the full meaning and therefore the best usage of the data.

With KYC, for example, technology has a key role to play in breaking down barriers and helping firms to go the extra mile to determine not only who their customers are, but who their customers’ customers are, into the future and even further along the chain. A utility approach towards KYC data, for example, will help market participants to capitalise on data without endlessly redeploying and replicating the same processes across the industry participants.

There are no differentiating factors or competitive advantages in data collection for industry players

Mathieu Maurier, Global head of sales and relationship management
Societe Generale Securities Services

There are no differentiating factors or competitive advantages in data collection for industry players and therefore a utility approach makes sense.

Regtechs may not only help securities firms to be more compliant, they may have the potential to assist regulators to be more specific and precise in the type of data they request, and also to develop more meaningful controls and data gathering. At present, the return on investment compliance is limited for all players because so much data is being collected, out of which it is difficult to get any implicit meaning.

As always, there will be winners and losers in fintech and regtech. The aim of technology should be to enable large organisations, such as global custodians and asset servicers, to be more nimble and agile in responding to regulation and client needs. Technology will play a role in transforming a very complex environment into an agile one.

It can seem that navigating the regulatory environment is like driving through fog—to protect yourself, you wear a seatbelt, limit your speed and turn on fog lights. To navigate the financial regulatory environment, we must embrace new technology to help us clear the fog.

This will enable the industry to turn what may at present be seen as a constraint into an opportunity, bringing value to our clients and therefore the market. **AST**

Small and mighty

Whether hailed as innovators or mistrusted as disruptors, financial technology start-ups are the talk of the town. Those in the midst of it all explain how they got there

EuropeOne Bank

Philipp Buschmann
CEO

> ***Financial services companies have always built technology, so in that sense there is nothing novel about fintech***

What is the story of your start-up? How did you get to where you are today?

EuropeOne was born out of the frustration of working across Europe, and having to change banking relationship each time you changed country. Labour mobility is increasing and many customers have problems with opening accounts and seamlessly conducting their cross-border lives. EuropeOne will change that.

What is the gap in the market that you're addressing?

We serve the un-served, underserved and poorly-served mobile Europeans whose work horizon extends beyond their home country. They are not attractive customers to traditional banks, but 20 million customers have a real need for a better banking relationship, and our customer base has been growing at 10 percent per year.

How does it work?

It's a bank as an app on your phone, with dedicated features to help support loved ones at home and to conduct cross border banking, all across Europe.

What is your target market? Who is using the product at the moment?

The 20 million professionals and workers who are working outside their home country. More than 400,000 enter the UK each year, more than 700,000 enter Germany. Beyond that, the 60 million with cross-border banking needs.

Who are you partnering with?

We are partnering with the German biw bank on licence, regulation and technology issues.

We have also been chosen as part of Startupbootcamp FinTech 2016 cohort, so we are confident this will gives us access to an amazing network and opportunities to grow.

Will fintech transform the financial services space?

Fintech is a strange word. Even an abacus was fintech that defined trade and currency.

Financial services companies have always built technology, so in that sense there is nothing novel about fintech.

What is revolutionary is the speed and the innovation that happens with fintech right now. Young people asking 'why not?' and developing entire new paradigms.

So it is not only the technology, but the thinking and community of fintech that will undoubtly change how we look at and interact with money.

GeoPhy

Jatin Bhurabhai
Head of sales and commercial partnerships

'Proptech' is evolving the way that businesses make decisions about property in both residential and commercial spheres

What is the story of your start-up? How did you get to where you are today?

GeoPhy was founded in the Netherlands in 2014 by a pair of trained architects and engineers, CEO Teun van den Dries and CTO Sander Mulders.

The company is focused on providing objective data and analysis for the property and financial sectors.

What is the gap in the market that you're addressing?

In a world demanding ever-greater transparency, property investment remains incredibly opaque. GeoPhy was founded to change just that.

On a daily basis, investors, banks, pension funds, consultants, governments, agents, and law enforcement and regulatory bodies make key property-related decisions based on partial and inconsistent information.

Right across the property industry, the lack of consistent and reliable data has undermined, devalued, and even potentially destabilised short-, medium- and long-term investment returns. We offer independent commercial property intelligence.

Our audited dataset includes information and modelled insights from the building level right up to national and international location and portfolio overviews. We combine structured and unstructured data into one global standardised property database.

How does it work?

We apply cutting-edge technology to an ever-growing volume of big data. This data is drawn from a wide variety of sources, from publicly owned data sets like the Ordnance Survey to privately owned, commercially generated data. We overlay data sets to cross reference the data and we give the buildings a quality score, which offers an objective international standard and enables our clients to make data-driven property decisions.

The score is based on a number of different data points including information on location, building quality and sustainability.

Large funds with diverse, global property portfolios particularly appreciate the holistic view that the GeoPhy dashboard gives them across their holdings, as well as the ability to drill down quickly to look at a particular subset.

What is your target market? Who is using the product at this moment in time?

Our main client base for our data products is made up of institutional investors, including pension funds, sovereign wealth funds and investment banks.

We are currently working with a number of the major UK-based international banks and some of the largest pension funds, asset managers and insurers.

Customers include pension funds APG and PGGM and Rabobank. We also provide data to government institutions.

Who are you partnering with?

In Q2 2016, Inkef Capital made an investment in GeoPhy as part of a strategic partnership with APG, which is focused on sustainability of its real estate investments and is using GeoPhy's carbon modelling to understand the energy intensity across its portfolio.

GeoPhy is also partnering with the Dutch infrastructure agency Rijkswaterstaat, to map flood-risk across all the major waterways of the Netherlands using advanced methodologies like lidar, radar-like technology using light from a laser.

Will fintech transform the financial services space?

In a word, yes. 'Proptech', or fintech as it relates to the property industry, is evolving the way that businesses make decisions about property in both residential and commercial spheres.

Whether that relates to better data availability to help decision makers, virtual reality for building tours, or the internet-of-things 'smart metres' for measuring energy use, the introduction of new technology and digital products will generate better, faster, and smarter outcomes across the property industry, and allied financial services industries.

Kantox

Philippe Gelis
Co-founder and CEO

> ***Clients can cut back on time-intensive manual processes and actively manage their risk exposure as a result of currency fluctuations***

What is the story of your start-up? How did you get to where you are today?

I studied at the Toulouse Business School where I gained a Master of Business Strategy degree and a Master of Business Administration degree. After leaving, I was side tracked by corporate life and from 2007 worked as a strategy consultant at both Deloitte and Axis Corporate.

While working at Deloitte, my co-founder Antonio Rami and I had a client that worked extensively with foreign exchange (FX) and was paying huge spreads on each trade. We tried to help the client negotiate with its bank, but soon realised this was complex and expensive. It was clear to us then that the FX industry was completely inefficient and ripe for innovation. Kantox was built to bring transparency in FX to an under-served sector of the market.

In 2010 we took part in a 54-hour start up weekend. I met our CTO John Carbajal there and formed a team. The year after, in 2011, we won a start-up contest, OMExpo Investor Day, which came with a €25,000 prize. This provided a real sign that people were taking our business seriously and prompted me to quit my job at Deloitte to start running Kantox full time. Following this, we raised a further €150,000 from family and friends, and concentrated on becoming Financial Conduct Authority-regulated.

In 2012, we secured a €1 million investment, and from this were able to start scaling. In 2014, we secured a €6.4 million investment from Partech Ventures and IDinvest Partners, two leading venture capitalist firms. This was followed by $11 million in Series B funding in 2015, allowing us to further develop our technology and consolidate our position in Europe.

What is the gap in the market that you're addressing?

Kantox is an example of a business born out of frustration with traditional banks. We believe that the financial industry, known for its opacity and lack of innovation, needs a radical change. We believe it is time to redefine the industry, adopting more transparent, efficient and fairer models.

Although the FX market is generally considered to be highly competitive, this is far from the case once you scratch the surface. Large corporates enjoy access to really competitive rates while small and medium-sized enterprises, which usually don't have access to live rates or an in-house FX expert, are overcharged by a banking oligopoly that promotes opacity.

Without these tools, it's easy for them to fall foul of hidden commission fees, undisclosed mid-market rates leading to selective rate adjustment, and 'dumping'—whereby they are offered unbeatable and unattractive initial rates, only for the bank to gradually load charges back on, without notifying them.

We provide small and mid-cap companies with a cost-effective and transparent alternative to trading FX with banks and brokers, so that even the smallest company can effectively protect its business from significant financial losses and unnecessary costs.

How does it work?

We enable businesses to buy and sell currencies and make international payments to overseas suppliers or subsidiaries, as well as measure and manage their exchange rate risk. Our technology and expertise help companies solve currency-related business problems transparently and efficiently. We charge customers 0.29 percent on spot transactions.

This is the only fee we charge for currency conversion, and international payments come at no additional cost, whereas the banks charge 1 and 2 percent upwards. We once saw a client that had previously received a charge of 3.39 percent, due to the hidden fees on the transaction.

Our application programming interface enables clients to plug the Kantox platform directly to their in-house enterprise resource planning or treasury management system, allowing Kantox to completely automate the entire FX management process.

This includes a dynamic hedging solution, which allows clients to set clear FX rules and provides ongoing real-time management to enterprises with even the most complex, multi-faceted currency requirements. As a result, clients, particularly those in the travel and e-commerce industries, can cut back on time-intensive manual processes and actively manage their risk exposure as a result of currency fluctuations.

What is your target market? Who is using the product at the moment?

We target any company that does business internationally, whether with customers or suppliers, and is looking for a more efficient and transparent way to hedge against currency fluctuation and associated risk. We now serve more than 2,000 corporate clients, ranging from small businesses to mid-cap companies with revenues in the billions. They have traded over $3.2 billion in more than 20 countries since our launch in 2011.

Who are you partnering with?

We have different kinds of partnerships. We have collaborators, such as the Spanish Chamber of Commerce in Great Britain, and other commerce and business institutions, based on offering their members the opportunity to learn from our specialists, bringing them the knowledge to optimise their FX policies.

We also have some affiliates with whom we share, or can share, customers. Some of our affiliates are other fintech companies and business associations.

As a software-based company, we also have agreements with other business-to-business companies open to integrating their products with our solutions. These kinds of partnerships help us to be more competitive and to go a step further with our customers. We also have some tech partners in the travel industry, for example.

Will FinTech transform the financial services space?

The fintech industry is in constant development, making it increasingly difficult to separate the buzz from the important facts and trends. Fintech consolidation followed the 2008 crisis—a turning point for the financial services industry. Venture capitalist firms were sceptical about fintech's potential, which had not yet made it onto the banks' radars. Fast forward a few years, and business trust increased with regard to fintech's ability and reliability in service provision, with billions of transactions completed through these new firms.

As we look to the future, there will come a point at which any financial company that does not manage to become a fintech (that is, a 100 percent consumer-oriented firm that uses digital tools to provide the best user experience, focusing on real innovation by creating new tech-driven products) will be out of the market in the long run.

This will apply to any sector, including banks' traditional core lending businesses, particularly thanks to the emergence of challenger banks—even within today's demanding regulatory playing field.

