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Don't look back

Thanks to LinkedIn, I've been reminded that I've been writing these columns for 11 years, so the obvious thing to do was look back and see what was on my mind then.

Oh dearie me: "renewed optimism after several years of doom and gloom". Just three years after 9/11 and another three to go before the first rumblings of the financial crisis.

The years since then have been even more full of doom and gloom than anything we saw at the start of the century, with the geopolitical situation as unstable as it has been since the Cold War and the economic outlook variable.

Not a good time to be in banking and financial services then, which is probably cold comfort to the many being laid off as the industry 'restructures'.

Cutting costs is not going to be enough though, as the full impact of new technologies hits the industry. In some cases this could be a terminal impact, but we have seen many businesses disappear for all sorts of reasons (that same issue 11 years ago has a feature on the death of online bond trading portals).

There are plenty of people out there who think that a terminal impact should hit all banks – if you're not following the Twitter traffic from the fintech world, you really should take a look. Whether those who want the overthrow of the entire financial services world achieve their dream or not, the changes that are happening are so enormous that they will probably be able to claim victory because things will look so different.

Is that so bad? It depends how nostalgic you want to be. Ironically, many of those clamouring for change in the banking system talk about returning to "old-fashioned banking", by which they mean a world in which customers have a direct relationship with their bank. Many of the new banks being set up have this at the heart of their proposition.

The platforms they are being launched on, and the networks they will use, will be radically different, however, so for that reason, I'll finish with the same conclusion as 11 years ago – there are interesting times ahead.

David Bannister, editor

News in FOCUS

Lloyds to plough £1bn into digital

Lloyds Bank plans to invest £1 billion in digital banking capability over the next three years, re-investing a third of the savings it hopes to make in its drive to become 'simpler and more efficient'.

Announcing the bank's results, group chief executive António Horta-Osório said it aims to make £1 billion of annual savings by the end of 2017.

Horta-Osório said that the bank has 10.5 million active online banking customers, and at the end of 2014 it has 5.2 mobile users, an increase of 29% over the previous years.

He set out a range of strategic priorities, the first of which is 'creating the best customer experience'. "We will achieve this through our multibrand, multi-channel approach by combining comprehensive online and mobile capabilities with face-to-face services delivered through our branch and relationship manager network. We will invest £1 billion over the next three years in digital capability across all business divisions, delivering better service with greater efficiency," said Horta-Osório. "This transformation will reflect our customers' changing preferences in how they choose to interact with us, providing seamless access through a secure and resilient digital infrastructure."

The second strategic priority is to create operational capability by becoming simpler and more efficient, which will fund the digital investment. "Through the simplification and increased automation of key processes, the reduction in third party spend and changes to our organisational design, we expect to deliver a further £1 billion of annual run-rate savings by the end of 2017, creating value for customers and improving our long-term competitiveness," he said. ***BT***

FCA to probe competition in corporate and investment banking

The UK Financial Conduct Authority plans to conduct a market study of the investment and corporate banking sector to decide if competition in the sector is working properly. It may also look into the asset management industry later in the year.

A recently published FCA review into competition that found that "limited clarity over price and quality of services may make it difficult for clients to assess whether they are getting value for money, and that the bundling and cross selling of services could make it difficult for new entrants or smaller established firms to challenge established large players in the market".

From 1 April this year the FCA will have competition powers that will allow it to take action against breaches of the Competition Act and to refer markets to the Competition and Markets Authority for in-depth investigation.

During the wholesale sector review the FCA met with some 70 organisations and individuals, through a combination of round-tables and one-to-one meetings and received 40 written responses. This provided feedback on other potential competition issues that might benefit from further investigation in the future, including:

- How purchasers get value for money when buying asset management services.
- The pricing and availability of data and related services.
- Vertical integration of clearing and execution services.
- The impact of a reduction in the number of clearing members and a lack of client clearing on over-the-counter derivative markets.

It will publish the terms of reference for this study "in the Spring", adding that feedback received to date included concerns around transparency, conflicts of interest and the impact that bundling services together has on competition, including new firms' ability to enter the market.

"We have chosen this particular

area because the benefits of effective competition in the market could be significant. The UK is a global hub for investment banking, and this sector plays a crucial role in our economy, helping companies raise capital for investment, expansion and funding ongoing operations," said Christopher Woolard, director of strategy and competition at the FCA. "What was clear from the discussions we had with stakeholders and firms was that there are unanswered questions about potential conflicts of interest and value for money in this market. This will form part of our wider work in the wholesale markets, alongside the Fair and Effective Markets Review."

