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With Sibos 2015 in Singapore now a few short months away, we hope you enjoy the taste of things to come provided in this edition's articles. Don't forget to check out www.sibos.com for the latest practical information to help you plan your Sibos schedule.

Best wishes
Sven Bossu,
head of Sibos

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Striking a balance

The complexities of the securities industry must accommodate regulators' demands for greater transparency, but not at all costs.

Practices in the global securities industry are "opaque", Adam Szubin told delegates at Sibos 2014 in Boston. Szubin, then director of the US Office of Foreign Assets Control (OFAC) and now under-secretary for terrorism and financial crimes at the US Department of the Treasury, went on to call for "transparency as the fundamental starting point of any meaningful compliance programme".

"Transparency must be improved," says Stephen Lomas, head of market policy for global transaction banking at Deutsche Bank. "The question is how best to accomplish this.

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MARKET INFRASTRUCTURES

Facing up to the real deal

Real-time payments initiatives offer a long-term future for payments banks.

Adoption of real-time retail payments systems (RT-RPSs) is growing across the world, with 18 countries already using an RT-RPS and almost 30 more in various stages of exploration or implementation. The momentum behind RT-RPS installation stems largely from the same kind of forces that have revolutionised consumer spending behaviour in recent decades, notably in the purchasing of books, music and other forms of entertainment. "In the era of mobile commerce and online selling, moving money can't be the slowest part of the process anymore," explains Robert Kauffman, professor of information systems at Singapore Management University. Mark Buitenhek, global head of transaction services at ING, agrees. "The digitisation of the world means everything is happening faster than ever before, but the current payments system is based on developments in the 1970s," he observes.

Today it is possible to order products online in the morning and receive them in the afternoon. Some retailers are even

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Striking a balance

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The international system under which securities and mutual funds are held, settled and distributed is highly complex and involves many different institutions." In March, however, Szubin reiterated the intention of policy-makers and regulators to cut through complexity. "We continue to focus on increasing the transparency of legal entities by proposing to require the collection of beneficial ownership information."

Opacity is never the objective of a legitimate securities transaction, of course, but operational efficiency is not necessarily enhanced by its exclusion; after all, it can be a long way to the far end of a complex, cross-border custody chain. It is also true that, not least for pragmatic operational reasons, absolute end-to-end transparency has never been part of the securities industry's approach to due diligence. Marco Zwick, head of compliance (Europe) and global head of anti-money laundering (AML), RBC Investor & Treasury Services, says: "Cross-distribution models currently pursue transparency at the end of the value chain. This is generally achieved by appointing distributors in local markets which are subject to equivalent international AML standards." The compliance obligation thus "cascades" through regulated professionals.

> **"The currently pursued objective of transparency will impact the efficiency of international distribution models and the associated costs.**
>
> **Marco Zwick,** global head of anti-money laundering, RBC Investor & Treasury Services

Zwick, also president of the Luxembourg Association for Risk Management, says: "The global securities industry has tried to strike the balance between transparency and operational efficiency by introducing the concept of 'know your intermediary' in addition to the regulatory concept of 'know your customer'." Upsetting the balance may also upset the customer, Zwick suggests: "The currently pursued objective of transparency, also motivated by factors other than AML, will impact the efficiency of international distribution models and the associated costs." Lomas acknowledges the need for further flexibility. "The balance that must be struck is to implement a new control framework that satisfies regulatory authorities worldwide while minimising disruption to the current system," he says.

> **"Ultimately, it is a question of efficiency; does the same due diligence have to be performed at every point on the chain?**
>
> **Olivier Goffard,** head of group compliance and ethics, Euroclear

Stretched to the limit

On the question of transparency of beneficial ownership – Szubin has previously singled out omnibus accounts as potentially problematic – Olivier Goffard, head of group compliance and ethics at Euroclear, makes a seemingly practical point. "If we have to provide the ultimate beneficial owner information within transaction messaging fields, we are limited because at the moment we don't have a standard that might be used for this purpose across the different stakeholders within the custody chain in an automated way," he says.

But this is more than a discussion about messaging technology. "Messaging complexity leads to wider complexity within a given financial institution. If we, Euroclear, have to deal with all the names of beneficial owners, we have to be able to record them in a uniform way, to process them. The more names, the more we have to control. And furthermore, it is not always clear precisely who within an organisation you are dealing with, particularly if it operates across many times zones and different business lines. Ultimately, it is a question of efficiency; does the same due diligence have to be performed at every point on the chain?" Goffard asks. Transparency is a virtue, but so is efficiency. To emphasise the former to the exclusion of all else, could make it mutually exclusive with the latter. It would also send the IT budget through the roof.

Transparency may have practical limits in other respects too. Stuart Weinstein, head of Coventry Law School and author of a SWIFT Institute-funded study, 'Regulatory Compliance – The Extraterritorial Challenge' (due for completion in Q3 2015), says: "If people are smart enough to engage in terrorism or money-laundering, they are fairly sophisticated players and they do know how to game the system. You can only be one step ahead of the criminals and that's the hard part. You only discover the newest criminal techniques too late." There will be a criminal 'solution' to transparency one day, if regulators come to rely on it.

There are also non-criminal but fallible individuals in sensitive positions in the securities industry. Weinstein says: "If you're working in the front office of a bank, you have a tremendous amount of volume coming into your operation. You do your best to keep track, but the reality is that it's an imperfect world." You make mistakes. Crucial details slip through the cracks. Your bank gets hit for a vast fine and withdraws from, say, countries where compliance is difficult, or not cost-effective. The sanction and the reaction to it are disproportionate, perhaps, but for Weinstein, the more important impact will only be felt later: "If there was no intent in the bank to engage in criminality, you really have to question whether the strict liability that is imposed works against finding the right solution."

No one's perfect

The risk of vast fines and reputational damage dampens the enthusiasm for business in distant, less familiar markets. More importantly for the long term, such experiences potentially discourage banks from engaging in constructive dialogue with regulators. But that's what needs to happen, and the signs are that it's not only happening, but also starting to work. In his March speech, Szubin said: "I want to make clear that we do not expect perfection from the private sector. We understand that financial institutions are not infallible, and that it is not possible or practical for them to prevent every single potentially illicit transaction flowing through them."

There is a fine but crucial distinction between stopping criminals at all costs, and defending a vital, pivotal industry against crime. Lomas says: "Transferring or transforming ownership interests multiple times brings enormous benefits to the global economy by achieving significant scale benefits that result in low transactional costs and a high degree of securities mobility."

Efforts are afoot to come to terms with the regulators' requirements. In May 2014, the International Securities Services Association (ISSA) launched an initiative to address compliance with recent interpretations of financial crime regulation in the securities and funds space. The principle objectives are: to provide a meaningful framework to guide custodians and funds distributors in the application of IOSCO principles on client identification and beneficial ownership; to minimise gaps between market practice and regulatory expectations, with particular reference to issues raised by enforcement actions and regulatory comment; and to create a set of principles for the securities services space, similar to the Wolfsberg Questionnaire for correspondent banking. Lomas, who also chairs ISSA, asserts that collaborative work of this nature will bring about effective change. "The principles are being discussed with the wider securities industry and key regulators across the global landscape to ensure that these deliver in line with expectations," he explains.

Arguably the most effective approach to striking the balance between transparency and efficiency is to do it before the regulator does. Weinstein says: "We have to be self-policing. There's no tolerance for people using settlement systems for illicit activity. If we develop the standards ourselves, we can suggest to the regulator the right approach. I think that's the key." ■

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Ray of hope

T2S is seen as a major step towards securities market integration in Europe, but who stands to benefit and when?

A new era dawned for the European securities market on 22 June this year, when TARGET2-Securities (T2S) – the European Central Bank's single settlement platform – sprang into life after years of planning and months of testing. It may not yet be apparent to investors and issuers in participating countries, but the post-trade complexities traditionally involved in cross-border securities trading are already melting away.

Undeniably, there have been setbacks and difficulties along the way. After Italian central securities depository (CSD) Monte Titoli requested a delay in early June, the first round participants were whittled down to just four markets: Greece, Malta, Romania and Switzerland. But over the next two years, 23 CSDs from 21 markets are scheduled to join T2S in three more waves, after which many expect the long-term benefits of the initiative to be more apparent.