If banks or any other financial institutions are not able to keep pace with new competitors, don't expect them to be able to seduce tomorrow's consumers anymore. In the long term, it won't be about newcomers contesting a big chunk of incumbents' market share. It will be much simpler: either banks become fintechs or fintechs will replace them.

RISE Technologies

Thorsten Peisl
CEO

To be successful, we have had to be mindful of the industry's needs, ensuring we provide a bespoke solution for a particular post-trade problem

What is the story of your start-up? How did you get to where you are today?

RISE was founded in 2014 by a group of post-trade industry veterans. We identified blockchain as a compelling technology that can transform securities services. However, in order to be successful we have had to be mindful of the industry's needs, ensuring that we provide a bespoke solution for clients' particular post-trade problems.

RISE consists of a pioneering team with extensive knowledge of distributed intelligence and traditional blockchain technologies. Since mid-2015, this team has grown and, under the leadership of post-trade industry experts and supported by a high profile advisory board, it is actively building a solution to optimise settlement of securities.

What is the gap in the market that you're addressing?

We optimise multi-asset class and multi-currency settlement with a powerful settlement network, or protocol, that enforces regulatory compliance, including with know-your-client regulations, on a shared ledger, and is built to scale to support industry volumes.

How does it work?

After a legally binding trade has been agreed, a settlement instruction is initiated on the distributed settlement network. While protecting confidentiality of both trading counterparties, the settlement instruction is completed, approved and validated before it is passed into the consensus process for final settlement. Each of these steps is captured in a verifiable audit-trail.

The network itself is operated by regulated financial institutions that can integrate the technology into their legacy environments via their existing interfaces. Settlement can occur in real time or at a speed appropriate for a market segment; on a net or gross basis; and in commercial bank or central bank money. For wider adoption, there are solutions that could be considered to help prevent pre-funding requirements or eliminate uncovered short selling.

What is your target market and who are you partnering with?

We focus predominantly in Europe and work with regulated financial institutions and financial market infrastructures.

We provide them with a solution to perform existing and new functions in a more efficient way.

In terms of partners, we are currently partnering with banks, exchanges, central securities depositories, and associations, and we have made available a test network that is continuously being developed.

Will fintech transform the financial services space?

Fintech certainly has the potential to transform financial services but it must be a collaborative effort that leverages best practices and maintains governance standards.

RSRCHXchange

Vicky Sanders
Co-founder

There was little to no investment or technological innovation in research distribution, where legacy aggregation was available via expensive terminals

What is the story of your start-up? How did you get to where you are today?

RSRCHXchange, the online aggregator and marketplace for institutional research, was launched in September 2015 by myself and Jeremy Davies, following over a year of prior development.

With backgrounds in research sales (me) and asset management for event-driven strategies (Jeremy), we were keenly aware of the shortcomings of legacy research procurement practices.

Bundled procurement procedures saw buy-side firms inundated with millions of ‘free’ research notes, only 5 percent of which were ever opened, with no clear insights into firm-wide research consumption.

On the other hand, asset managers faced challenges accessing truly unique research content as provider onboarding took weeks, if not months, and often the research requested was no longer required.

What is the gap in the market that you’re addressing?

We realised there was little to no investment or technological innovation in research distribution, where legacy aggregation was available via expensive terminals.

Furthermore, the Markets in Financial Infrastructures Directive (MiFID) II set out the new unbundling rules which will require the sell side to charge separately for research and asset management firms to run distinct research procurement budgets and to track firm-wide consumption in a MiFID II-compliant and auditable way.

It was clear that there was no centralised market for research and that the incoming regulatory and structural challenges would significantly affect asset management firms as well as sell-side research and sales departments.

In setting up RSRCHXchange, We were determined to move away from static PDFs and inbox distribution and to digitalise research in order to produce a better user experience for the buy side and better control for the sell side. The RSRCHX platform is cloud-based, and research is centralised and accessible. It can be searched, reviewed and shared, and research consumption can be tracked firm-wide. We have now built a markets-focused technology company that is changing research procurement and distribution, and disrupting the industry as a whole.

How does it work?

The RSRCHX platform is a MiFID II-compliant research aggregation, procurement and management solution that enables institutional asset managers to buy research in a more efficient, transparent and auditable way. The co-founders have built RSRCHX in consultation with both asset management institutions and research providers, to ensure the new venture addresses the legacy challenges of accessing research and the forthcoming challenges of MiFID II-compliant research procurement.

In an age of social media tools, mobile access and search-driven functionality, the RSRCHX functionality and user interface brings research consumption into the 21st century: the platform features include star-rating, sharing, full text search functionality and

the ability to purchase research by note or by subscription. You can purchase an episode or the full box set. Research providers are onboarded to the RSRCHX platform only once they have completed a compliance questionnaire, which was developed in close collaboration with asset management firms.

This ensures that as soon as a provider is onboarded, asset managers will have immediate access to the research on the RSRCHX platform, to buy what they need, when they need it, using a variety of hard or soft dollar payment mechanisms. Provider onboarding is now customer-led, which means the asset management community requests which research providers are onboarded next, in order to ensure they maintain access to research relevant to their investment strategies.

What is your target market? Who is using the product at the moment?

RSRCHXchange offers an automated way for institutional asset managers to track firm-wide research consumption to rate and evaluate the content they receive, to improve the procurement process and to ensure MiFID II compliance.

At the same time, research providers benefit from access to a growing community of global buy-side firms and efficient payment, compliance and administration processes designed to help analysts focus on what they do best: producing insightful research. Research from over 140 providers including banks, brokers and independents is available to hundreds of buy-side firms via the RSRCHX platform, and the number is increasing every day.

Who are you partnering with?

Over the past year, RSRCHXchange has signed partnerships with other market participants including research curators, hedge fund incubators, trading technology vendors and prime brokers to make research available to an ever-increasing universe of asset managers. Partner brands include Global Prime Partners, Linear Investments, Substantive Research and Flextrade.

Will fintech transform the financial services space?

Arguably, fintech—innovation in financial services technology—has always been transforming the financial services landscape. However, what we are also seeing the rise of so-called regtech—technology innovation driven by regulatory changes and the need for market participants to use new technologies in order to be compliant.

In our case, MiFID II has set out the direction of travel and unbundling of research and execution costs is going to happen. The demand from buy-side firms looking for a new way of finding and procuring research is there. RSRCHXchange offers a technology-led solution to procuring investment research and tracking firm wide consumption in a MiFID II-compliant and auditable way.

Taskize

John O'Hara
CEO

> ***A number of processes in the custody industry remain highly manual, resulting in costly overheads and chronic inefficiencies***

What is the story of your start-up? How did you get to where you are today?

My 20 years of experience in the banking industry has been a lead up to creating Taskize.

It began with a chance visit to the Waldorf Hotel, which led me to being hired by J.P. Morgan, and my life was transformed.

In the 90s, J.P. Morgan quipped that it had "more PhDs than NASA and more developers than Microsoft", and it was true. While at the bank I invented Advanced Message Queuing Protocol (AMQP) and worked hard to make this into an ISO standard. Others were able to take AMQP and build successful businesses. This is what I wanted to do—see a vision through from conception to full commercialisation.

Fast forward a few years, and I was working at Bank of America Merrill Lynch and considering an offer to be technology fellow at the best name on Wall Street. I looked at the industry that I knew best and found that the back-office was under-served. It was my father suddenly passing away that spurred me into action. I stepped out into the cold lonely world of starting-up my own business in January 2012.

What is the gap in the market that you're addressing?

A number of processes in the custody industry remain highly manual, resulting in costly overheads and chronic inefficiencies. Nowhere is this more evident than in the post-trade space where manual interventions around corporate actions, trade settlement, clearing and reconciliations dominate.

Today, the pressure on firms to standardise and automate back-office tasks is reaching breaking point. Largely, the pressure stems from regulatory drivers, not an increase in transaction flow, meaning that extra budget to quickly facilitate process improvement is limited. Overwhelmingly, the aims of regulatory reform—greater transparency, stability and efficiency—represent a significant squeeze on resources.

Taskize is designed to help post-trade teams address the instances when straight-through processing fails and manual intervention is required. Tens of thousands of queries and issues arise every day, all of which require some form of human intervention to resolve.

Resolution is not straightforward, as transactions involve complex multi-party relationships which are further complicated by outsourcing, offshoring and headcount pressures. This, combined with regulatory demands for shorter settlement periods, makes the current method of resolution both costly and risky.

Taskize helps the financial services industry make work flow by enabling clients, colleagues and counterparties to address manual interventions efficiently, intelligently, and securely. It offers the industry a standard mechanism to collaborate globally and connect with the right people to manage exceptions. The platform is designed to be easy to deploy and a cost-effective solution that streamlines the handling of manual interventions—improving operational efficiency while mitigating the risk and cost of delayed settlement.

How does it work?

Taskize connects the right staff performing the right roles in the right firms right now. This shortens settlement times, reduces risk and improves controls. Through economies of scale we can deliver this at a price-point that is lower than a bank could do for itself. Also, Taskize integrates with legacy systems and processes and doesn't require huge spend or a rip-and-replace of old systems.

We have a couple of unique inventions at Taskize, including our Smart Directory, which learns who does what in an organisation, and secure micro-project workspaces we call Bubbles, which provides a way of managing literally thousands of manual tasks per day, with a built-in understanding of the structure of these complex businesses. All of this is packaged as an easy-to-use utility with simple subscription pricing.

Taskize is a network business and kick-starting any network is tough work. But I think my experience with AMQP and Financial products Markup Language (FpML) will stand us in good stead, plus it's one of the reasons we took investment from Euroclear.

What is your target market? Who is using the product at the moment?

Taskize handles a niche market and is incredibly difficult to penetrate with demanding, regulated customers. In addition to making a compelling solution, we have to be able to talk the banks' language and know how to meet their standards.

We have a laser focus on operations. We even have a head of operations from one of the big name banks on our staff now. Operations is in our DNA.

Today, and despite numerous attempts to perfect automation, there are literally tens of thousands of people working behind the scenes in investment banks. Those people are starved of effective, modern tools. Banks aren't well connected in the back office, despite the fact they need to work with each other frequently.

We're really excited about what we can do for banks—and so are the banks and their customers. We're entering a pilot phase now involving half-a-dozen or more banks, and we will then be opening up to other market participants.

Banking will get better and safer because of Taskize and operations staff may even get home to their families earlier each night.

Taskize is a subscription business. We want people to join the club and reap the benefit. We want there to be no impediment on extending use within a firm once they're on board. Like all good clubs, the members make it what it is.

We think we've got a compelling offering. We've grown from two to 19 people in the past 12 months, and we're all based in London.

Who are you partnering with?

Taskize ran super-lean during its early years while we were validating the business and building our minimum viable product. There were three of us in the early days and we did contract work with the likes of BP and VMware to make ends meet.

However, when we started to talk with banks the interest was huge and we realised that we were going to need an industry partner.

Now we have Euroclear as our investor—they see the value in what we do as a great strategic fit for diversification and geographic reach. We value them for their neutrality and their huge experience as a trusted business utility. Euroclear leave us to our own devices and they have been fantastic to work with. Of course, Euroclear Bank is our first paying customer, too.