The FCA will consider undertaking a market study into asset management and related services later in the year. However, for the other potential competition issues identified, it is expected that forthcoming regulations will affect the way competition works, so there are no immediate plans to conduct further studies into these areas. ***BT***

Doubts rankle as European Commission races towards MiFID II

European regulator ESMA is preparing to issue hundreds of pages of MiFID II cost-benefit analysis and Q&A material between now and July – but market participants are concerned about unresolved issues and rushed implementation as the deadline draws ever closer.

Last month, ESMA held a public hearing in Paris on implementing technical standards. In addition to the 355 pages of MiFID II consultation which were discussed at the meeting, there will be a further 2,000 pages of consultation and CBA before MiFID II is finally implemented. But given the extremely tight deadline, some market participants questioned the practicality of issuing a cost-benefit analysis just months before implementation.

"The cost-benefit analysis is due to be published in July, but there will be no time for the industry to respond because it's so close to implementation," said Christian Voigt, senior regulatory advisor at Fidessa. "It's far too late to influence the actual policy at this stage, particularly as the level one text has already been decided and is not up for discussion."

According to PJ Di Giammarino, chief executive at regulatory think-tank JWG, the obligation to publish a full CBA is simply a legal requirement – but ideally one that should have been done much earlier in the process. "In an ideal world, it would have been done years ago, when the Parliament was still discussing the issues," he said.

During the meeting last week, much of the discussion revolved around the lack of a common framework among EU member states for how to implement the requirements of MiFID II. For example, transaction reporting is done differently in 23 EU member countries. While MiFID II aims to harmonise that, some issues had to be referred back to the European Commission.

"Transaction reporting should be at the top of everyone's agenda," said Voigt. "The definitions in MiFID II and EMIR of what constitutes a transaction are different, and firms will struggle, particularly if they have to meet both separately. There is a risk that they won't be able to find a cost-effective way to do that unless this issue is resolved."

Further complications arise from the difficulties of obtaining data, particularly in some of the more opaque non-equity asset classes. While some participants at the meeting volunteered to share their data with ESMA, the burden on the regulator will be substantial.

"It's too late to influence the policy, particularly as the level one text has already been decided ..."

"Who is looking at the data?" asked Bernd Richter, partner at Capco. "Requiring market participants to report all this data is all very well, but somebody needs to look at it. Who validates the data? The regulator? They can't do it – they don't have the capacity. Regulators have grown in size, but it's not enough."

Even some of the core elements of MiFID II are still being debated and defined, even at this late stage. For example, the directive aims to establish a European consolidated tape of post-trade data, available on a reasonable commercial basis. But according to Di Giammarino at JWG, there is as yet no agreement on how exactly a "reasonable commercial basis" should be defined. The implication, he believes, is that financial institutions cannot simply delegate their MiFID II compliance and forget about it. Instead they will have to stay tuned to the process all the way to completion in 2017.

"The rocket is on the launchpad and there's already smoke coming from the engines," he said. "If you're preparing for MiFID II, you'd better get ready to face the known unknowns." ***BT***

Deutsche signs 10-year modernisation deal with HP

Deutsche Bank and Hewlett-Packard have announced a 10-year, 'multi-billion dollar' agreement that will see parts of the bank's global IT systems rationalised and migrated to HP platforms.

Henry Ritchotte, chief operating officer of Deutsche Bank, said: "This agreement enables Deutsche Bank to secure standardised, world-class IT infrastructure while lowering costs. Having a more modern and agile technology platform will further improve the bank's ability to launch new products and services and lay the foundation for the next phase of its digital strategy."

The deal "mainly" covers the bank's wholesale banking IT. While Deutsche will keep responsibility for IT architecture, application development and information security, HP will provide dedicated data centre services on demand including storage, platform and hosting.

The financial value of the deal was not disclosed.

As part of a wider IT transformation programme, Deutsche Bank will upgrade and reduce the number of its IT applications, move them on to the HP platform and enhance its own processes for providing technology support to its operations.

Deutsche has been making strenuous efforts to reduce its IT overheads over the past few years, including suggesting sharing some services with other banks in a utility model.

It has also radically shaken up its IT management over the past 18 months with a number of high-profile appointments. At the end of 2013 it hired Boeings' chief information officer, Kim Hammonds, to become global CIO and global co-head of group technology and operations.

More recently it took on Richard Shannon from Goldman Sachs as Americas CIO and co-head of GTO with Hammonds and Scott Marcar from RBS as head of IT infrastructure. ***BT***

Euroclear Finland begins overhaul for T2S

Finland's central securities depository, Euroclear Finland, has completed the first stage of a major project to completely replace its securities processing infrastructure as part of its preparations for Target2-Securities.