Stemming from the TARGET2 system for settling large-value euro-denominated payments in central bank money, T2S was originally conceived as a platform on which securities and cash accounts could be integrated to effect real-time delivery-versus-payment settlement across Europe's national boundaries. As such, the main expected benefits of T2S fall into three broad categories. First, banks, brokers and custodians should be able to reduce operational overheads and back-office complexity due to the opportunity to potentially simplify the way they access multiple domestic markets today, thereby generating cost savings that may be passed on to clients. Second, as a major step forward in the integration of Europe's securities market infrastructure, T2S will help to make cross-border activity not just cheaper but considerably simpler for issuers and investors. Mid-sized domestic corporate issuers that are currently constrained in their range of investors by national borders will be more able to reach a wider market; while institutional investors should find it easier to access a wider sweep of euro-denominated investment opportunities. Third, the ability of banks to access and manage collateral should be significantly enhanced by the introduction of T2S, notably via its auto-collateralisation facility, compared with the functionality offered previously by central banks and CSDs in smaller European markets. At a time when banks are adjusting to the new capital and liquidity requirements of Basel III, any opportunity to access a single pool of liquidity and/or manage collateral more effectively is viewed as particularly welcome.

Evolving business models

With T2S in its infancy, its precise impact can only be estimated. As such the business models of service providers and market infrastructure operators are evolving cautiously. Nevertheless, there are risks for those that do not adapt quickly enough. "Over time, greater harmonisation of post-trade processes in Europe is likely to reduce the value of the local agent bank and increase the opportunities for service providers to develop new propositions," says Philip Van Hassel, T2S programme director at Euroclear, an international CSD. "It is possible that the chain of post-trade intermediaries will reduce in due course. It seems likely that the market will divide between service providers that can invest sufficiently to deliver broad pan-European coverage and those which choose to pursue niche plays, such as tax servicing."

As a pan-European post-trade services provider and custodian, BNP Paribas Securities Services (BP2S) is looking to rationalise its cost base in response to T2S, while also evolving its value proposition to clients. The firm already processes the majority of its European settlement business in a dedicated facility in Lisbon, complementing asset servicing teams on the ground in locations across Europe.

Alan Cameron, head of relationship management for international banks and brokers at BP2S, suggests there is substantial scope for sell-side firms to achieve cost savings through rationalisation. "Broker-dealers and custodians have a serious need to simplify their post-trade processes. For many, T2S is an opportunity to consolidate their settlement operations in one place. Many firms may be using two or three agent banks in one market alone. Each of these relationships has a cost, so there could be significant scale benefits to consolidating with a single provider," he says.

For CSDs, the effective outsourcing of much of their settlement business to T2S means a switch of emphasis to asset servicing, either as a scale or niche service provider. Cameron says most CSDs do not have the scale to compete with custodian banks. "But they can build out from their existing core services, effectively doing better what they already do now, for example by providing better linkages between issuers and investors," he says.

> Broker-dealers and custodians have a serious need to simplify their post-trade processes.
>
> **Alan Cameron,** head of relationship management for international banks and brokers, BNP Paribas Securities Services

> T2S will provide benefits as an eco-system to support the development of other services.
>
> **Tom Zeeb,** CEO, SIX Securities Services

SIX SIS, the CSD for the Swiss securities market, joined T2S in the first wave, but Tom Zeeb, CEO of SIX Securities Services, believes the benefits will only really emerge once the second and third wave markets join, lending critical mass to the greater ability of market participants to mobilise and pool collateral.

> To get the full benefit of T2S, we need to harmonise practices across the European securities market.
>
> **Marc Bayle,** chairman of T2S board, European Central Bank

"T2S will provide benefits as an eco-system to support the development of other services," says Zeeb.

As both a domestic and cross-border CSD, SIX SIS's strategy in the post-T2S environment has two core dimensions: working with partners to bring new combined service propositions to clients; and providing value-added services to clients' middle and back offices, e.g. in the compliance and collateral management spaces, to help clients achieve greater flexibility in their cost base. In this context, settlement is fast becoming a commoditised foundation stone on which to build greater value.

Break down the barriers!

In terms of the broader benefits to the European financial markets and indeed the overall economy, T2S board chairman Marc Bayle views the role of T2S in the longer-term strategic push to harmonise and integrate Europe's securities market as two-fold. "To get the full benefit of T2S, we need to harmonise practices across the European securities market," he says. On the one hand, T2S directly dismantles a number of the 15 'Giovannini' barriers to efficient cross-border securities clearing and settlement in Europe. On the other, T2S serves as a catalyst for action: a common platform requires the adoption of common practices. This influence can be seen already in the smooth migration of Europe's securities markets to T+2 settlement effected in Q3 2014 as a pre-condition of T2S (with the exception of Spain, which will migrate in November 2015). However, some Giovannini barriers require political rather than technical solutions, such as the harmonisation of withholding tax rules, and resolving the differences between local laws on the issuance and distribution of securities.

Euroclear's Van Hassel agrees with Bayle's assessment of T2S's potential, but if this is a new dawn, the warm glow of success is still some distance in the future. "Over time, cross-border settlement via T2S should lead to a higher volume of cross-border securities trading, a greater pooling of liquidity and increased self-collateralisation of credit. But it will not happen overnight, it will be a progressive undertaking," he says. ■

Facing up to the real deal

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trialing drone technology that will enable them to deliver products in a matter of hours. Yet with conventional end-of-day settlement of retail payments there is a high chance that goods will be received before money has moved between accounts.

Having to wait until the end of day is not likely to be a major issue for a big retailer, but internet-based commerce is also a critical – indeed, for some, only – channel for small businesses. These small business owners are most likely to suffer from any payments delays as they may be operating with relatively limited finance capabilities, meaning the completion of one sale may provide the funding for the next. For this army of entrepreneurs – widely seen as the true engines of economic growth – having to wait for payments could be damaging for business.

Regulatory support

Combine the advance of e-commerce and consumer technology with policy objectives of governments to provide better support for SMEs and it is unsurprising that regulation is the second major factor influencing the adoption of RT-RPSs. "The introduction of the Single Euro Payments Area (SEPA) will be the final frontier of achieving real-time payments across Europe," says Buitenhek.

Europe's elimination of cross-border payments in the euro-zone via SEPA facilitates migration to real-time payments, but regulators have also played a direct role in the adoption of RT-RPSs. In the UK, government legislation mandated the introduction of Faster Payments, an industry-owned non-profit initiative created to speed up retail payments.

A recent SWIFT white paper found that regulatory initiatives were the key driver behind the move to real-time payments in 73% of countries that have already implemented an RT-RPS, while for remaining countries there was an even split between third-party competition and commercial issues. Indeed, the competitive environment has changed significantly for payments banks in recent years, with many new entrants looking to use technology and increasing market sophistication to encroach on territory traditionally dominated by banks.

Payments has long seemed an extremely secure area for banks, with barriers to entry erected by high and increasing levels of regulation as well as many decades of expertise and investment in underlying systems. But now competition is being felt and many major internet-based technology companies are offering viable alternatives. In large parts of the developing world, while many people remain unbanked, they are using smartphone technology to send and receive payments.

But Kauffman says technology specialists have been relatively slow to move into the payments space. "At the moment, there's not that much competition from fintech companies. There's a lot of interest, but the banks do have time to marshal their forces and take action," he says. "We're also seeing banks invest in the next generation of payments innovation. For example, in 2012 Citi Ventures invested in payments start-up Square. Banks shouldn't try to do this on their own and should look at opportunities to make strategic investments."

"A natural evolution"

A major driver of RT-RPS adoptions, of course, has been the range and pace of technology innovation in recent years. "This is part of the natural evolution of banking," says Buitenhek. "First we started to offer banking services online, then made those services available on smartphones." However he accepts that the next stage of development for payment systems will be the hardest part of that evolutionary process, which explains why it has taken longer than many other innovations. It's not simply a process of upgrading existing technology to cope with real-time processing, asserts Buitenhek: the entire architecture of banking payments IT has to be redesigned from the ground up.

"Under the current system of batch processing, we do all of our testing and system upgrades overnight or at the weekend when the system is out of use. With real-time this is no longer possible, so we will need to create new systems that can cope with this," he observes.

> **"The digitisation of the world means everything is happening faster than ever before.**
>
> **Mark Buitenhek,** global head of transaction services, ING

Payments banks have long been divided between those that continually invest in the systems required to clear and settle payments across multiple markets and those that outsource much of the heavy lifting, specialising in delivery to end-customers. But the sheer cost of adapting existing systems to handle the migration of a core market to an RT-RPS might cause more banks to revisit their payments strategies. It is telling that many of the countries that are most advanced in implementing RT-RPS already have relatively consolidated banking sectors, such as the UK or Australia.

On business case grounds alone, RT-RPS adoption may not appeal to many banks. In its report on migrating to faster payments, the US Federal Reserve Bank estimated implementation costs of US$ 0.9 to 1.8 billion and a reduction in per-transaction costs from US$ 0.47 to US$ 0.27, adding up to neutral or negative business case. But, as the SWIFT white paper points out, other factors need to be taken into consideration, such as customer expectation, disintermediation threat, and the potential to develop new products and services.

Can banks that simply cannot afford to support RT-RPS find some way to fit into this new world? "This is a natural, long-term evolution and the short-term business case is negative," explains Buitenhek. "If you want to remain relevant then you will need to follow this path, and over the long-term you will get to a position where you can do everything instantly, which will ultimately benefit your business and your customers." ■

Getting it right: how to manage infrastructure change

Domestic payment market infrastructures are implementing ISO 20022-based projects to ensure international interoperability.