Will fintech transform the financial services space?

Fintech has the potential to transform the financial services space although this will take some time. If we look to past experience, this industry does not have a track record of implementing significant changes quickly.

I think fintech can help banks to make incremental improvements to their front and back office operations. Financial services firms need to look beyond traditional approaches to consider how fintech-based solutions can tackle today's problems. Fintech should act as an enabler for established financial services firms, and it can make a big impact where there are direct peer-to-peer transactions.

In this environment, established players are looking to new solutions that work in tandem with their existing processes and systems, rather than completely disrupting their operations, or where significant investment to replace legacy systems is required in a cost-constrained environment.

We work to complement existing processes and to be straightforward to deploy, and to solve an existing industry challenge with enhanced control, greater efficiency, reduced risk and greater client satisfaction.

These type of utility-lite solutions based on the collaborative, analytics-focused technologies that have already revolutionised other industries are emerging and can improve existing processes without reinventing them.

From an operations perspective, greater control, capacity and flexibility can be achieved at low cost by empowering staff with the skills and tools to handle the inevitable outages, exceptions, and unexpected requests more quickly and collaboratively. **AST**

Evolution in the boardroom

Institutions should consider a one-stop, interactive corporate governance data and analytics solution, according to Broadridge's Demi Derem

Since the 2008 financial crisis, the asset management industry has seen significant changes, particularly in how institutions—including family offices and sovereign wealth funds—choose to manage their risk. The pre-crisis landscape was largely one of diversification, with institutions preferring a safety-in-numbers approach, in terms of both portfolios and asset managers, in order to spread their risk profile. However, many institutions have since concluded that this approach alone is no longer enough to insulate them from the potential exposure that might result from financial and nonfinancial governance risk.

Governance risk has emerged as the major concern for many European institutions in a post-crisis world. 'Say-on-pay' votes, legal and regulatory controversies, bailouts and the like have eroded investor confidence and affected annual meetings. Corporations and their executives need information on corporate governance in order to mitigate risk and foster better communication with their shareholders. Many institutions are now looking at their governance risk processes to consider how best to monitor the companies whose shares constitute the backbone of their portfolios. Of course, the larger the portfolio the more challenging the job, and investors have an acute need for comprehensive, objective, and predictive information about how their portfolio companies are run, and about the people running them. However, there are a number of key issues that investors need to consider in order to manage their portfolios and the associated governance risk. There are also opportunities to resolve these risks once identified.

The key issues

A number of the issues in managing governance risk relate to board oversight, and an awareness of the potential risks surrounding the roles of both directors and executives. The first of these risks relates to the potential for unethical practices by a director or board member, and the heightened focus of investor attention on board and director performance, due to the risks of legal or regulatory action that might expose them to financial and reputational losses.

One such practice is that of 'interlocks', the potential conflicts that arise when directors or executives of two companies sit on one another's boards. While there is nothing necessarily wrong or unethical about interlocks, they still may facilitate the transmission of material, non-public information among companies, and therefore expose investors and issuers to governance-related risk. Certainly the ability to identify and analyse interlocks allows both investor and issuer to guard against potential conflicts of interest, and thus manage risk effectively through the acquisition and use of timely and accurate information.

The oversight of directors is not just a question of ethics, however. Investors also need to know how far a director's span of control and oversight extends. After all, directors can't be expected to do their job properly if they do not have the capacity to remain fully informed about the companies they are paid to oversee. It might also be the case that membership on too many boards signals that a director's attention is not sufficiently focused on the company at hand to make them truly effective in their role; therefore, access to full information about the business interests of directors is a prerequisite for managing the associated governance risk.

A further issue in terms of the senior tier is their ability and willingness to focus on the reasons for what might be a short-term company success. Directors and executives must look closely into the root causes of corporate successes as well as corporate failures to ensure a sustainable business model, rather than one built on a sudden surge for a single division or product that may not last into the future, or may—as much as a failure might—be a sign of an underlying weakness. Again, investors must be able to gain a deep enough insight into the key individuals that make up the board, to ensure they are competent, following good practices and have the correct and sustainable vision for the future of that company.

Governance of a company's remuneration models and practices has emerged as a further key topic for investors in recent years, not just in terms of ensuring that executive remuneration is in line with industry benchmarks, but also ensuring that no other risk issues are emerging from pay practices. For example, issues such as a structure that rewards short-term success rather than longer-term results might be a risk indicator, as might pronounced gender pay disparities that could highlight an issuer's commitment to social responsibility in broader areas.

This focus on remuneration has resulted in both the adjustment of investor portfolios and, in some cases, a show of active disapproval of pay practices through negative votes at annual general meetings which, while rarely affecting the outcome, have gone on to depress the share prices of a number of firms.

Each of these instances highlights the need for investors to access timely and comprehensive information on executive remuneration, and the ability to benchmark against industry norms and practices, in order to make informed and timely investment decisions.

Analysing the data

In order to manage governance risk in this uncertain and rapidly-shifting environment, issuers and investors alike need access to correct, comprehensive governance data, both quantitative and qualitative, to accurately assess the governance of share-issuing corporations and to take timely action as and when necessary. Reliable, transparent and timely information is the foundation of good governance and necessary for companies and institutional investors to make informed decisions.

One such source of information is through proxy statements, which offer shareholders the ability to assess a company's corporate governance and management, both in terms of financial results and by how well the team communicates the corporate strategy. Shareholders can also determine whether directors have the best interests of shareholders at heart by analysing management remuneration and incentives, how they engage shareholders, and how they respond to shareholder proposals. With much of this information deriving from the annual general meeting (AGM), institutions require a single source of information about AGMs, including the questions on the proxy ballot and pay practices, in order to vote wisely and practice good stewardship of their investments.

One option for managing the challenges of governance risk, the associated decision-making process and communication between institutions and issuers, is a one-stop, interactive corporate governance data and analytics solution. In order to be truly effective, this solution should provide an independent platform for analysing governance risks and executive pay, enabling benchmarking and capable of generating predictive insight. It should also be capable of screening for pay-for-performance misalignment, director expertise and interlocks, and broader company-level governance practices. **AST**

Reliable, transparent and timely information is the foundation of good governance and necessary for companies and institutional investors to make informed decisions

Demi Derem, Managing director of investor communication solutions, international, Broadridge

Quality in commonality

As data utilities become more widely used, SmartStream's Joe Turso explains how common data can add value for asset managers

How has the SmartStream RDU developed over the last year?

The Refernce Data Utility (RDU) has been focused on meeting its founding banks' challenges in processing securities data for listed derivatives. With this asset class nearly completed, it is now turning its attention to equities. The focus of the RDU's effort in processing an asset class is not to just process the data, but also to address the data challenges of clients, allowing them to meet their business case for adopting the utility model.

The RDU has also been focused on making sure its operating procedures meet the best practice standards defined by the founding banks, Goldman Sachs, J.P. Morgan Chase and Morgan Stanley. This ensures that clients that join the RDU can have confidence that the utility's procedures meet industry standards.

To what extent are utility solutions changing the post-trade space?

Incorrect and inconsistent data is a leading contributor to post-trade processing errors. The utility model, with its emphasis on proactive data quality checking, is designed to capture and correct errors before they can impact a trade. The utility is also creating a common language between exchanges, market data vendors and financial institutions, in order to automate and facilitate the recognition of a product where there are not standards for naming a security, such as with derivative securities.

But most importantly, the utility does this is a cost-effective way. By performing data quality and cross-referencing in a 'mutualised' method, all participants of the utility benefit from its efforts to clean the data.

Will new technologies like blockchain further improve reference data management?

I believe that blockchain will be difficult to implement for listed securities, primarily because of the large number of changes made to securities resulting from corporate action events. However, I do believe that blockchain technology can be of benefit to a smaller sub-set of reference data where standards are important, such as in regulatory data. I see industry value in having a single source, such as a utility, provide this data through blockchain technology.

Blockchain technology could also be applicable for over-the-counter products, in capturing mandatory data associated with a swap product that changes infrequently.

How can asset managers stay on top of increasing data requirements? What kind of challenges are they facing?

Asset managers are challenged by two conflicting goals. The need to improve their data quality to meet regulatory requirements, while also reducing their operating costs. In most cases, improving data quality means investing in people, data and technology.

The utility model allows asset managers to achieve both goals through the practice of mutualisation, which essentially means performing a task once and allowing all clients to benefit from those activities.

Securities data is a prime candidate for mutualisation because so many of the tasks that asset managers have traditionally performed to manage securities data are so similar in practice. **AST**

"Asset managers are challenged by two conflicting goals. The need to improve their data quality to meet regulatory requirements, while also reducing their operating costs"

Joe Turso, Vice president
SmartStream

A blockchain reaction

Standard Chartered Bank's Margaret Harwood-Jones considers how blockchain could be deployed to assist market infrastructures

Blockchain—the most common form of distributed ledger technology (DLT)—is an innovation that could spark major change across financial services and beyond. Technologists have said blockchain could play a positive role in a diverse range of industries and sectors including healthcare, insurance and government. Blockchain is a shared distributed ledger, or database, holding unalterable transactional information supplied by its user base. The technology was the infrastructure supporting bitcoin, a cryptocurrency, but its influence and practical application in securities services globally is likely to be elevated.

The disruptive nature of blockchain is likely to be most felt in some of the more archaic processes associated with post-trade securities services where much of the work continues to be manual and paper-driven, such as trade settlement, reconciliations and corporate actions. Even innovations such as Target2-Securities (T2S), the European cross-border trade settlement platform, could be displaced, or at least disrupted, by blockchain, a point made in a recent Standard Chartered whitepaper, Blockchain and T2S: A Potential Disruptor. But how could blockchain be deployed to assist market infrastructures across the Middle East and North Africa (MENA) and Asia Pacific (APAC)?

Market infrastructures across APAC and MENA

APAC and MENA are extremely diverse regions with countries at varying levels of economic development and regulatory sophistication. These jurisdictions are also enjoying capital inflows from international investors driven by a combination of factors. Fund managers are looking towards emerging markets as low interest rates force down yields. Emerging markets offer generous returns—China, for example, has a predicted growth rate of 6.5 percent in 2016.

A push towards privatisation of state-run industries across MENA is the direct result of volatile commodity prices. Saudi Arabia is about to unveil the most sizeable initial public offerings (IPO) ever through its partial flotation of Aramco. African companies are attracting record amounts of private equity investment through their strong growth prospects and young workforces. In short, emerging markets have a lot to offer foreign institutional investors.

But with international investment comes challenges. Market infrastructures need to meet international standards otherwise foreign investors will be hesitant to put capital to work. Rules such as UCITS V penalise depository institutions if assets are lost or misappropriated at the custody or sub-custody level. A failure to adopt international standards around asset safety, segregation, settlement and reporting will mean investors are more reluctant to invest in those countries.

A number of emerging economies have built fully functioning central securities depositories (CSDs), which are not bound by the legacy systems, platforms or technologies that have affected western market infrastructures. Corporate actions and adherence to straight-through processing (STP) are also at varying stages of progress, with some MENA economies plagued by manual processes and other issues, such as a lack of English translations for instructions. Trade settlement timeframes are also sporadic, although efforts are being made to bring them towards the international standard of T+2. South Africa, for example, recently migrated to a T+3 settlement time-frame from T+5.