The first phase of the project, which has been underway for less than two years, was the replacement of the Ramses fixed income system with a new version called Infinity. According to Hanna Vainio, deputy chief executive and head of infrastructure, the project makes Euroclear Finland the first European CSD to adopt the ISO 20022 message standard for corporate action and settlement activity.

The European Central Bank made the standard a mandatory part of migration to T2S, which itself is aimed at harmonising Europe's clearing infrastructure and making it more efficient. Migration to T2S will begin in June this year and will continue through to 2017.

Euroclear Finland plans two more phases in its securities processing overhaul. The second stage, scheduled for May 2016, will involve the replacement of the current equity transaction processing systems, HEXClear, and the central register. The third stage will be the connection of the Finnish market to T2S in a scheduled migration in February 2017.

"Implementing the Infinity system for the fixed income market has been a tremendous effort for the whole market," said Mats Råstedt, the chairman of Euroclear's Finnish Market Advisory Committee. "Close cooperation and coordination between Euroclear Finland and the market participants has made this transition possible. This is an important milestone on the Finnish market's roadmap to T2S, and at the same time aligns the Finnish fixed income market with the new European harmonisation standards." ***BT***

New entrant targets businesses with pan-European current account

London-based Orwell Group, founded in 2005, has launched a pan-European current account. Called Ipagoo, the product will initially be available in the UK, France, Spain and Italy.

Ipagoo allows users to make cross-border transactions, make and receive payments in different currencies and use cash management features. While several large global banks offer services in multiple countries, they operate as separate legal entities in each country. That has a huge impact on the customer, says Carlos Sanchez, chief executive at Orwell Group.

"If you were based in the UK and you moved to France, for example, you'd have to be onboarded separately in each country," Sanchez said. "If you end up with different accounts in each country, you can't manage them all in one place. It becomes very complicated."

The idea behind Ipagoo is to simplify things. The company exists as a single legal entity, and claims that a customer can sign up in 20 minutes. Having done so, they won't need to use an additional separate set of details and passwords for each country. Instead they have one login. Accounts have their own IBAN and BICs and can be used to setup direct debits, standing orders, normal payments and to order a debit card. Joint accounts are also available. Like many of the newer companies in financial services Ipagoo uses payment services from traditional banks. But Sanchez is keen to emphasise the open architecture aspect of Ipagoo, which he says is used by no other retail bank. He adds that this enables the company to plug various third-party services into Ipagoo. While there are around 8,000 banks in Europe, the average retail customer in the UK for example has access only to a handful. Ipagoo's ambition is to change that.

"We will become like a supermarket, in the sense that you can come to us and shop for a whole bunch of different financial services, being offered by companies from right across Europe," he said. "So for example if you spot a German product that looks good, you can have it, even if you are based in another country. If you are in Spain and you feel that you want a French service, you can do that. It opens up a whole new world of choice and competition in Europe."

Major financial institutions are also beginning to look at using APIs to open their architectures to third party services. RBS' global transaction services business, for instance, is exploring collaboration with a number of start-up companies as a way of combining its own services with the innovation provided by smaller companies.

The other area in which Orwell says it can differentiate Ipagoo is in cash management. "Traditional banks are focusing on credit and lending and investment, so for them cash management is a necessary evil to attract money in," said Sanchez. "They have never put enough effort into cash management services. We have developed a lot of services around cash management that banks have never provided before."

These services include real time cash pooling across Europe 24/7, and conditional payment. For example, an outgoing payment can be conditional on receiving an incoming payment from another party.

Ipagoo has just launched for individuals and plans to launch for businesses in March. The company estimates that individuals and small businesses with international interests would benefit the most, although the company does plan to appeal to as broad a customer base as possible. It estimates that 30 million people within the EU are living in a different EU country than the one they were born in, while 2.5 million move between countries each year. Of the 30 million, about 80% live in the big four countries: UK, France, Germany, Spain and Italy. After the European rollout is complete, the company is also exploring opportunities to launch in Australia, Canada, the US and New Zealand. ***BT***

Europol takes down botnet in joint international action

In a joint international operation Europol's European Cybercrime Centre seized servers said to have controlled the Ramnit botnet that had infected 3.2 million computers internationally.

The operation involved investigators from Germany, Italy, the Netherlands, and the UK – which led the operation – along with Microsoft, Symantec and Anubis Networks worked together with Europol officials to shut down command and control servers and to redirect 300 Internet domain addresses used by the botnet's operators. The Joint Cybercrime Action Taskforce, located at Europol's headquarters in The Hague, supported the operation and the EU's Computer Emergency Response Team relayed information on the victims to national agencies.