ISO 20022, the transformative open standard for the financial services industry, is the acknowledged first choice for infrastructure renewal across major payment systems and jurisdictions worldwide. From early implementations such as the Single Euro Payments Area, through projects in development such as Australia's New Payments Platform for fast, low-value payments (due 2017) to longer-term legacy renewal strategies in Canada, the UK and the US, ISO 20022 has now passed the tipping point for global acceptance.

"We noticed the international dialogue on ISO 20022 shift from 'why and if' to 'how and when' between Sibos in Osaka in 2012 and the following year's conference in Dubai," comments Richard Dzina, group head, wholesale product office at the Federal Reserve Bank of New York.

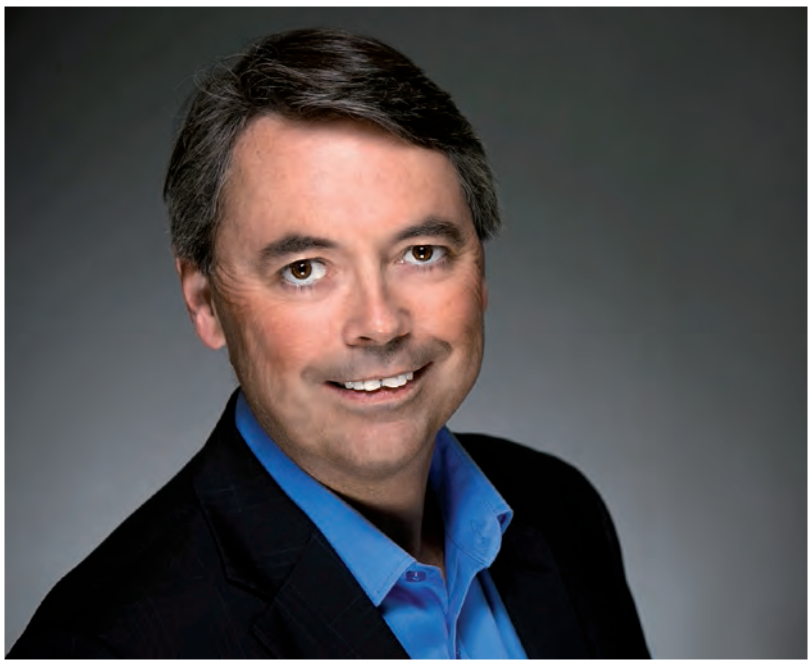
In the US, a round of infrastructure upgrades had then only recently been completed (the FedWire modernisation programme). Despite that, the Fed actively researched the business case for ISO 20022 adoption and consulted with stakeholders. In January this year, the Fed's strategy paper, 'Strategies for improving the US payment system', declared the intention to "develop an implementation strategy for the application of the ISO 20022 standard to US payment transactions".

Local flavours

In Canada, a payments system task force recommended ISO 20022 as the future direction for payments infrastructure in 2011, a recommendation subsequently adopted by the Canadian Payments Association (CPA). Three key payment messages – automated funds transfer (AFT), wires and electronic data interchange (EDI) – have now been mapped to ISO 20022 and targeted investigations are currently taking place with key stakeholders ahead of a public consultation phase later this year. The plan is to make the AFT message and rules available for market-led adoption by Q2 2016. ISO 20022 will then be the standard adopted for Canada's next-generation clearing and settlement project, which is currently in the planning.

In the UK, there is industry agreement that ISO 20022 will be used for new infrastructure developments and change processes. For example, it is the basis of a current account switching service, will be used for processes required for ongoing pension reform, and for transfers of cash ISAs (a UK retail savings product).

So far, so good – and so domestic. But, as ISO 20022 projects proliferate in multiple jurisdictions, are some of the key benefits of ISO 20022 – the potential for interoperability and the exchange of more and richer data – in danger of being lost? With a wide variety of local market practices and national stakeholders to satisfy, a drift towards distinct local flavours of ISO 20022 looks likely. And we have been there before, on many occasions.



Payment market infrastructure operators today are well-connected with their counterparts across the globe, and alive to the dangers. "We're most focused on replacing our existing legacy standards for domestic use. We're also very plugged into what's happening in other jurisdictions and we recognise the importance of leveraging the richness – for example, extended remittance data – and flexibility that ISO 20022 offers," says Jeff Moran, VP, payments and industry relations, CPA. Although full implementation is still some way down the line for Canada, the CPA is active in a number of international forums including: a group of market infrastructures working on an ISO 20022 harmonisation framework with SWIFT; the Common Global Implementation (CGI) group, a global body concerned with developing global market practice for ISO 20022 standards in the corporate-to-bank space; and the Payments Standards Evaluation Group, which reports to the Registration Management Group (RMG) for payments under the Technical Committee 68 of the International Organisation for Standardisation (ISO), and is in the process of joining the RMG itself.

> **Where there are accidental differences, let's try to harmonise them, and where there are genuine differences, let's document them.**
>
> **James Whittle,** director of industry dynamics, UK Payments Council

> **We contemplated the negative business case [for using ISO 20022] as seriously as the positive one.**
>
> **Richard Dzina,** group head, wholesale product office, Federal Reserve Bank of New York

Multiple markets

For the Fed too, interoperability will not be sacrificed lightly. The US decision to consider adoption of ISO 20022 was based in part on the possible consequences of being outside a development that has global momentum, according to Dzina. A business case evaluation conducted independently for a stakeholder group consisting of the Fed, the Clearing House Company, NACHA and the Accredited Standards Committee X9, cited global momentum and competition as well as cost savings, enriched data content and interoperability as strategic reasons for adoption. Says Dzina: "We contemplated the negative business case as seriously as the positive one. What would it mean for the competitiveness of our financial institutions, and how would it affect our end users, and even the status of the dollar as a global settlement currency, if the US were not to adopt ISO 20022 for payments?"

> **We recognise the importance of leveraging the richness and flexibility that ISO 20022 offers.**
>
> **Jeff Moran,** VP, payments and industry relations, Canadian Payments Association

Cost savings are a potent reason for not re-inventing the wheel with each implementation project. James Whittle, director of industry dynamics at the UK's Payments Council, points out that financial institutions have to support developments across multiple market places. And because there are limited technological and human resources both internally and externally, it makes sense to harmonise what can sensibly be harmonised at an international level.

In April, SWIFT hosted a meeting for representatives of 20 market infrastructures for payments and securities to discuss these issues. The group agreed to establish a common framework for ISO 20022 harmonisation, to include information sharing (using SWIFT's MyStandards as the central harmonisation platform), establishing global market practices and introducing stricter message version control and release management. An implementation roadmap is the first planned deliverable and the group will meet again at Sibos in October.

Real-time realities

With several ISO 20022-based instant payments services either operational (Denmark, Singapore) in development (Australia) or planned (The Netherlands and the Euro Banking Association plan to offer services by 2019; the US is also considering a service), the recent decision to create a sub-group for real-time payments as a neutral industry activity under ISO governance is both positive and timely. An initial meeting was hosted by the UK Payments Council and attended by more than 30 global payment infrastructures, financial institutions and vendors.

Says Whittle: "There is a variety of market practices out there, and this isn't about everyone having to do the same thing. But where there is a common approach, let's use it; where there are accidental differences, let's try to harmonise them, and where there are genuine differences, let's document them, so everyone's aware."

The group has set a deadline of end-July to document current settlement practices for instant/real-time payments. It will then go on to consider remittance/merchant data and system messages covering, for example, irrevocability and other requirements. ■

Staying alert

Cyber-threats require a strategic, enterprise-wide response, but technology remains at the heart of the matter.

When UK mortgage lender Northern Rock sought emergency support from the Bank of England in September 2007, it sparked widespread panic, with savers queuing up outside branches all over the country to withdraw their cash. Queues outside banks became an enduring image of the ensuing financial crisis, repeated across the globe as institution after institution followed Northern Rock into near bankruptcy and in search of a bail-out.