One of the trickier challenges for emerging markets is around centralised clearing. The US Dodd-Frank Act and the European Market Infrastructure Regulation (EMIR) were landmark pieces of legislation that required the majority of vanilla over-the-counter (OTC) derivatives to be cleared through central counterparty (CCP) clearinghouses.

Establishing a CCP is not an inexpensive undertaking. A number of emerging markets where OTC trading is undeveloped or simply does not exist query whether they should build CCPs. Conversely, many of these same markets recognise international investment is critical to their long-term success, and a failure to build a CCP could make that more challenging to achieve. Not having the infrastructure in place as, when or if OTC trading volumes pick up could put those markets at a competitive disadvantage. One possibility being discussed is the creation of a multi-jurisdictional clearing utility.

How can blockchain address these challenges?

The continued dominance of manual processes in the post-trade securities settlement and custody lifecycle is something that needs to be weeded out. A failure to embrace automation and STP will only fuel further inefficiencies and risk to the end investors. It is important that these emerging and frontier markets look to innovations such as blockchain when developing their market infrastructures.

Some developed and mature markets in APAC, including Australia, are already looking at blockchain. The Australian Securities Exchange

(ASX) has been exploring blockchain in equity trade settlement and clearing, and it is possible others will follow suit, particularly if their markets are relatively dematerialised and small. This is especially true as blockchain has faced questions around scalability and its ability to deal with sizeable transactional volumes. Such a criticism would be fairly immaterial in an emerging market with low volumes.
Emerging market CSDs could deploy blockchain as a tool by which to complement corporate actions and speed up trade settlements. Blockchain is both real-time and immutable, and this could bring in real-time trade settlement. Nonetheless, this doeshave flaws, namely exposing investors to foreign exchange risk. The adoption of blockchain would bring efficiencies to corporate actions by eliminating a number of the intermediaries between issuer and investor. This would—if properly used—reduce the risk of error and cost, and bring about enhanced standardisation around corporate action messaging.

Settlement finality assurances could also bring into question whether these markets would need to invest in CCPs. As many emerging or frontier markets do not have meaningful derivatives volumes, a migration to a blockchain system rather than a fully-fledged CCP could incur cost savings. However, end investors would need to be satisfied that blockchain operates appropriately and correctly. In addition, a blockchain-only system for OTC transactions would not remove CCPs from the picture entirely, due to their netting functionalities.

One of the benefits emerging markets have—which is luxury not afforded to developed countries—is that many of their infrastructures are relatively new and unsaddled by legacy systems. This puts them at a competitive advantage as it will enable them—should the situation arise—to implement blockchain with limited disruption on existing technology. A number of market infrastructures in developed markets frequently highlight the potential disruption and associated risks of leveraging blockchain onto ageing technology as being a major disincentive.

Blockchain is far from perfect

Innovations such as blockchain need to be carefully considered before being adopted. Blockchain is still in the proof-of-concept stage of development, and its integration into capital market utilities should not be rushed. A failure to get blockchain implementation right could have major consequences, and even systemic risks. Such shortcomings will not go unnoticed by international regulators and organisations that are monitoring blockchain avidly.

Firstly, standardisation of the rules to which blockchain adheres must be discussed. Efforts are being made through forums such as R3, the Hyper Ledger Foundation and Linux Foundation to agree technical standards and practical purposes for blockchain. International regulators and organisations such as SWIFT must be party to these discussions. SWIFT has been at the forefront of developing standards around messaging. It is also important that CSDs across all markets are involved in these discussions to prevent arbitrage emerging around standards and regulatory oversight.

Financial services firms and technology providers are building their own private blockchains, and these ventures need to have a semblance of standardisation if blockchain is to achieve the success its proponents feel it will, which is to become a truly public utility. Once this standardisation has been achieved, the technology can be rolled out.

Cyber security is an all too familiar trait to afflict financial services. Blockchain will host sensitive data, and it must ensure that its cryptography and cyber protections are robust and in line with best practices. Blockchain is firmly in regulators' remit and providers deploying this technology need to be vigilant and careful in how they operate it. The recent breach of smart contracts on a blockchain highlight that not only blockchain providers but their end users must adhere to excellent standards around cyber security.

This is something emerging markets must be mindful of should they pursue blockchain implementation for critical market utilities.

So what next?

Time-scales for mass adoption of blockchain range from two to 10 years, sometimes longer. Before the implementation stage will have to come standardisation, and thoughtful analysis around how and where blockchain can make material improvements to the functioning of capital markets. A rushed integration will have painful consequences, and such integration needs to be carefully considered.

Emerging markets across MENA and APAC are at a juncture, and increasing international investment is likely to continue. Embracing innovations and STP should be encouraged, and areas where blockchain could play a useful role need to be identified in those markets. It is imperative that emerging markets and service providers such as Standard Chartered and its clients play a proactive role in industry-wide consortia, forums and discussions on blockchain policy and its implementation. **AST**

A failure to get blockchain implementation right could have major consequences, and even systemic risks. Such shortcomings will not go unnoticed by international regulators

Margaret Harwood-Jones, Global head, securities services, transaction banking, Standard Chartered Bank

Know your utility

What would an asset management know-your-customer utility look like? Paolo Brignardello of Fundsquare considers the view

Investors are demanding lower fees and are putting asset managers under greater pressure to deliver value for money, just when regulations are driving up costs. Bold reform of fund industry practice is needed, and one promising option is a fund industry-focused know-your-customer (KYC) centralised utility. What could this look like?

Mutualised utilities have been helping the financial services industry cut costs and increase accuracy for decades. Performing key tasks centrally through a trusted provider enables players to avoid having to duplicate tasks in-house. As well as reducing costs, there is an improvement to quality and accuracy as data and documents are shared, checked and screened centrally. A hub-and-spoke system replaces a spaghetti plate of potentially confusing bilateral relationships.

KYC is particularly well suited to being streamlined through a utility. More than 60 documents and data points can be required by asset managers related to KYC for each investor. Considering that nowadays, following an open fund distribution model, investors tend to subscribe to multiple funds, KYC documents could be collected, verified, updated and processed centrally once and for all. Investors would only need to upload data once, and then could grant access to this information on a case-by-case basis. Several KYC utilities have emerged across the financial services sector, but none fulfil their needs for the fund industry.

Ultimate KYC responsibility cannot be delegated by law, and must stay with the management company, even if the dominant model sees a delegation of operational activities to the transfer agent. However, through a contractual relationship, several tasks could potentially be centralised. Processes that could be accommodated include customer identification, initial risk assessment, compliance information, onsite and other forms of due diligence such as know-your-distributor checks, tax information verification, document collection and review, risk scoring, reputation risk management, Foreign Account Tax Compliance Act/Common Reporting Standard (FATCA/CRS) compliance verification, anti-money laundering/combating the financing of terrorism (AML/CFT) country risk assessment, and reporting to regulators and crime agencies.

This all needs to be monitored and maintained for completeness and validity on an ongoing basis, which is the most onerous aspect. Watch lists and country risk assessments must be kept updated, including media monitoring. Dashboards could be generated to keep interested parties informed and up to date, with alerts issued when necessary.

Out of the scope of a utility, and so remaining the responsibility of the fund and the transfer agent, have to be client acceptance, account opening, transaction monitoring and screening, reporting of suspicious transactions, and a transaction archive. The distributor would remain in charge of providing application documents, with the transfer agent responsible for the share register and AML transaction monitoring.

The core of this effort would be organised through a central document repository/exchange, which would collect, disseminate and archive documents. Additionally, a risk-based approach could be used for certain tasks.

During the migration phase, the management company would ask all existing fund investors to upload a full list of the required KYC documents directly to the platform. When up and running, new clients would be onboarded directly to the utility. Monitoring of KYC data and documents would be in an ongoing fashion, either using the repository/exchange or via a risk-based approach.

> ***A MiFID II utility could share key information including investment strategies, the suitability of investors for complex funds, and changes in asset ownership***
>
> **Paolo Brignardello,** Head product management and marketing Fundsquare

Distributors and asset managers would see greater cost savings and business benefits for transaction processing with streamlined order routing and compliance tasks such as regulatory reporting and passporting. The establishment of distribution agreements and fund set-up requirements would also be eased. Business value would be generated from performance analytics and market research.

There are major potential gains from such an approach. For example, nearly €1 billion could be saved each year through greater mutualisation in the Luxembourg fund industry, Europe's leading cross-border domicile. Analysis by Deloitte has shown that KYC and due diligence procedures offer the biggest potential savings, with cash and document management, order processing, and corporate actions also ripe for reform. Another example is how a Markets in Financial Instruments Directive II utility could streamline procedures and reporting. It would share key information, including product investment strategies, the 'suitability' of investors for complex funds, costs and fees embedded in each product, and changes in asset ownership.

Moves are underway to create the KYC utility the asset management industry needs. Fundsquare is working with industry players to understand requirements and gauge options. Given Luxembourg's unique role as a cross-border service provider, there is potential to make an important breakthrough. There is a precedent, as the financial services industry came together to launch CCLUX (now Fundsquare) in Luxembourg in the early 1990s to create a hub-and-spoke data sharing utility.

If all stakeholders can be equally entrepreneurial once again, the benefits to customers and the wider economy would be significant. The prize for building these data hubs is a more resilient, efficiently regulated financial services sector offering better quality services at lower cost. The industry is moving to make this happen, but further decisive action will be required by asset managers, regulators and legislators. **AST**

T2S and asset safety: A first mover view

T2S has now been up and running for over a year, with SIX Securities Services among its first participants. SIX's Avi Ghosh discusses the role of the new platform in addressing broader industry challenges, and the progress made so far

More than 100,000 settlement transactions are processed every day in Target2-Securities (T2S), representing around 12 percent of the expected total volume upon full implementation in 2017.

From the point of view of SIX Securities Services, the system has proved to be stable and our clients have not experienced any difficulties so far. Indeed, our experience with T2S since the go-live on 22 June 2015 has been a positive one. Considering the complexity of such an undertaking, we have been impressed with the system's stability and the lack of major operational issues that can plague even the best planned infrastructural implementations.

Our initial focus at SIX Securities Services was on the migration of the Swiss market to T2S, that is, our issuer central securities depository (CSD) business. This has paved the way for Swiss and Liechtensteinian securities to be settled in central bank money and made available for all T2S participants. We are now shifting attention to the implementation of direct links with other T2S CSDs (that is, the investor CSD links) for our cross-border business.

The success of T2S to date does not, however, curtail the broader challenges presented to clients by post-crisis regulatory concerns. T2S was, after all, conceived at a time of relative optimism prior to the collapse of Lehman Brothers.

Asset protection

Since then, regulators have heightened their attention to matters of asset protection and are looking increasingly at transaction processes rather than simply balance sheet exposure.