Writing on Microsoft's corporate blog, David Finn, associate general counsel & executive director, Microsoft Cybercrime Center, said the simultaneous seizure of servers in four countries followed a US lawsuit filed under seal in federal court by Microsoft and the Financial Services Information Sharing and Analysis Center.

Europol deputy director of operations, Wil van Gemert, said: "This successful operation shows the importance of international law enforcement working together with private industry in the fight against the global threat of cybercrime. We will continue our efforts in taking down botnets and disrupting the core infrastructures used by criminals to conduct a variety of cybercrimes."

The operation comes on the heels of a recent report by Kaspersky Labs about a separate attack on financial institutions (*see pages 16/17*).

"In both situations, law enforcement and the private sector worked together to protect people online," wrote Microsoft's Finn. "That's because the complexity of fighting cybercrime is bigger than any one company or organisation. It requires a diverse set of skills, including sophisticated computer forensics, big data analysis and legal strategy." ***BT***

Bloomberg gets FCA approval for trade reporting from OMS

Continuing its policy of offering products that fit across user workflows, Bloomberg has moved in to the transaction reporting space in Europe.

The company's Trade Order Management System has been granted approval by the Financial Conduct Authority to report securities with an International Securities Identification Number and OTC derivatives as part of the UK's Approved Reporting Mechanisms regime.

A similar capability has been available in the US where Bloomberg has fed data on clients' behalf to FINRA's Trade Reporting and Compliance Engine since 2002.

The Bloomberg transaction reporting service is now available as part of the normal ticketing workflow to all current users of TOMS, a fixed income and derivative transactions order management solution for the sell-side used by more than 375 internationally.

The FCA ARM reporting solution uses Bloomberg market data to reduce transaction over-reporting and meet the current reporting requirement by the end of the following business day (T+1). The reporting is direct from the trade ticket so that no middleware, manual re-keying or file conversions are required, "helping to position firms for the accelerated trade reporting requirements expected in 2017 for MiFID II" says Bloomberg. ***BT***

Idea Bank experimental branch opens doors to SMEs

Poland's Idea Bank has launched an experimental branch aimed at corporate clients. The 'Idea Hub' bank branch was created to test the idea that innovative bank branches can attract customers and provide a complementary service to online and mobile banking.

Most of the space available at the new branch has been set aside for entrepreneurs. The bank branch has a co-working area and bookable conference rooms. The rest of the branch consists of showrooms, mainly intended for entrepreneurship training sessions and meetings with the bank's representatives.

Most of the customers of Idea Bank are small-business owners. The bank has fitted its Idea Hub branch with office facilities including printers, scanners and copiers and unlimited Wi-fi. It also has TV, daily updated economic press and free coffee. There's an app for customers that want to book the conference room and the bank has employed a team of specially trained baristas to ensure there is a pleasant atmosphere and good working conditions.

"Idea Hub's project stands in complete opposition to the current global trend of turning the emptying bank branches into so-called high-tech branches, crammed with electronics, located in shopping malls, and usually just doubling tools already available on mobile devices," said Dominik Fajbusiewicz, Idea Bank board member and the originator of the Idea Hub concept. "I think the only functionalities that may encourage customers to actually visit a branch are those you cannot offer virtually." ***BT***

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News in BRIEF

Online social investment network **eToro** has moved its core IT infrastructure onto a hybrid cloud system. The platform will allow it to maintain sensitive applications in a private cloud while using a public cloud for others. It is moving applications, including those supporting its Social Trading service, to the Microsoft Azure public cloud platform, hosted by **TelecityGroup**. At the same time, the private infrastructure running its core trading functions has been relocated into Telecity's London data centre.

State-owned Dutch bank **SNS** is to upgrade its treasury and risk infrastructure using services from **SunGard**. The bank wants to centralise its credit and market risk management, including initial margin and potential future exposure, in view of Basel requirements that oblige banks to adhere to higher standards of record keeping and transparency. SNS was already an existing SunGard Treasury customer, but it will now also use the vendor's market and credit risk applications to create a single framework for all treasury, trading and risk activities, so that the bank can keep its costs down and keep risk management as simple as possible. The bank plans to consolidate all valuations into an intra-day view of risk across the trading and banking book. This should make its risk management more effective. As part of the implementation, the bank's financial markets division will use SunGard's hosted and managed services, including data services.