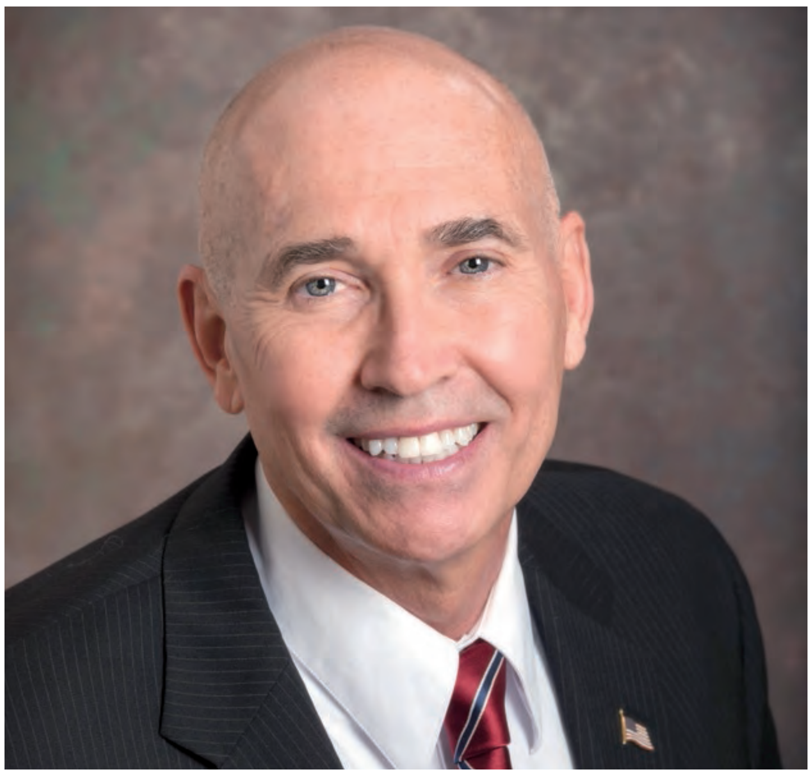
Since the crisis, policy-makers and regulators have focused on ensuring banks have sufficient capital and liquid assets to avoid collapse or bail-out in the future. But a growing school of thought suggests they may have become too single-minded: could the next bank failure be caused, not by a credit bubble, but by cyber-attack?

"The emerging threat for banks is that cyber-crime is becoming ever more sophisticated in taking money away from banks and customers. I can't help thinking that the attacks will become so frequent over the next five years that they will cause at least one major bank to go under – not just because of sustained attack but the loss of reputation that goes with it, accelerated by social media," says Richard Benham, professor in residence at the UK National Cyber Skills Centre and founder of the national MBA in cyber-security, a new UK qualification designed to help business leaders deal with the cyber-threat.

Employee education

The term cyber-crime can cover a wide range of attacks, from a minor internal security lapse to a massive organised theft of data. In the UK alone, 90% of large organisations reported

this year that they had suffered a security breach, up from 81% a year ago. The average cost of the worst security breach now ranges from £1.46 million to £3.14 million, according to an annual survey conducted by PwC, a step change from the £600,000-£1.15 million reported 12 months previously.



While it is only the most high-profile attacks that are reported in the press, experts believe the vast majority of companies are likely to have suffered some kind of attack by now. A lack of adequate governance or staff training can often be responsible for even the most minor data breach; the PwC survey found that 50% of the worst breaches over the past year had been caused by inadvertent human error.

"With the threat environment we face today, it is so important that the workforce of any company understands the nature of the cyber-threat and is properly trained to avoid putting the infrastructure at risk," says Dr Starnes Walker, founding director of the University of Delaware Cyber Security Initiative.

Education of staff is widely seen to be a priority in dealing with cyber-threats, because if employees can be trained to detect and eliminate possible threats, they can avoid significant harm being caused. But for banks that run multiple businesses with thousands of employees across the globe, pitching the message appropriately can be a challenge.

> **"Banks have to protect their data and their reputation.**
>
> **Richard Benham,**
> professor in residence,
> UK National Cyber Skills Centre

The priority, says Chris Hurran, senior associate fellow at the Institute for Security and Resilience Studies at University College London, is to put security at the heart of the business process rather than as a retrospective add-on. Having a clear strategy and governance structure in place to deal with breaches is also critical, he adds.

"Technology is absolutely at the heart of the solution to this and the chief information security officer will play a key role, but it's ultimately the responsibility of the business to make sure that security protocols are taken seriously and properly communicated to all employees," Hurran explains.

Benham also stresses the importance of a company-wide response, asserting that cyber-security risks being marginalised if regarded as a pure IT issue. "Finance is increasingly becoming a digital industry so banks have to protect their biggest assets, which are their data and their reputation. That is too significant to be branded as an IT issue – board members and middle managers have to take it seriously," he says.

Technology is part of the problem and the solution. When it comes to protecting IT architecture from external penetration, the biggest challenge may lie in the sheer number of systems that banks tend to rely on to conduct their operations across businesses and asset classes. Walker stresses the need to rigorously test each and every system before putting it into action, using both internal and external experts.

Benham says: "It is critical to ensure that systems are properly vetted before being placed on a network so that any potential vulnerabilities are well understood and dealt with in advance. Using a 'red team' allows external experts to find weaknesses that may not have been detected during an internal IT build."

Ensuring business continuity

Such is the probability of banks coming under of regular cyber-attack that Walker advocates having effective business continuity plans in place to enable them to continue to operate under attack. "Banks have to be able to develop and implement capabilities to enhance the resilience of business network operations and ensure a continuity of operation plan is in place as a measure of a layered cyber-defence strategy to minimise shareholder losses from a cyber-attack," he says.

As the cyber-threat continues to grow and evolve, banks collectively and individually will have to evaluate strategies to protect themselves, their customers and their shareholders. Tackling internal deficiencies in governance and staff awareness is likely to be the first step in raising defences, but Troy Pugh, leader of the IBM Counter Fraud Intelligence Unit, believes greater government support and cross-border cooperation is needed if the threat is to be properly eliminated.

"Cyber-crime is a chaotic environment in which a wide variety of actors are trying to gain access to systems and information for a wide variety of purposes. Even though we face a very real threat, the challenge is that the government has left the private sector on its own and there is no consolidated effort to share intelligence. Technology and education can certainly help, but this is a war and we have to do a better job at collaborating to tackle it," he says. ■

> **"Technology and education can certainly help, but we have to do a better job at collaborating.**
>
> **Troy Pugh,** leader, counter-fraud intelligence unit, IBM

> **"The workforce must understand the nature of the cyber-threat and be trained to avoid putting the infrastructure at risk.**
>
> **Dr Starnes Walker**, founding director, Cyber Security Initiative, University of Delaware

BUILD BETTER NETWORKS THAN THE HACKERS, RECOMMENDS EX-FBI EXPERT

Photo: Courtesy of University of Delaware

As a part of its ongoing programme to bridge the gap between academics and financial industry practioners, the SWIFT Institute recently partnered with the University of Delaware to bring together a cross-section of experts to discuss the evolving cyber-threat to financial services. With a mix of academics, technology and security experts, plus former and current US federal law enforcement officers, the event provided a sometimes disconcerting view of the growing trends in cyber-security, highlighting new vulnerabilities and threats.

Dr Starnes Walker, founding director of the university's Cyber Security Initiative, reminded nearly 150 attendees of the constantly advancing nature of cyber-security threats. "Technology moves exponentially as a function of time", he said, noting that the capabilities of both attackers and defenders would inevitably continue to improve.

In her keynote address, Elizabeth Petrie, director of strategic analysis at Citigroup and former head of cyber-intelligence at the US Federal Bureau of Intelligence (FBI), highlighted the fact that cyber-threats to the finance sector would continue to change shape. "The industry has evolved from a model of hacking for fun to hacking for profit to now hacking for destruction," she said. Today, loosely-knit groups of hackers have become better organised and sophisticated in their communications and approach. Hackers actively communicate and collaborate to identify the targets that will yield the highest returns at the lowest risk. "Actors are becoming better networked, enabling better communications with one another," said Petrie. "We, the defenders, have to abide by country laws, policies and regulations, which can slow down the dissemination of threat information requiring us to shift and adjust our posture on defence to keep the attackers out," she added.

The growing interconnectivity of electronic devices and the rapid digitisation of commerce might be essential and desirable for businesses and consumers, but it also provided incentives and opportunities for hackers and criminals. In this context, the response of financial institutions to cyber-security threats is critical. "It is not just the money that financial institutions hold, but it's the ability to transfer money combined with the vast amounts of access to data that make financial institutions a lucrative target," Petrie said. The complexity of the threat facing financial institutions arises in part from efforts by external bad actors to compromise insiders, who may or not be aware of their complicity. "The good news is that, knowing the anatomy of an attack, there are programmes we can implement to shut down that adversary," said Petrie, asserting that communication could help to combat cyber-threats. "We need to build as strong a network as the adversaries: leverage forums, talk across countries, and share information."

> **"Actors are becoming better networked, enabling better communications with one another."**
>
> **Elizabeth Petrie,** director of strategic analysis, Citigroup

A market transformed

The Shanghai-Hong Kong Stock Connect is both a work-in-progress and a game-changer for RMB investment.

A new access point to China has been created during the last year with the introduction of the Shanghai-Hong Kong Stock Connect.

Planning and preparation of the project's infrastructure took six months to establish after an official public announcement in April 2014. Taxation waivers were approved for investors, necessary operational challenges resolved and the Stock Connect went live on 17 November 2014. There have been no fails, buy-ins or delays and the systems have worked as planned.