The custody chain, for example, involves a range of identifiable risk factors deriving from asset commitment, liquidity, counterparties and transparency, to name a few. Recent years have seen increased regulation with direct consequences for custody and asset servicing. Through the Alternative Investment Fund Managers Directive (AIFMD) and UCITS V Directive, the market has seen efforts to further increase asset safety through the custody holding chain. Asset safety is therefore likely to remain an issue that the market, our clients and regulators will be paying close attention to in the years ahead. The first port of call for asset safety in a post-crisis world should be the infrastructure.

The EU's CSD Regulation (CSDR) defines the way in which local market CSDs interact and operate with T2S. There is an expectation that this, together with the operational flexibility that T2S enables, will lead to competition between CSDs and custodian banks.

Institutions holding securities accounts on behalf of investors, whether CSDs or custodians, are also under pressure to provide, at the very least, a choice of account structures that enable maximum transparency as to the ownership of assets. Had this been a regulatory requirement prior to the initiation of the T2S project, it is quite possible that the T2S architecture may have been modified.

In addition, and again despite the flexibility in network service structures that T2S affords, custodian banks are required to have contingency plans in place for their sub-custody or corresponding banking network. They must also establish a back-up plan to guard against the risk of a local provider exiting a market or ceasing to exist for any reason.

Besides AIFMD and UCITS V, international investors, including fund managers, are facing immense regulatory overheads, including the Foreign Account Tax Compliance Act (FATCA), the European Market Infrastructure Regulation (EMIR) and the Markets in Financial Instruments Directive (MiFID) II. They have urged custodians to ensure contingency planning is maintained.

At the 2016 NeMa conference in Dubrovnik, Moulik Shah, assistant vice president for investment operations at Capital Group, stressed: "It is very important our global custodians maintain a contingency network. It will be a difficult conversation for us to have with our board if we have to divest our assets in a market because a sub-custodian has discontinued market coverage or gone insolvent. As such, the importance of a contingency network should not be underestimated."

In addition, he noted, having multiple providers and accounts set up for different funds can help improve the accuracy of information supplied to investors about any given market.

Contingency planning

Both contingency planning and account structure imperatives will therefore still need to be taken into account in the design and service model for those markets participating in T2S.

Network contingency planning can take a number of forms. A 'cold' contingency plan would typically involve a custodian alerting an agent that they are their standby provider, but they will not have a sub-custody agreement negotiated and signed nor any account opened. This is a low-cost option, but would not facilitate a rapid transfer of assets between providers in the case of a trigger event.

With a 'warm' contingency plan, the custodian has agreements signed and accounts established with a secondary sub-custodian provider enabling the transition to occur.

A 'hot' contingency plan, meanwhile, would see the custodian utilising two custodians in a single market. This would allow rapid switching in the event of one of the custodian's agents being incapacitated or impacted by a risk event.

While all three contingency options are likely to be available in the T2S markets, this is not necessarily so in all other jurisdictions, particularly frontier markets, where alternative providers may not be available. The credit quality of the providers may be sub-standard, or the service offering not in line with international best practices. Fund managers—some of whom have struggled to deliver on expectations of performance—have faced fee pressure from investors. As a result, they have sought to push down service provider—especially custody—fees.

It is therefore unlikely that fund managers will want to incur the additional costs of their custodian operating a bespoke and sophisticated contingency plan across its network. 'Hot' contingency networks are expensive and custodians may be reluctant to shoulder the costs. Establishing 'hot' contingency networks across multiple markets would lead to additional costs facing participants, especially if they were being set up in markets where segregated accounts were the norm.

In that regard, it is possible that the operational flexibility inherent in T2S may allow for contingency savings enjoyed by treating participating markets as one unit to be used to fund such initiatives elsewhere. There is also the possibility that establishing a secondary relationship may put pressure on existing providers to revisit their own fee structures. Service providers are only now beginning to get to grips with these opportunities.

Safety and cost

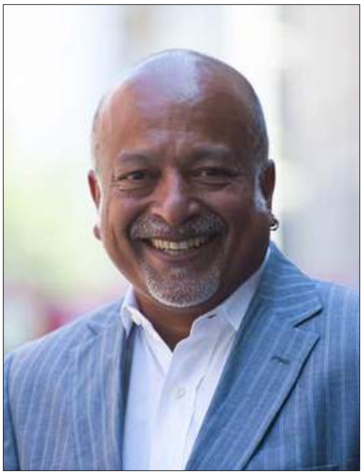
The cost of such contingency plans will also be tangibly affected by the level of account segregation deemed necessary, whether for regulatory or other reasons. The first port of call for asset safety in a post-crisis world should be the infrastructure. Current industry discussion, prompted by perceived regulatory interest, revolves around the level of asset account segregation that provides the most safety and reassurance without 'breaking the bank'.

Full account segregation at every level of the investment chain is one approach to transparency, but there may be alternative ways of providing the comfort needed to regulators without the extensive reengineering and resource drain that would be required for full segregation.

A full appreciation of the benefits of T2S will only really be possible once the next wave of migrations has brought critical mass to the network. Based on our experience to date, the resulting flexibility will enhance the choices in service provision available to institutional investors, but the jury is still out on how requirements for network contingency and client asset protection will impact the strategic decisions that service providers still have to take in regard to leveraging the new pan-European settlement platform. **AST**

"A full appreciation of the benefits of T2S will only really be possible once the next wave of migrations has brought critical mass to the network"

Avi Ghosh, Head of marketing and communications
SIX Securities Services



Partnering for growth in Asian asset management

Working with a reliable bank that has a strong local network improves international asset managers' chances of benefiting from the region's rapid growth, says Jeremy Amias of Standard Chartered Bank

Asia's asset management industry is gaining momentum, with significant growth in China and elsewhere. It is growing at a rapid rate, far faster than the rest of the globe's. Liberalisation, deepening capital markets and ageing populations all give reason to believe this will continue, making Asia a significant part of the global industry by 2025.

But Asia is a complex region. Even if only 10 of the huge region's countries (excluding Australia and Japan) have great potential, that still means international asset managers seeking to grow in the region have to tackle multiple different sets of regulations, taxes, languages and cultures.

That makes the few international banks with deep Asian roots essential partners. The countries of East, Southeast and Southern Asia are set to become a more substantial part of the global asset management industry, and international banks with local networks will play a strong part. They will distribute asset managers' funds, help them to form alliances with, or in fact acquire, local asset managers, execute trades in local markets and perform post-trade services.

In our paper, Asian Asset Management's Inflection Point, we anticipate that the Asian asset management industry will be a significant global force by 2025. According to our February 2016 report, China's Bond Markets: The Start of a Golden Age, China's asset management industry alone—including mutual funds, pensions and wealth management products (WMP)—is likely to expand by about four times by 2020 to RMB 104 trillion (€14.2 trillion), up from RMB 27.6 trillion (€3.77 trillion) at end 2015.

The fund passports currently in their early stages will help to smooth out the region's differences, but regulators and policymakers have yet to agree the next steps. The Mutual Recognition of Funds between Hong Kong and China, established in 2015, has huge potential, as do the two Asian fund passports, the ASEAN Collective Investment Schemes and Asia Region Funds Passport.

As such, having local partners and possibly a local presence is essential for international asset managers looking to access promising markets such as China, Indonesia and India. These three countries have huge populations and under-developed investment fund industries.

In Indonesia, for example, while it is theoretically possible to gain a licence to operate from the central bank, in reality this is no longer an option, according to Standard Chartered's 2015 report, Indonesia: Asia's Untapped Growth Opportunity.

Realistically, the only way to enter the market is to buy an existing asset manager, either a dormant firm that has a licence or a company that has an established business. A good banking partner with local specialist knowledge can help to identify and broker a suitable target.

Foreign exchange is also a critical issue where a local partner makes all the difference. Some currency markets are heavily regulated and can be illiquid during times of market stress. This results in operational challenges that can only be solved by banks with deep regulatory and market expertise.

Asset managers might also want value-added solutions, such as high-quality investment research, transaction banking and financial markets products. These have the potential to improve efficiency and lower costs when effectively integrated with post-trade services. In countries with large Muslim populations, asset managers should look into a bank's expertise in Islamic finance and supporting Islamic investment products.

Contact with regulators is important, too. Given the rapidity of regulatory change in some markets, asset managers should seek to work with a provider in constant and close dialogue with the regulator, which enables proper interpretation and understanding of the regulators' intentions and what the regulatory changes are designed to achieve. Only a bank with a local presence and strong local relationships can do that.

> ***Given the rapidity of regulatory change in some markets, asset managers should seek to work with a provider in constant and close dialogue with the regulator***

Jeremy Amias, Global head, financial institutions
Standard Chartered Bank

For international asset managers looking to take part in the likely growth of Asian asset management, the path of expansion is unlikely to be smooth. Asia is known for its market volatility and there might well be unanticipated changes in regulation.

Building a brand in local markets will take time and it may often seem as though little progress has been made.

However, the investment in time and commitment is likely to be rewarded. Partnering with a reliable bank offering global best practice standards, modern technology and flexible solutions will improve the chances of success. **AST**

Stephanie Palmer reports

Russia’s new normal

NSD’s Maria Krasnova reveals how market participants will now be able to build their relationships at a new level and outlines further developments planned at the Russian central securities depository

The Federal Law No 210-FZ has come into effect. Its provisions will inevitably lead to significant changes in Russia’s stock market. What is the key message of this reform?

With effect from 1 July 2016, the law changed the format for interactions between issuers and investors in the Russian market, specifically how it related to settlement infrastructure institutions in corporate action processing. The idea behind the reform was to make corporate action processing transparent and efficient via the use of the newest electronic technologies and by providing investors with access to these technologies. Everyone knows the principal shortcomings of the current corporate actions procedure: it requires exchanging paper documents and there is a lack of access to reliable corporate information. Prior to this reform being implemented, market infrastructure opportunities—depositories and registrars integrated into a developed correspondent network and equipped with modern electronic technologies—were rarely involved in corporate action processing.

Many things changed after 1 July. Now, corporate actions are processed mostly in an electronic format, investors can participate remotely in security holders meetings, and reliable official information on corporate actions is now generally accessible. If investors keep their assets in a depository, they can participate in any corporate action by sending instruction to their depository.

How important are these changes?

They are crucial. The changes are intended to resolve longstanding serious challenges associated with large expenses and investors’ high risk level. We facilitated investors’ ability to participate in all types of corporate actions: in respect to exercising pre-emptive rights, in repurchasing shares, and in making voluntary and mandatory offers.

The opportunity to use electronic voting, to send requests to call general meetings in a centralised way, to add items to the agenda, and to nominate candidates to issuers’ executive bodies, was very important for investors. Addressing these issues will improve the quality of Russian companies’ corporate governance and, subsequently, the overall investment attractiveness of the Russian market.

What innovations will be proposed by NSD due to changes in the format of interactions with issuers and investors?

It is essential to provide market participants with information on corporate actions for efficient processing. They have to receive this information as soon as possible, and the information has to be identical for all participants. The creation of the Corporate Information Center (CIC), on the basis of NSD, will be one of the reform’s elements. The CIC receives information on corporate actions from issuers in a structured form. This information is then automatically transmitted to NSD clients and is placed on the website for all interested parties.

So as of 1 July, all issuers submit information on corporate actions to NSD in a certain format?

This is now covered by the Law On the Securities Market. There is a paragraph obliging issuers to submit information to NSD. It also says that corporate information distributed by the central securities depository (CSD) is recognised as official. The recognition of the official status of this information means that in the case of discrepancies between information disseminated by NSD and data from other sources, NSD’s information will take priority.

How will the format of shareholder meetings change? Will there be new voting methods?

Firstly, there is no need to draw up a list of shareholders beforehand. The list is formed on an accrual basis as depositories submit information on their clients entitled to take part in the meeting. Along with presenting this information, a depository can also state how its client voted at the meeting.

Secondly, submitting shareholder information is no longer mandatory if a shareholder does not want to disclose this information and properly instructs the depository.

Thirdly, the range of options for participating in meetings has been significantly expanded. In addition to traditional ways—attending in person or submitting a paper ballot—there is now the opportunity to vote via the depository (e-proxy voting) and to participate by voting on a special website (e-voting).

The e-voting service that NSD plans to launch will let shareholders not only vote simultaneously with participants who attend in person, but also to watch the meeting in real time, ask questions, and exchange information via chat.

You've mentioned that the reform will contribute to upgrading corporate governance quality. How will this happen? By increasing the number of voting shareholders?

In addition to the potential increase in the number of participants at general meetings of shareholders, I would highlight several other factors. The opportunity for an investor to interact with an issuer in electronic form via the chain of depositories substantially decreases the possibility of issuer abuse. A message that is transmitted via the closed-loop system in a structured form can be found easily and quickly reaches the recipient. There are no risks associated with the post, and the guarantee of taking the shareholder's vote into account increases.

Do you think that all investors will view the innovations positively?

When planning the reform, we assumed that we had two distinct groups of investors: the first one included Russian investors who were used to the outdated procedure for corporate action processing (exchanging paper documents via the postal service); and the second group was foreign investors who are accustomed to other, more efficient ways of participating in corporate actions in other markets. So, by qualitatively changing the Russian system, we decided to use the newest international practices as a basis for the system's design and operational principles.

We relied on standards for convening shareholder meetings and corporate action processing developed by the international industry. Moreover, we chose ISO 20022 and ISO 15022, the standards that allowed us to automate processes for participants who required this. As a result, foreign and local investors will be able to get the necessary effect from the reform.

All of these changes, are they just a tip of the iceberg? Is this the beginning of reform that will continue to gain momentum?

The changes that came into force after 1 July have been on a very large scale, so some time will need to pass for us to realise their true effect. By creating the CSD in 2012, we solved numerous problems related to attracting foreign investments and creating a secure settlement structure. By undertaking corporate actions reform, we have made the next important step towards improving infrastructure. However, possible financial market infrastructure improvements do not end there, because we have a lot to enhance, for example, in the sphere of tax administration, as well as automating processes that are currently conducted in a paper format.

International practice shows us that financial infrastructure is often used as a key agent in making improvements required in the country. Our projects of creating the CSD and conducting corporate action reform demonstrated that NSD can be a change driver in Russia and can effectively represent the professional community's interests. Being at the centre of the infrastructure, unifying issuers, investors, and professional securities market participants, functioning as a settlement bank and a systemically important financial institution, NSD, in terms of its overall qualities, can and should be considered as a promoter of best practices and modern technologies. Furthermore, NSD can help other market participants to solve their problems by supporting the functionality that is important for all participants and connected with carrying out regulatory obligations, providing information, and managing risks, in a centralised way.

Which functions do you mean?

At present, the economic situation is not the best, so companies do not have enough opportunities to gain. Meanwhile, regulations are getting stricter. This concerns not just Russia, but other countries too. Since 2008, regulatory requirements have significantly expanded, and many market participants have even expressed their concerns about further development opportunities.

Against the backdrop of these discussions, an evident concept has emerged—the concept of creating market utilities that can provide on their platform services that will be universal for all customers. Instead of paying €10 to solve a regulatory problem, for example, one will pay RUB 1 per year to outsource this service to a market utility.

These centralisation options using the infrastructure for improvements demanded by the market will make its participants' and regulators' lives easier, and can be implemented on the basis of NSD. We think we have all the necessary prerequisites to play this role. **AST**

> ***By undertaking corporate actions reform, we have made the next important step towards improving infrastructure. However, possible financial market infrastructure improvements do not end there***

Maria Krasnova, Deputy chair of the executive board
NSD

Czech-ing the smallprint

The sub-custody system in the Czech Republic can leave shareholders feeling somewhat disenfranchised, says Michal Koláček of CSOB

Every year, when spring comes to Prague, it is accompanied by voting season at the general meetings organised by Czech joint stock companies. While proxy voting teams of local sub-custodians are rather busy, the wave of foreign tourists coming to Prague is getting stronger. Among these tourists there is an investor who holds minority stakes in a few Czech companies, Mr James. Although Mr James is a fictitious investor invented for the purposes of this article, his story is actually true to several foreign investors, and it may happen again.

Mr James invests into stocks all over the world and uses a New York-based global custodian for holding his custody account, including his Czech portfolio. He is well aware of how all custodian banks invest into their networks and comply with regulatory requirements for clients' assets protection, and so he feels certain of his entitlement to the securities in his portfolio. When he finds out that two of the Czech companies whose shares he holds are organising general meetings in Prague during his stay there, he decides to attend these meetings, to enjoy the atmosphere and to cast his votes personally. And so he informs his global custodian that he will not vote via the custodian chain, but in person.

On the meeting day, however, an unpleasant surprise awaits him—he is not allowed to attend the meeting. He is not on the list of shareholders issued by the CSD in Prague, and so the company does not recognise Mr James as an entitled shareholder, and does not allow him to vote. The same happens at the second meeting a few days later. Mr James, who clearly sees his shares in the Czech companies on his portfolio statement from his global custodian, is left wondering what has happened.

Safekeeping assumptions

Any reader who is aware of the Czech capital market environment probably has an idea of the problem. Mr James's global custodian does not hold his position either on his segregated beneficiary account in CSD Prague, or on his statutory nominee account in CSD Prague—instead, it uses a beneficiary account in global custodian´s name for holding clients' securities. Such a safekeeping model has certain implications, including that Mr James is not deemed beneficial owner of his Czech securities, and therefore is not recorded on the list of shareholders. The recorded shareholder is the global custodian, because the Czech market determines the deemed owner of securities as the holder of beneficiary account.

While some global custodians use the described safekeeping model and are routinely treated by Czech authorities, the CSD, issuers and regulators as the securities owners (as opposed to their clients), some global custodians act more responsibly. The approach of each global custodian depends on its and its clients' risk appetite and interpretation of Czech law.

It is the Czech Civil Code and Capital Market Act which together form the account structures allowed in the Czech Republic. The civil code defines two securities account types. The first is the beneficiary account, or single owner account, defined as an account where book-entry securities are registered for the person for whom the account has been opened, and it is deemed that the owner of any book-entry securities held on this account is the account holder.

The second is the statutory nominee account, or the customers' account. This is defined as an account for registration of book-entry securities of persons other than the account holder, and the account holder is not the owner of book-entry securities registered on this account.

In addition to this, it clearly emerges from the Capital Market Act that the Czech CSD maintains the central register of book-entry securities on both account types mentioned above. But the person, typically the bank or global custodian, who keeps the statutory nominee account in the CSD cannot open another nominee account

and link it to the statutory nominee in the CSD. Such a person can only open the beneficiary accounts in its books, and link them to the statutory nominee in CSD. The Czech market therefore operates with a two-tier registration of ownership. The first tier is the CSD where ownership is recorded on the beneficiaries' accounts, and the second is the books of holder of CSD statutory nominee.

Czech safekeeping models

When a global custodian holds Czech securities for Mr James and its other clients, it will use a Czech-based agent bank for access to CSD Prague, and will select one of the account structures offered by its agent bank. Knowing the two-tier registration concept, the global custodian can choose from three basic approaches.

One option is using a statutory nominee account in the CSD, in the global custodian's name. Due to specific technical and reporting requirements, this approach further requires that the global custodian opens a beneficiary account for Mr James in the local agent books, and this account is linked to the global custodian´s statutory nominee in the CSD.

Similarly, the beneficiary accounts in local agent's books are opened for other clients of the global custodian. Through this set-up and due to mandatory automated reporting, the local agent informs the CSD that Mr James is the holder of beneficiary account and therefore the registered owner of securities. The CSD processes that information and, said shortly, Mr James is seen as the owner and shareholder at all times by all Czech authorities, the CSD, issuers and the regulator. If the global custodian had used this approach, Mr James would have been allowed to vote.

Another option for the global custodian is to perform the total segregation on beneficiary accounts already in the CSD's books. This way, Mr James has his beneficiary account on a CSD level and is seen as the owner at all times. The effect is, again, absolute safety for Mr James, who is recorded in the list of shareholders. Nevertheless, the first option appears to be more efficient, bearing in mind that there is no segregation on CSD level, but only at the level of local agent bank.

The third option is to use the beneficiary account in the CSD in the name of the global custodian, for holding securities for its underlying clients. This way, it doesn't matter if global custodian does or does not further segregate in its local agent books, it is not its clients, but the global custodian itself who is recorded in the list of shareholders and who is treated as the deemed owner.

This is because the account type used in the CSD is the beneficiary type, not the statutory nominee. Mr James was not allowed to vote at the general meetings because his global custodian uses this model of safekeeping, and it was global custodian, not Mr James, who the issuer and meeting organisers recognised as the entitled shareholder. It must be noted that some global custodians tend to interpret that the beneficiary account in the CSD could be used for holding underlying clients' securities. They support this interpretation by stressing the word 'deem' in law, which states that it is 'deemed' that the owner of book-entry securities held on the beneficiary account is the account holder. In their opinion, the global custodian, as the beneficiary account holder, is considered as the securities owner.

This does not mean that it actually is the owner, and it can be proven that the actual owners are its underlying clients. The question of how to prove that, in what situation, and how long such proving may take, is placed to the backcloth. Apparently, Mr James failed to prove that he is the actual owner, and was not allowed to execute his right associated with his shares.

To use or not to use?

To use or not to use the CSD beneficiary account for holding securities of underlying clients? Global custodians commonly ask this question, but the answer they get from local agents might not always be the same. Some agents recommend it, referring to the word 'deem'. Others recommend not to use, referring again to the case of Mr James and the fact that beneficiary account is not the statutory nominee, which is a different account type existing and used on the market.