Northbound investors, meaning those investing in Shanghai A shares, require no quotas or licences to participate, as had formerly been the case under other mainland investment schemes, namely the Qualified Foreign Institutional Investor (QFII) or Renminbi Qualified Foreign Institutional Investor (RQFII) schemes.

According to Hong Kong Exchanges and Clearing (HKEx), the Stock Connect platform is scalable, and its modus operandi can be applied to multiple markets and assets. It may have a wider impact on initial public offerings, exchange-traded funds and renminbi internationalisation.

"The Stock Connect is having a major effect on renminbi internationalisation because for the first time we are experiencing significant daily flows of RMB onshore and offshore for stock transactional purposes," said Cindy Chen, Hong Kong country head of securities services for Citi. "Offshore RMB is being used to buy A shares and onshore RMB can be converted into Hong Kong dollars to buy Hong Kong-listed stocks."

Stock Connect allows international investors to trade up to 13 billion yuan a day (US$48 billion), or a cumulative total of 300 billion yuan, in Shanghai-listed A shares. Mainland investors can trade up to 10.5 billion yuan a day, or 250 billion yuan in total in Hong Kong-listed shares.

The pace of 'Southbound' investment – buying shares in mainland companies with Hong Kong listings – was initially sluggish, but has been boosted by the upswing in traded volumes in China this year.

Facing obstacles

Whilst Stock Connect has functioned well, resolution of ongoing issues could make the programme more attractive to a wider spectrum of investors. Foremost among these issues is that of beneficial ownership, and specifically the ability to litigate. At present, Chinese law does not provide the certainty that a Northbound investor can take legal action against an issuer in the mainland courts.

Northbound investment holdings purchased via the Stock Connect are held in a nominee name within HKEx's clearing house. Whilst nominee arrangements have been tested in Chinese law, the identity of the beneficial owner is not clear due to this co-mingling. As a result, investors cannot file a legal action in China.

In contrast, QFII and RQFII investors have a segregated account in ChinaClear, China's securities depository and clearing agency. As their names appear in the shareholders' register, they are entitled to take legal action. Although Stock Connect enables Northbound investment without time-consuming account opening with ChinaClear, the legal uncertainty is a potential disincentive.

Nevertheless, important hurdles have been cleared on securities borrowing and lending for covered short sales. Introduced earlier this year, the new stock borrowing/lending provision will only apply for Northbound Stock Connect users and will be unavailable to QFII and RQFII holders. There are likely to be additional restrictions and limitations, such as only being able to short up to a maximum of 1% of the total amount outstanding of A shares in Northbound trading.

On the horizon

The success so far of Stock Connect poses a number of intriguing possibilities about the future path for integration of the Chinese securities market with international investment flows:

- Inclusion of Shanghai A shares into MSCI indexes – It is difficult to estimate exactly when Shanghai A shares will be included within MSCI indexes, although it appears to be a question of 'when' rather than 'if'. There had been some signs that it would happen during the summer of 2015, but in early June, MSCI said it would not take place this year. Views from the market now suggest 2017 is the next likely window. It will be a major market announcement when it ultimately takes place as it would likely result in significant additional flows and necessitate a rebalancing of investor portfolios.
- Shenzhen-Hong Kong Stock Connect – HKEx chief executive Charles Li said in May that the exchange operators in both cities are ready to launch their version of the link. Approval from Beijing is all that now remains to be secured. The Shenzhen bourse carries younger and higher growth stocks than Shanghai, which is characterised by large state-owned enterprises and bigger firms in the 'old economy' sectors.
- Rival Stock Connects – Other international exchanges are at liberty to use the blueprint for the Stock Connect to construct their own versions. Pointing this out, HKEx's Li observed earlier this summer, "I am not worried by this happening, as by the time it does, Hong Kong will be much further down the road with its own Stock Connect". Whilst logical rivals would be Taiwan and Singapore, market observers have conjectured that it would be inconceivable that bigger exchanges such as those in New York and London are also investigating similar schemes. The future also holds the prospect of inclusion of new asset classes into the Shanghai-Hong Kong Stock Connect, initially, index futures, equity derivatives, and exchange-traded funds. At a later date that may widen to include single stock options and futures, bond futures and commodities. ■

> "We are experiencing significant daily flows of RMB onshore and offshore for stock transactional purposes.
>
> **Cindy Chen,** head of securities and fund services, Hong Kong, Citi

STOCK CONNECT'S IMPACT ON RENMINBI INTERNATIONALISATION

In the past, renminbi flows were the result of trade activity, the financial proceeds of exports and imports. As cross-border trade has grown, the renminbi has now become the fifth biggest currency of international settlement.

Today, using the Stock Connect, offshore renminbi (CNH) has become available for the purchase of Shanghai-listed A shares. Furthermore, onshore renminbi can be used on the Stock Connect to make investments in Hong Kong.

In support of this process and the underlying currency requirements of settlement, the Hong Kong Monetary Authority (HKMA) has introduced a CNH 10 billion repo facility to provide intra-day liquidity for the Stock Connect.

The HKMA has additionally appointed seven primary liquidity providers. Each provider dedicates a CNH 2 billion line to provide yet another layer of liquidity. In total therefore, CNH 24 billion of additional liquidity is currently available to the offshore market for the Stock Connect product, and those funding arrangements could also help in the emergence and creation of future CNH products.

Looking to the next horizon

Treasury management in Asia has matured in recent decades, but there is no scope for banks or corporates to rest on their laurels.

When Damian Glendinning first arrived in Singapore in the late 1990s to work as IBM's Asia Pacific treasurer, the treasury management profession was relatively underdeveloped largely due to the prevalence of family or state-owned enterprises in many economies in the region. "Many Asian companies did not use treasury management systems or have a full time treasurer, and dealings with local banks were often based on preferential relationships," recalls Glendinning, now group treasurer at Chinese computer technology company Lenovo (which acquired IBM's PC business in 2005) and president of the Singapore Association of Corporate Treasurers.

But a lot has changed since then. Many of those family-owned companies became major multinational corporations in their own right, which meant they could no longer be managed in a less than professional way. "We are reaching a point where Asian corporates are becoming sophisticated enough to bring pressure to bear on the banks," says Glendinning. Local banks have also had to grow in sophistication to service the increasingly complex needs of regional treasurers. "When you asked local banks if they could provide daily balance reporting over SWIFT, they would look at you and say, 'We don't do that'. But now local financial institutions understand that if they want to work with local multinational corporations they need to connect into their global network."

Managing complexity

Bank of America Merrill Lynch's second Asia Pacific Treasury Barometer Survey, based on the views of approximately 1,350 global treasury professionals, highlights the complexities for treasurers operating in a region as diverse as Asia. Challenges identified included managing a range of banking relationships, operating with a large number of accounts, which makes more efficient liquidity management difficult, and disparate means of accessing account information. "If you are a multibanked corporate and you want to have anything approaching modern cash management," says Glendinning, "you can either sign onto every banking platform and have 300 different banking IDs in lots of different languages, or buy a treasury workstation that comes with SWIFT connectivity and negotiate with your bank to provide you with the data that you need."

To reduce complexity and risk in its global cash management business, Lenovo has prioritised simplicity. Instead of working with multiple banks in every country, the firm has a single global banking relationship, which gives it visibility over cash positions globally. "We simply go to [our bank's] internet banking system and download the statements in a spreadsheet," says Glendinning. "As we use one banking system, we only have one set of passwords to remember."

Are multinational corporates well served by banks? "The industry as a whole is failing companies because of all the hoops we have to jump through to get the information that we need," says Glendinning, adding that corporate banking could learn from its retail peers in terms of customer service. However, he acknowledges that corporates are part of the problem. "Banks will do things if customers insist, but we have not been very good at telling them what we want as a community," he says.

Working capital efficiencies

With multinational companies focused on leveraging growth in their emerging markets subsidiaries, the expectation is that treasury management best practices, as represented by shared service centres, in-house banks and centralisation, will become the norm in Asia. However, given that regulations in some Asian markets prevent inter-company lending, companies will need to free up working capital via other means in order to grow. Here, attention is expected to shift towards trade and supply chain finance. "The growth cycle in China is slowing, and corporates realise they are not going to grow as fast on their top line so they are focused on making working capital accelerations," notes Vivek Gupta, global head of trade & supply chain product, ANZ Bank.