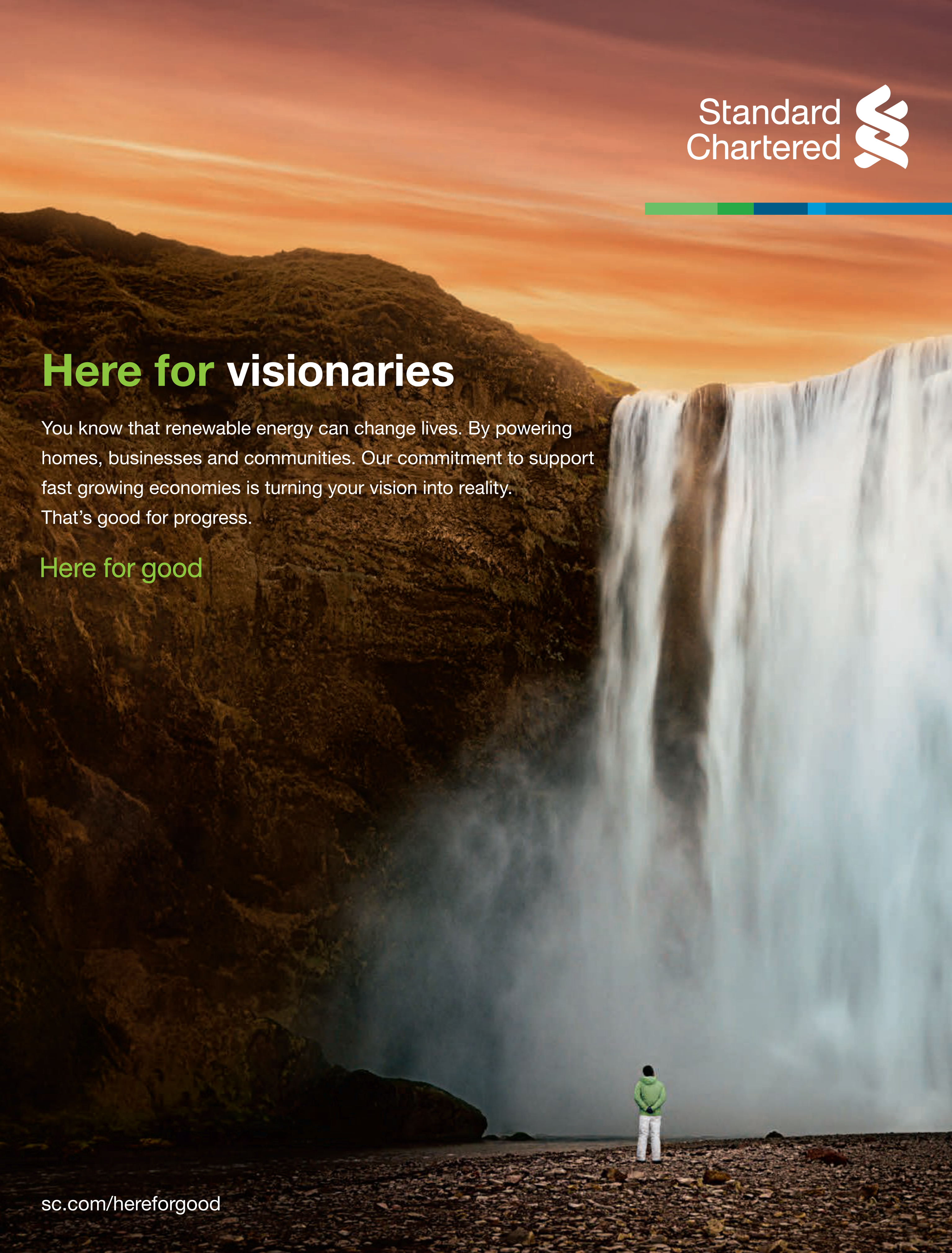
The latter approach is, at last, included in the Czech market profile created by some key providers of securities markets information, as they believe that the matter should be explained transparently.

Czech shareholders, either companies or individuals, strictly ask to be registered on the lists of shareholders, and do not accept that their securities would be held on a beneficiary account in the name of somebody else. They know very well why.

All local agents make it possible for a global custodian to hold securities of underlying clients on a single beneficiary account in the CSD, however, custodians should be informed of the associated risks, and it depends on the risk appetite of the custodian and its clients, which account structure is eventually used. What was Mr James's risk appetite? Mr James might be thinking of that on his flight back home. For sure he will be asking himself what would happen if his global custodian became insolvent. **AST**

> ***Czech shareholders strictly ask to be registered on the lists of shareholders, and do not accept that their securities would be held on a beneficiary account in the name of somebody else. They know very well why***

Michal Koláček, Custody relationship manager
CSOB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Transformational times

Robert Scott of Commerzbank provides an overview of the key topics and challenges currently facing post-trade services

I see five key areas of focus. Namely, but not in order of importance: a continuing adaptation in the post-trade landscape, digitalisation, the application of new technology, cost and standardisation, and changing of traditional product silos to integrated 'solutioning'.

The post-trade landscape: a continuing adaptation

Reduced and challenged profitability remains a key feature across the financial industry. Recent examples show anything from a 7 to 30 percent reduction in terms of overall profitability. Volume for the most part remains relatively stagnant with a reduction in volume growth figures overall.

Post-trade businesses, which in the past have tried to be all things to all men, have continued to take a hard look at their business models. Organisations are now seeking increased clarity and asking again: what are our key areas of differentiation? How are we adding value and effectively connecting what we do to our underlying clients? What value are we bringing to clients?

In some cases, this may lead to continued reshaping of post-trade service offerings and possibly further consolidation in certain areas. In recent times, we've witnessed many organisations retracting from post-trade service provision, notably in the area of over-the-counter derivatives and securities clearing activities. Also, we've seen them exiting specific markets and geographies, for example in securities services, which are no longer considered of strategic importance. Exits have been particularly prevalent and visible where, unless you're a service provider, it is widely accepted that there is little to no differentiation in areas such as matching, settlement, confirmations, corporate action processing, reconciliation and functional activities surrounding collateral management processing, as well as managing settlement and operational processing, managing disputes and margin calls, providing independent valuations, and in the assimilation of data in order to optimise activities.

There has been much talk about the need for leadership within the industry. This topic featured heavily at the NeMa 2016 conference in Dubrovnik. There is clearly a need for organisations and individuals within them to step forward to facilitate innovation and growth strategies across the industry.

With continued regulatory change remaining a prevalent feature, post-trade activities feature high on the agenda in terms of considerations regarding balance sheet consumption, capital charges or leverage ratio impacts. Know your customer (KYC) and on-boarding processes, which are already stretched at most organisations, are seeking ways of streamlining the various internal processes, while maintaining a higher degree of counterparty scrutiny, standards and control. There have been moves from companies to outsource components of this to a kind of utility structure. These utility-like offerings can significantly help with the overall quantity and quality of data refresh needed. However, an organisation considering outsourcing needs to get the right balance; an organisation can never absolve its core responsibility, stewardship and oversight in this regard.

Digitalisation

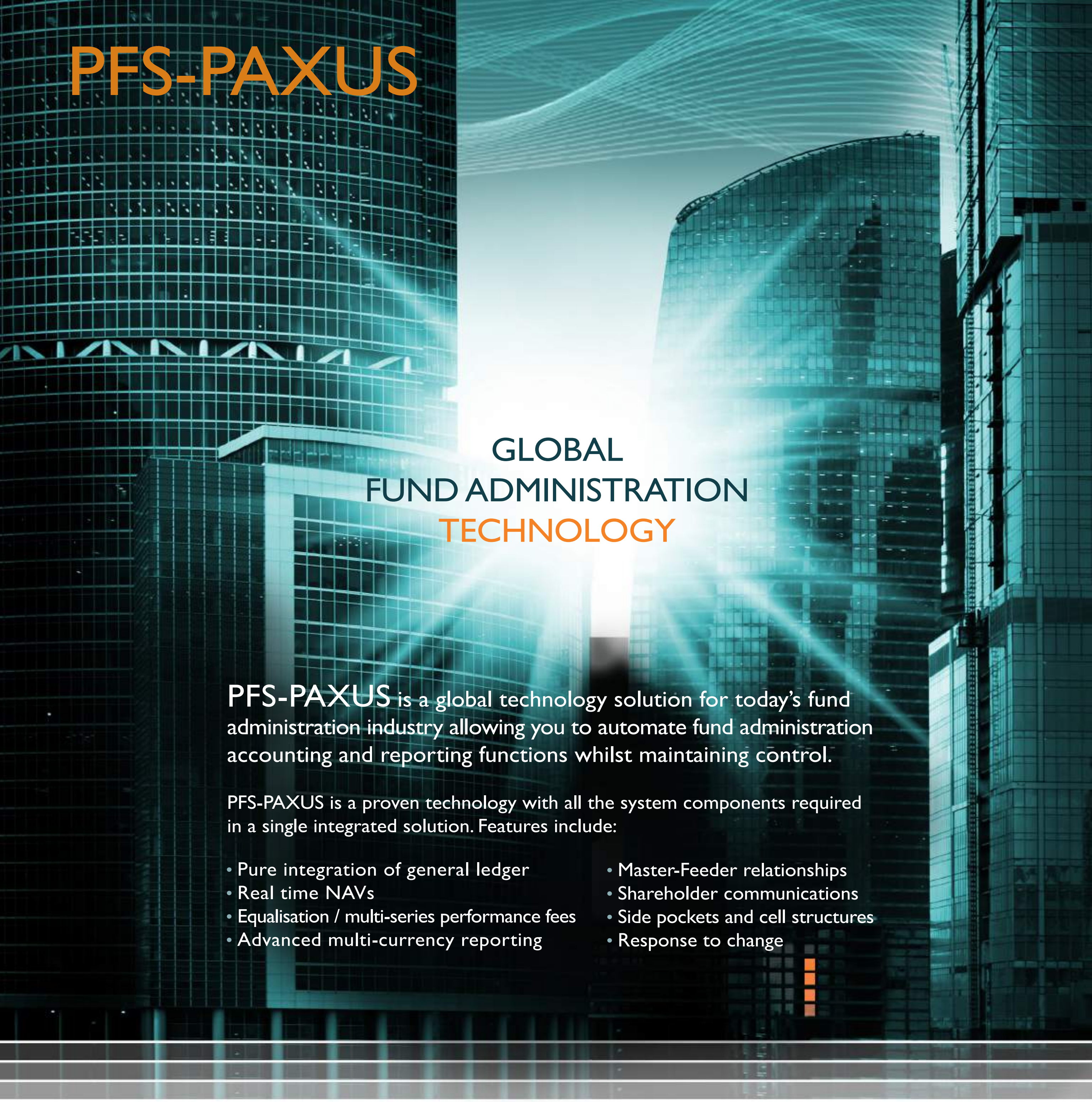
I like the IT Glossary definition of Gartner to describe digitalisation: "Digitalisation is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities." The world of technology continues to move at an incredible pace. We as individuals as well as organisations are all gravitating towards digitalisation in many areas of our lives and business. The infographics overleaf contain a few examples of just how transformational this move toward digitalisation is and how it affects other sectors.

We live in a world where everything is becoming instant and data is being consumed in vast quantities. Everyone wants access to information at anytime, anywhere. Commerzbank is trying to lay the digital foundations in our post-trade offering, where real-time and comprehensive access to information are all key requirements, be it from the point of execution, positions, corporate actions or settlements. We are working hard to explore this, by for example, providing enhanced client experiences delivered through digital and cloud-based technologies.

It is now possible to log on to your Amazon account, for example, and order, pay and get something shipped, in some cases on same day. And yet in the world of securities settlement, it can still take days to match and physically settle trades. It doesn't take long to realise the business model in post-trade needs, in some cases, a degree of transformational adjustment.