In April, ANZ Bank led an industry first with a "truly four-corner" Bank Payment Obligation (BPO) involving an electronic bill of lading," says Gupta. The essDOCS's

> **"Asian corporates are becoming sophisticated enough to bring pressure to bear on the banks.**
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> **Damian Glendinning,** group treasurer, Lenovo

> **"Accelerating payment equates to a lot of money in the bank.**
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> **Vivek Gupta,** global head of trade & supply chain product, ANZ Bank

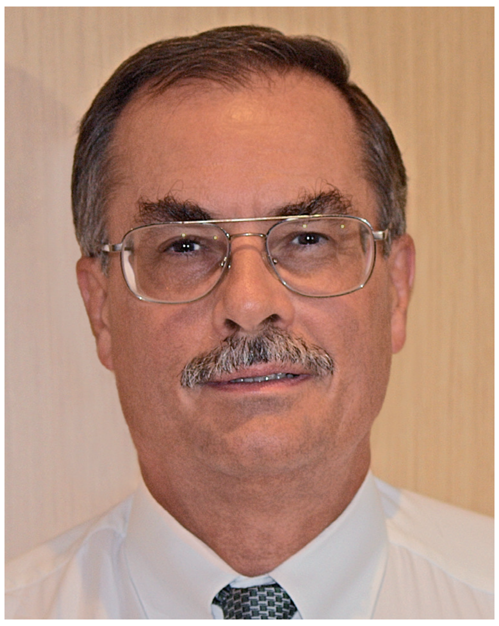
CargoDocs solution was used for digitising bills of lading and electronic invoicing between global resources giant BHP Billiton and a buyer, agricultural commodities conglomerate Cargill, in conjunction with Westpac as the recipient bank and ANZ as the obligor bank, for iron ore shipments from Australia to China. As Gupta explains, automating trade documentation with suppliers can help speed up payment. "For large resources companies, each major shipment of iron ore to China could cost US$20 million. Accelerating payment equates to a lot of money in the bank."

Bevan Davies, vice president, Asia Pacific & head of metals at essDOCS, says the combination of its e-docs platform with SWIFT's BPO has enabled corporates in the mining, agricultural and oil industries and their partner banks to adopt the trade finance instrument with the minimum amount of effort. Davies says essDOCS now has 22 banks using its electronic bill of lading platform. "We did not work with banks two years ago, so to get to where we are today has been quite rapid progress."

Disruptive forces

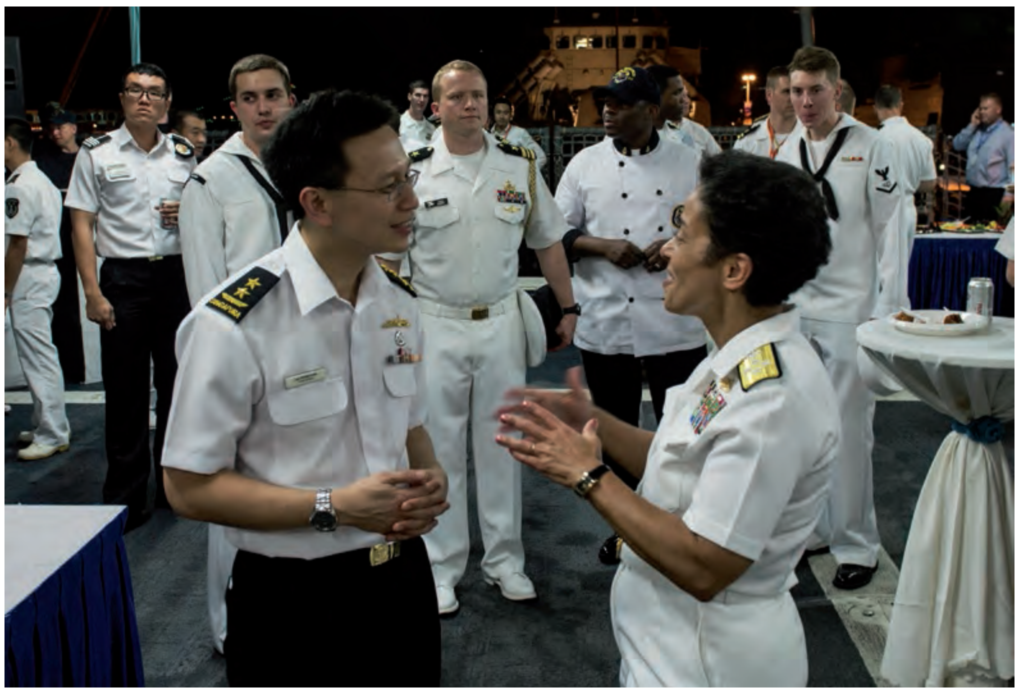
While there may be working capital and processing efficiencies for corporates in digitising trade documents, Glendinning points out that the technology being used to automate trade documentation is not new. Moreover, he apportions some blame for lack of progress to treasurers, who he says are largely conservative by nature and may be less inclined to adopt newer third-party solutions. But he says the banks should be concerned about disruptive forces like PayPal and Google Wallet. "There's nothing to say we [corporates] couldn't go to PayPal and say: 'I'm shipping some goods. When I give you the documents, I want you to release some money for me'. Are corporate treasurers going to hesitate to adopt these alternative solutions? I wouldn't be 100% certain that it's not going to happen. They may be forced to use them," he warns.

With increased competition in the trade and supply chain space, Gupta says banks need to move beyond trying to protect traditional revenue streams and embrace working with third-party providers who are intermediating between the physical and financial supply chains. "There is now an inertia that stems from the fact we've invested so much into our proprietary technology platforms. But this short-term mindset is not forward-looking and will hold us back." ■



Strength through diversity

US Navy Admiral Michelle J Howard explains why equality of opportunity is key to sustaining a diverse talent pool.



> **"It's about making sure that everyone has the chance to develop their skills and pursue their chosen career path.**

Over 200 years ago, British politicians put aside their differences to form a 'ministry of all the talents' with the aim of promoting national unity and defeating a common enemy, Napoleon Bonarparte. Of course, in 1806 British politicians were hardly the image of diversity – all white, all men, all elected by their upper class peers – but an important and long-lived principle was recognised: far more binds us together than separates us. Nevertheless, 200 years later, organisations across the finance sector and beyond are not yet giving full rein to all the talents harboured by their staff.

Admiral Michelle J Howard views the importance of diversity to the US Navy both in terms of access to talent and representation of the underlying population. The diversity of thought and perspective required to achieve mission or organisational goals is much harder to achieve in an homogenous group, she points out. Quoting renowned US scientist Dr Linus Pauling – the only person to win unshared Nobel prizes in two different fields – Howard adds, "If you want to have good ideas, you must have many ideas".

Moreover, Howard asserts the need for a strong bond between a country's armed services and the civilian population. "The strength of the US lies in its diversity. The military will not succeed in its objectives if it is isolated from and does not reflect the people it serves," she says.

How does the US Navy attract, nurture and maintain a diverse talent pool? Step one, says Howard, is to ensure that the widest possible share of the population is aware of the various opportunities for career fulfilment that the US Navy offers. "We must ensure they understand the life opportunities, encourage them to apply, walk through the door and have a conversation."

Long-term approach

Finding and attracting talent from across different backgrounds is no easy matter, but consistent success only comes to organisations that can develop and retain that talent on an ongoing and long-term basis. Like many large employers, the US Navy has had to move with the times. (Indeed, when Howard was growing up in Colorado, the US Naval Academy wasn't even taking on female recruits.) Today, fewer people are attracted to the idea of a 'job for life', many more are interested in the idea of re-booting their career after taking time out to start a family.

According to Admiral Howard, the US Navy is authorised to offer financial bonuses to incentivise staff with particularly prized skillsets to remain in the service, not dissimilar to established practice in the private sector. It also offers sabbaticals of between one and three years, which can be used for a variety of purposes, for example to take a degree course or to become a 'stay-at-home' parent for a period. Returning staff then compete for promotion with colleagues that have gained a similar level of experience, as opposed to length of service. "In terms of career progression, we're looking to move from being a time-focused to a milestone-focused organisation. The programme has been successful so far, and other US armed services are looking into it as well," says Howard.

Senior personnel in any organisation must bear responsibility for bringing through new talent, and the US Navy is little different from any bank in that respect. With leadership responsibilities has come regular involvement for Howard with the US Navy's mentorship programmes. Moreover, as the first African-American and the first woman to achieve her current rank as four-star admiral and vice chief of naval operations, she accepts the public profile that her position carries. Drawing parallels with the attention accorded Indra Nooyi when she became CEO of Pepsico in 2006, Howard observes, "If you reach a certain level and you are the first one, you become a de-facto role model."

Chance to flourish

More important to Howard, perhaps, is the part she plays alongside other senior officers in ensuring that talent is recognised, supported and given the chance to flourish at every step in the career lifecycle. "We have to make sure that opportunities are presented across the cohort," she says.

This sounds easier said than done across an organisation consisting of 326,000 personnel on active duty, more than 100,000 ready reserves and almost 200,000 civilian employees, spread across the globe. Howard demurs, however, saying that the critical measurement of success in sustaining a diverse talent pool is a matter of ensuring that equality of opportunity is being offered, both in terms of attaining skills and being given the responsibility to deploy them. "It should be easy to track whether, for example, every lieutenant has been given the opportunity to become a department head," she explains. "This isn't about guaranteeing that there will be a certain proportion of staff at any particular level from a specific ethnic or gender group. It's about making sure that everyone has the chance to develop their skills and pursue their chosen career path."

In both the public and private sectors, much progress has been made on diversity since 1806. But as far as blueprints for recognising 'all the talents' are concerned, Admiral Howard's has considerably more to recommend it than the expedient arrangements of 19th century politicians. ■

NURTURING A DIVERSE TALENT POOL

At Sibos 2014 in Boston, Admiral Howard gave the opening keynote address of 'Change Day' and participated in a panel discussion on diversity. In October, Sibos 2015 in Singapore will follow up the themes explored 12 months ago in a series of sessions centred on ensuring a diverse representation at all levels of organisations operating in the finance sector, with an emphasis on ensuring that the brightest talents can attain the highest positions regardless of background.

While some, like Admiral Howard, believe the benefits of diversity are already well founded, for others the case for change still has to be built on statistics. As such, a number of recent studies have attempted to define the 'diversity dividend'. In September 2014, a Credit Suisse Research Institute report on the impact of gender diversity on stakeholders included a number of positive metrics. For example, firms where >15% of senior management were women were shown to outperform (as measured by ROE) firms with a female representation of 5% or below. Similarly, a study released last year by the US-based Centre for Talent Innovation 2014 study found that publicly traded firms with 'two-dimensional diversity' (i.e. both inherent diversity – gender and race, for example – and acquired diversity – meaning range of experience and skills) were 45% more likely to expand market share and 70% more likely to have captured a new market in the past 12 months.

The right mix

Innotribe-sponsored research shows women and Millennials will play a key role in building a better finance industry.

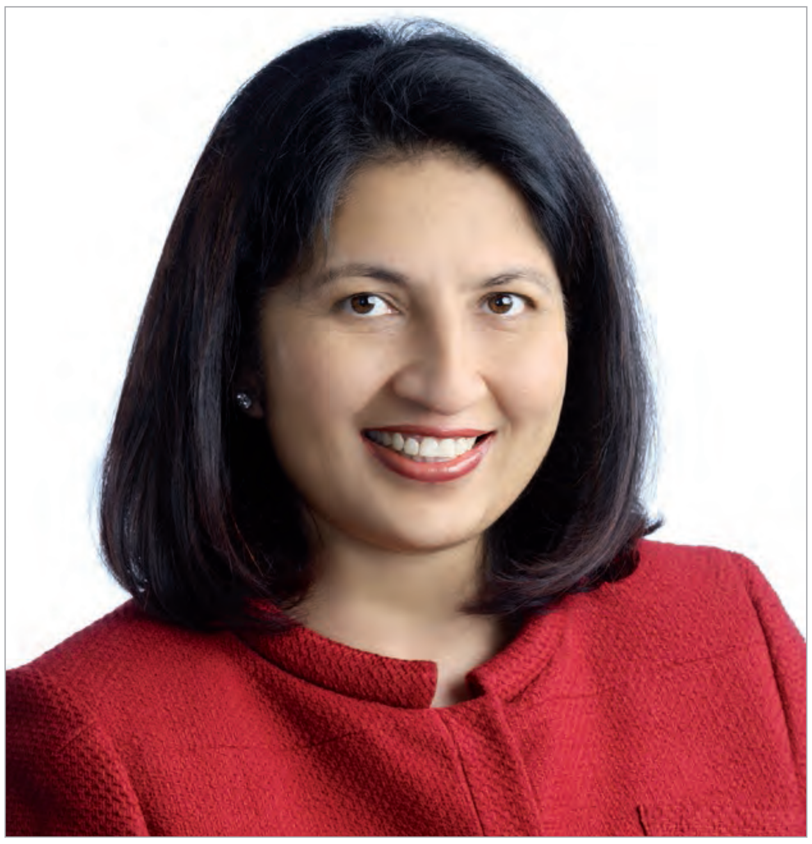
The rapidly growing financial technology (FinTech) industry is attracting investment and talent globally. In March, consultancy firm Accenture said global investment in FinTech ventures tripled from US$4.05 billion in 2013 to US$12.2 billion in 2014. The US captured the greatest share of this investment, but Europe experienced the highest growth rate, with an increase of 215% to US$1.48 billion in 2014. The UK and Ireland accounted for 42% of the European total.

London, San Francisco and New York are established FinTech hubs, with government bodies and industry associations focused on attracting start-up companies to set up shop. Newer hubs such as Paris, Singapore, Nairobi and Sydney are also emerging. But in this frenzy of investment, the industry may be missing out on opportunities because it lacks diversity; women and Millennials are under-represented in FinTech firms.

"Women are half of the equation in the world," says Christine Duhaime, barrister and solicitor at Toronto-based Duhaime Law, and executive director and founder of the Digital Finance Institute. "Financial technology is important because it is changing financial services, making them more democratic and open. From the ground up, women should be there. We should not let another change happen without women being around the table."

The Digital Finance Institute is focused on FinTech, financial innovation, regulation and inclusion. It aims to bring together representatives from the financial services industry, non-governmental organisations, academia, financial regulators and policy makers to discuss issues and engage in research and education. Duhaime and Sam Maule of Carlisle & Gallagher Consulting Group have written a white paper, 'Power Women in FinTech: Bridging the Gender Gap', which was launched in June.

Duhaime says a growing body of research suggests that organisations founded by women or that take leadership roles by empowering women in FinTech are more innovative and return better financial results. There is another perspective, too: "By not employing women, companies are missing out on a different perspective on their products and services. By not being more inclusive towards women, organisations are missing out on business opportunities."



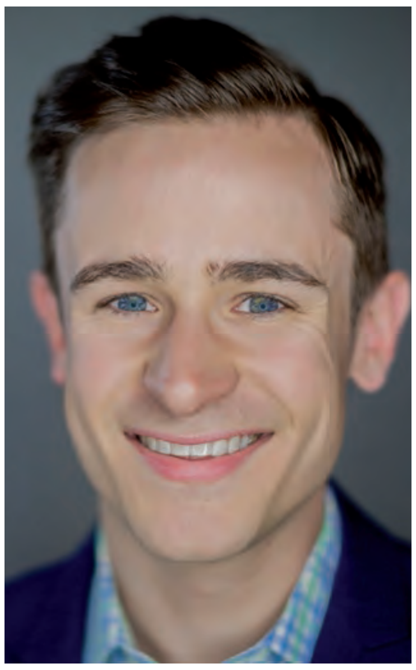
Unlocking innovation

Anju Patwardhan, group chief innovation officer at Standard Chartered in Singapore, agrees. "Like any other industry, FinTech can certainly benefit from a more diverse group of senior professionals. I have spent the majority of my working life in risk management in financial services and that area has a similar challenge."

Unlocking an organisation's true potential to innovate, she adds, requires diversity not only in gender, but also of thoughts, perspectives and knowledge which is influenced by many factors including industry experience, merit, ethnicity and cultural background. "For sustainable change to happen, we need to change the culture and the traditional mindset," she says. "That requires a concerted effort by all stakeholders. It starts with changes in the selection process to cast a wider net at the entry level, building a leadership pipeline for senior women, and more development opportunities either through formal or on-the-job training."

How far have we come already? The numbers speak for themselves: the global average for women on listed company boards – across industries – is only 11%. Patwardhan says there is, however, a more conscious effort by several multinational companies to appoint diverse boards including more people of Asian background and more women.

But as Patwardhan suggests, inclusion is about more than gender or ethnicity; another group that FinTech companies are in danger of overlooking are Millennials – typically defined as those born between 1982 and 2004. According to another recent white paper, 'The Millennial Generation and the Future of Finance: A Different Kind of Trust', written by Daniel McAuley and Steve Weiner of Wharton FinTech, Millennials are "especially" distrustful of incumbent financial brands and institutions. On the other hand, as users of technology in every aspect of life, they are also "the single largest current market opportunity for start-ups and innovative corporates looking to build FinTech businesses", says the white paper.



"The Millennial voice will be part of the redefinition of financial services.

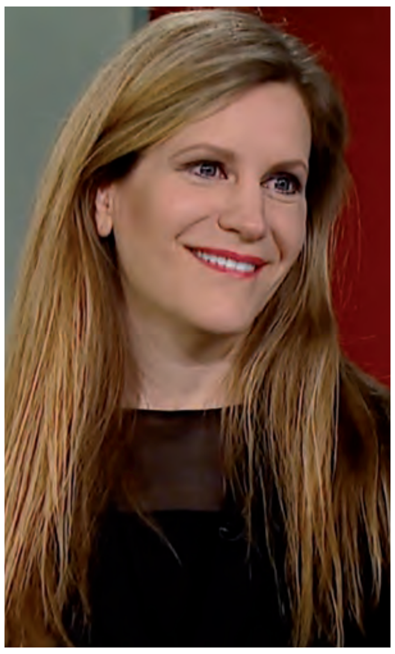
Daniel McAuley, Wharton FinTech

Feedback loop

Wharton FinTech is a student-led initiative at the Wharton School of the University of Pennsylvania that aims to provide thought leadership, education, career development and idea generation by connecting innovative, established, disruptive and proven FinTech enterprises with students and industry professionals. Not only does it provide a pool of talent for FinTech companies, but it also acts as a consultancy, providing feedback to companies on their products and services.