Application of new technology

I'm sure that in the fullness of time those organisations and service providers that are able to nimbly effect the application and adoption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PFS-PAXUS is a global technology solution for today's fund administration industry allowing you to automate fund administration accounting and reporting functions whilst maintaining control.
PFS-PAXUS is a proven technology with all the system components required in a single integrated solution. Features include:
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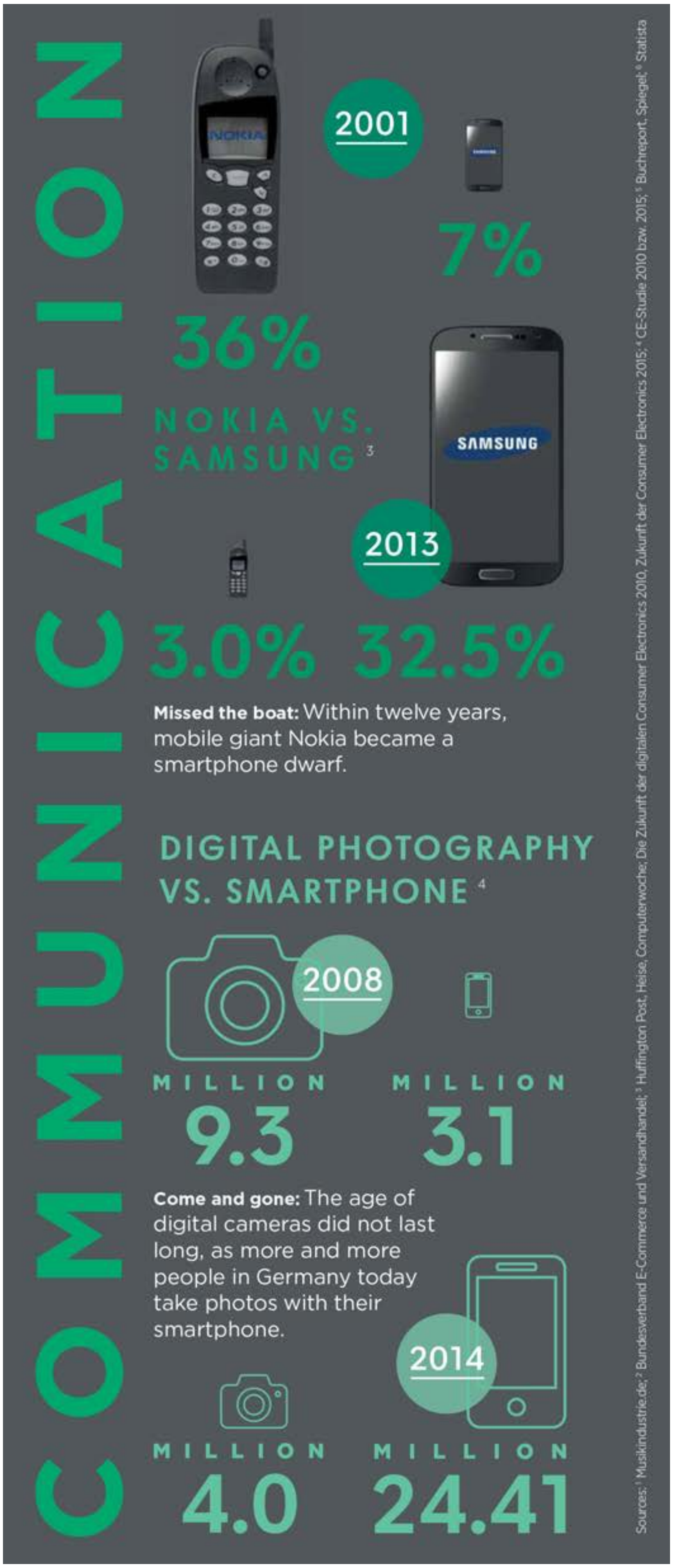
• Shareholder communications
• Side pockets and cell structures
• Response to change



of new technologies will be in a winning position. If, for example, you look at the array of initiatives currently being explored in the post-trade industry surrounding blockchain, it's very clear that blockchain technologies potentially provide a real opportunity to transform and address aged technology platforms and the various legacy processes within organisations. If I look across all the areas that this technology is being considered, be it in the core securities value chain or that of cash and payment processing, there are many people who are trying to find the silver bullet solution or business case. There is an increase in the resources being deployed to examine and analyse all the various aspects of the full value chain of processes.

However, I'm not sure this silver bullet is necessarily the answer to the industry's problems, and even if found, there's no guarantee of widespread adoption or any real short-term commercial benefit. Of course, a longer term transformational view could give rise to different architecture and interaction points, far from what we have today.

If I look back over my career in post-trade, I believe that any new technology will need, in the first instance, to be able to interface with the array of legacy systems and platforms deployed at the various organisations affected. It strikes me that perhaps not enough is being considered in the areas such as getting counterparty and instrument static correct at source and in being more standardised. These data sets are common to all, however, upon closer inspection, they look very different across organisations.

While recent initiatives such as legal entity identifiers have begun to help with this standardisation, it is my experience that many of the operational post-trade inefficiencies and manual downstream processes are the result of poor data quality at the outset. This leads to a disruption of much of the value chain, which is reliant and built principally with straight-through processing in mind.

If there was a way for new technologies to help solve these problems while providing a seamless integration layer that is capable of interacting efficiently with legacy platforms, then a series of real silver bullets would begin to emerge in all downstream processing that takes place, making a business case easier to achieve. I believe this would then become the driver of more transformational change for business cases and cost efficiencies.

What is also clear is that organisations need to continue to look to their areas of specialism or areas of key differentiation and not try to build everything themselves, which has been the business model of many. Perhaps it's a better approach to leave some of this building to a mix of industry experts and millennials. Then perhaps a client's post-trade experience in the future will begin more like an interaction with a technology provider than that of a core bank, which has been the experience to date—an experience that is far more flexible and rich in client need and interaction points.

Costs and standardisation

Cost containment remains a big topic of focus for both clients and service providers.

Many organisations continue to look towards outsourcing as a viable alternative to in-house production. Service provision needs to be viewed differently today. Many point to the car industry as a good example of this. The many components of the car manufacturing process are outsourced to various organisations across the globe but then centrally assembled under the specific branding of the car manufacturer. In the securities services industry, many new service providers have begun to emerge with strong balance sheets and are increasingly trying to enter the market. These companies have successfully provided a level of standardisation, cost and process efficiency to other industries. Just look at the airline and insurance sectors and the likes of Accenture, Broadridge, Tata, Infosys and Wipro.

There are many examples where components of the value chain are now recognised and accepted as not being service or product differentiators, and are commoditised in nature. There is more of an acceptance, given the trend of organisations that are judged on their efficiency and return to the bottom line and shareholders.

The real challenge is that some organisations have created a variety of bespoke services and solutions on largely proprietary-based technologies, deployed to their clients, which results in largely inflexible support models. As we move towards digitalisation, these can be hugely difficult to transform, at great cost and at a time where available 'change the bank' investment is challenged.

There are numerous examples of where the industry tries to standardise more, making interacting with it more efficient. Target2-Securities (T2S) is a good example. Certainly, the success of T2S, a clear beneficiary of all the regulatory changes and focus contained within the Central Securities Depository Regulation, has provided an array of increased standardisation along the way. We now come into the final delivery of this project, which has been a clear driver to simplify and drive standardisation across T2S markets.

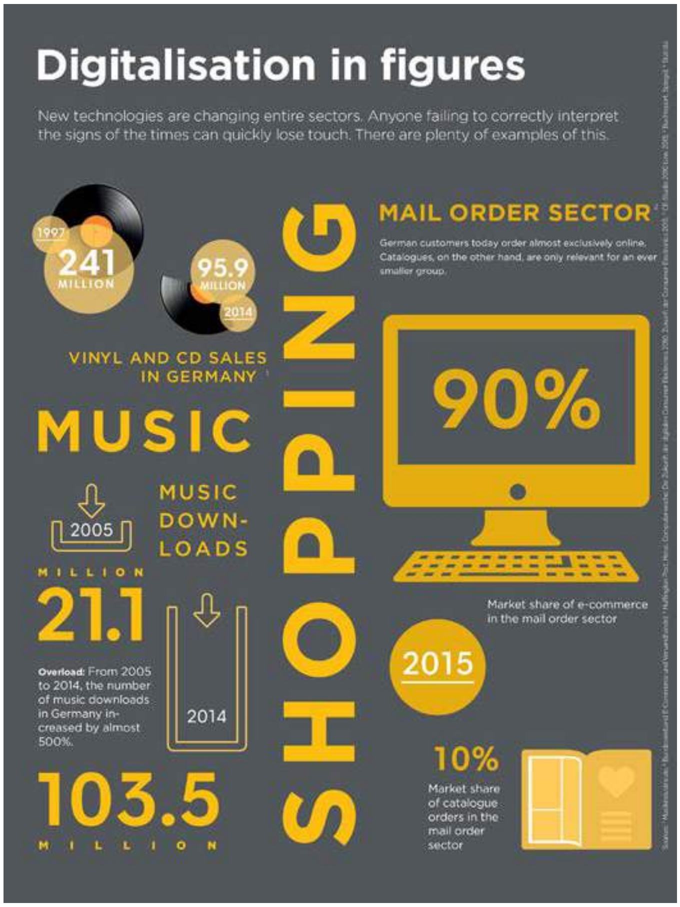
As we look now to re-engineer core platforms, redefine product offerings and service provision, we need as an industry to find ways of cooperating in a more efficient manner and certainly with faster deployment. After all, looking at T2S again, we've been talking about, and at various stages of, implementation of this platform for more than 10 years.

Integrated solutioning

Clients now look towards service providers to offer them holistic, integrated solutions rather than the traditional product-centric approach to sales, where providers would try and work with organisations in a somewhat siloed and disjointed manner. Clients require their service providers to be far more integrated, providing easy access, integration and connectivity to them. They look for solutions to their problems, not opportunistic sales of various individualised products. Commerzbank's post-trade offering, TradeCycle, is one example where the client is able to choose the services they need, whether it is one module, several or the full suite. Together with our partner Clearstream, we work together to deliver precisely what the client wants.

I'm pleased to see that recognition and new business is given to those that have and maintain a clear and consistent focus around relationship management and understanding their clients.

Clients want to work with organisations that understand them and their business models, and support them. At Commerzbank, we have an absolute focus on clients and pride ourselves on understanding our clients and what they need, as well as how solutions can help support their business ambitions.



In summary, the industry is at an inflection point. There needs to be strong leadership across the industry's various value chain components and participants. The introduction and adoption of new technologies can transform a client experience and the service provider's business model. This could be in the way we work with the various regulators and market participants, representing our clients around the globe in order to bring more transparency and control, where service provision and asset safety remains of paramount importance.

Or perhaps it is simply about transforming business models to be more aligned with client needs, re-examining what's been done in the past and ensuring continued value is created for clients in everything you do, making the client central to how you measure your success. **AST**

> ***The industry is at an inflection point. There needs to be strong leadership across the industry's various value chain components and participants***

Robert Scott, Head of market services
Commerzbank