When it comes to innovating, traditional financial services organisations are held back by regulation, bureaucracy and also inertia, says McAuley: "There is a tendency to do things in a particular way because that is how things have always been done." Weiner says the students realised the university could take a leading role in the FinTech industry as continues to build momentum. "We represent the Millennial voice, which will be part of the redefinition of financial services."

Wharton FinTech's white paper argues that the biggest challenge faced by incumbent financial services organisations are customer acquisition and user experience, as both of these critical functions are completely overturned in light of starkly different consumer preferences among Millennials compared with previous generations. "Start-ups have recognised this chasm of trust and are attacking incumbent financial institutions from all angles," says the paper. Deploying 'mobile-first' (whereby initial contact with a customer is via their mobile phone) and building relationships through educational content are key strategies for firms to market to Millennials and eventually build trust.



"By not employing women, companies are missing out on a different perspective on their products and services.

Christine Duhaime, barrister, Duhaime Law, and founder, Digital Finance Institute

"For sustainable change to happen, we need to change the culture and the traditional mindset.

Anju Patwardhan, group chief innovation officer, Standard Chartered

New behaviour patterns

Millennials trust technology and are less likely to seek face-to-face meetings with bankers at bricks-and-mortar branches. This group of consumers want entirely new digital products that are relevant to their daily lives, says the white paper. An example cited is that of Wealthfront, an algorithmic personal investment platform. Users do not talk to a human financial advisor, which rather than being a drawback is in fact one of the product features that most appeals to Millennials. Weiner compares this to Personal Capital, a competing financial advisory start-up, which uses technology to acquire customers and pair them with a human advisor employed directly by the firm. The net result of these different approaches is that the average age of a Wealthfront customer is 32 years old while that of a Personal Capital customer is 45, which is consistent with the business model of each firm.

In the US, Millennials recently became the largest percentage of the workforce. As McAuley points out, there is a significant wealth transfer under way, which will require financial services firms and FinTech companies to pay heed to the generational shift and the millennial point of view. ■

SWIFT INSTITUTE

Learning the lessons of the past

New ways to think about familiar problems will be proposed by the SWIFT Institute in Singapore.

> There is always the risk of political pullback, resulting in a half-baked banking union.
>
> **Erik Jones,** professor of international political economy, Johns Hopkins University

The SWIFT Institute will present a series of lectures at Sibos 2015 from leading academics and experts inspired by a Japanese proverb: 'Better than a thousand days of diligent study is one day with a great teacher'. The lectures – typically lasting 30 minutes, including Q&A – cover topics ranging from clearing and settlement in Asia to RMB internationalisation to risk management in a networked world.

The thread running through the series is that valuable insights can be gained by examining practical economic or financial issues through a rigorous theoretical framework. In his lecture 'Safeguarding financial integration', Erik Jones, professor of international political economy at the Johns Hopkins University and senior research fellow at Nuffield College, University of Oxford, considers the euro-zone crisis in terms of the pre-conditions for stable financial integration. Jones – who has co-written a related SWIFT Institute working paper – draws on previous experiences of financial integration in countries including the US, UK and Canada to argue that European policy makers have focused too much managing exchange rates and macro-economic adjustments, rather than creating the institutional framework needed to support capital mobility and cross-border transactions.

In the euro-zone, this failure of policy caused severe economic difficulties in Greece, Ireland, Spain and Portugal in the aftermath of the global financial crisis, when foreign capital evaporated, leaving those countries needing huge bail-outs. Jones' analysis proposes six institutional arrangements to mitigate the forces of financial market disintegration, but admits several – such as a central system of sovereign debt management – are "hotly contested".

While some economists regard the euro-zone as fundamentally flawed, Jones suggests that financial integration has always been a matter of trial and error, with political expediency besting academic theory. Moreover, he believes that Europe has belatedly put in place some crucial underpinnings, for example the dominant role of the European Central Bank in prudential oversight of euro-zone banks and standardised resolution mechanisms. "There is always the risk of political pullback, resulting in a half-baked banking union," warns Jones.

New models needed

Like Jones, fellow SWIFT Institute lecturer Alan Laubsch believes we can get better at anticipating and withstanding future crises. Laubsch, director of Financial Network Analytics, will argue that prevailing approaches to risk management are ill-equipped to help us anticipate, quantify and handle the risk. As a co-founder of the RiskMetrics group at JP Morgan, Laubsch contributed to the development of value at risk (VaR), a technique that came to dominate bank risk management. But Laubsch claims over-reliance on established methodologies draws our attention away from the most potent threats in a highly-connected and highly-disruptive post-crisis environment.

"The basis of VaR was that more volatility implied more value at risk, but subsequent events suggest a trade-off between apparent stability in the short-term and structural risk in the longer term," he says. "In the long run, the more stable you seem, the more vulnerable you are to disruption."

Laubsch says the global economy faces unprecedented levels of disruption, often from the least expected sources. "Innovation and change does not take place at the centre, it happens at the periphery," he asserts. As such, large firms that relied on command-and-control management structures should take a 'sense and respond' approach, in order to be more nimble in a period of constant change.

Risk management strategies therefore should be broad enough to alert us to the least, as well as the most, likely threats. Stress-testing can falsely boost confidence if scenarios focus too much on known threats. In the shadow of the crisis just past, there is an understandable search for stability, but if – as Laubsch suggests – stability is not possible, it's pursuit by banks and regulators could lead to new threats. "We need to remember to consider the hidden risks and the unintended consequences. Regulators want banks to be less risky, but this could also make them less innovative and therefore more vulnerable to disruption from challengers," he says. ■

REFERENCE DATA

Accurate data essential for corporate treasury efficiency

The search for payments efficiency can be a bigger driver of corporates' demand for reference data than regulatory change.

> The more payments we can validate upfront, the lower our overall payments costs will be.
>
> **Scott Lambert,** senior director, treasury, Cigna

Changes to the way banks operate and deliver their services are often driven by regulation. Never has this been more evident than in the post-crisis era, in which many of their clients have also had to adjust their financial management practices. The European Market Infrastructure Regulation, for example, requires buy-side users to report all derivatives transactions to trade repositories. This has required European corporates to ensure they apply the right legal entity identifiers (LEIs) for their derivatives counterparties, just like the Single Euro Payments Area obliges them to source international bank account numbers (IBANs) and bank identifier codes (BICs),

But even in today's reformation of the financial markets, regulation does not drive every change. Greater corporate use of reference data is also the result of initiatives to improve efficiency, such as increased automation of payments or other critical financial transactions.

Timely payments are critical to global health insurance group Cigna, both in its home market of the United States and its international businesses around the world. In the highly regulated US health insurance system, the path of payments formats between the healthcare provider and the insurer must be followed quickly and accurately to avoid late payment interest charges. And for Cigna's international supplemental medical insurance business – the firm has sales representation in 30 countries and maintains more than 88 million customer relationships globally – prompt payment to the end-user is fundamental to customer satisfaction.

Five years ago, Cigna established a payments hub with the support of a specialist technology solutions and service bureau provider, to help to further improve payments efficiency. At first the payments hub handled only a small portion of the firm's US payments flows, but gradually took on more volume. Now Cigna is trying to further enhance payments efficiency through greater harmonisation across all its treasury operations. As well as channelling more payments through the payments hub, the firm is implementing a treasury workstation globally and moving from use of bank portals to initiate payments to a bank-agnostic approach, based on ISO 20022-based payment messages. "It was almost a full-time job just ensuring to manage our security access to all our banks' payments platforms," recalls Scott Lambert, senior director, treasury, at Cigna.

As part of its move to a fully bank-neutral payments platform, Cigna is permitting more end-users within the firm's individual business lines to initiate payments, which are then channelled to and checked by the payments hub. At the same time, the payments hub is processing large payment files from US business units. In both cases, the payments hub acts as a quality control backstop, validating banking data prior to the payment transmission. To do this, Cigna needs access to reliable reference data: IBANs and BICs for international payments and American Banking Association routing information for domestic wire transfers.

"The payments hub already processes 1.5 million payments annually. As that increases, we will need to continue to increase straight-through processing rates. The more payments we can validate upfront, the lower our overall payments costs will be and the faster our customers will receive payment," says Lambert. "It's a win-win." ■