Deutsche Börse has signed a trio of commodities trading entities to use its new M7 trading platform, developed as part of a complete renewal of its trading infrastructure. Singapore-based regulated futures exchange **Cleartrade Exchange**, London-based **Freight Investor Services**, a broker of freight and commodity derivatives, and **Norexeco ASA**, a commodities exchange for pulp and paper based in Norway, will start to use M7 in the next few months. The M7 trading platform is part of the exchange's 7 Market Technology series, which currently includes the T7 derivatives trading infrastructure, C7 clearing system, N7 network solution and M7 multi-asset class trading service. Like other parts of the family, its design allows the creation of applications and functionalities unique to a particular market structure or client base. The platform is hosted on Deutsche Börse's servers is being expanded to include new asset classes including iron ore, steel, oil, freight, pulp, paper and fertilizers, on top of its traditional client base in the gas, electricity and emissions markets.

ECB, a Zimbabwe-based application software and services provider, has joined the **Misys** InFusion partner programme. Working with banks and government institutions in Zimbabwe, Malawi, Angola, Botswana, Zambia and other African countries, ECB provides application development, managed services, strategic sourcing, training and consulting. As part of the Misys partner programme it will promote the Misys FusionBanking portfolio, including core banking systems, digital channels and lending. ECB has already worked with Misys on a number of projects across southern Africa over the last 12 years in areas such as project management, core banking system implementation and systems integration.

FirstOntario Credit Union is replacing its existing core banking system with the Temenos T24 platform along with the vendor's its business intelligence solution, Insight. Temenos' continued investment in its Canadian Model Bank template is said to have been a factor in the choice as it was essential that the system supports Canada-specific requirements, including taxation, deposit insurance and registered retirement products, and was capable of interfacing with other typical Canadian third party providers, such as switching for debit card processing, loans origination and clearing.

Getin Bank is working with **Oberthur Technologies** to introduce mobile proximity payments using on Host Card Emulation, a cloud-based protocol simplifying mobile contactless payment implementations. HCE was introduced on Android platforms at the end of 2013 and is now endorsed by major payment schemes. Getin Bank performed a first transaction compliant with Visa specifications for HCE at the end of last year.

MarketAxess has launched **Axess All**, the first intra-day trade tape for European fixed income markets, providing aggregated volume and pricing for the most actively traded fixed income instruments in Europe. Bond information within Axess All includes last trade, daily high and low trade prices, aggregate trade volume, and volume weighted average prices. Trade data in Axess All consists of all major European bond sectors including government bonds, corporate bonds, emerging market debt and covered bonds. The data is provided by MarketAxess subsidiary, Trax, and includes all bonds captured by Trax that have traded five or more times in the current London business day, with a one hour delay.

Advanced Payment Solutions has struck a deal with the UK **Post Office** that will allow the 1 million business and consumer users of its online Cashplus current account to access banking services at more than 11,500 branches across the UK. They will now be able to deposit and withdraw cash in real time as well as make instant balance enquiries from Post Office counters. APS is also a provider of payment solutions to local government: its prepaid card and current account, run in partnership with MasterCard, supports 20% of the UK's local authorities with their social care programmes, handling over £180 million worth of benefits payments each year. The Post Office's withdrawal capability will allow APS' public sector clients to offer benefits recipients real-time access to over-the-counter cash withdrawals.

Lloyds Banking Group is to allow customers to upload images of identification documents required as part on an online account opening application. Once set up for existing account applications, the system will be made available to all savings and credit card customers of Lloyds Bank, Halifax and Bank of Scotland by this summer. ***BT***

Breaking into China

As the Chinese renminbi moves into fifth place among world trading currencies, *Heather McKenzie* charts the growth of clearing centres helping it along

Internationalisation of the Chinese renminbi continues apace as an increasing number of countries agree deals to trade with China in their national currencies or scramble to become RMB clearing centres. The latest data from Swift shows the RMB taking fifth spot as a global payments currency, leapfrogging the Australian and Canadian dollars.

In terms of value, the RMB's global share of payments is still small beer – in December 2014 the currency reached a record high share of 2.17% of global payments handled by the Swift network, trailing the yen, which has a share of 2.69%. The US dollar remains the major player in global payments, with a 44.64% share, followed by the euro with 28.3%.

The value total may not yet be significant, but the growth rate is impressive. Global RMB payments increased in value by 20.3% in December 2014, while the growth for payments across all currencies was 14.9%, says Swift. The RMB has been showing a consistent three digit growth over the past two years, increasing in value by 321%. During 2014, RMB payments grew in value by 102% compared to an overall yearly growth for all currencies of 4.4%.

Swift's head of banking markets, Wim Raymaekers, attributes the ascent of the RMB in part to the rise of offshore RMB clearing centres, with eight new agreements having been signed by the central bank, People's Bank of China, in 2014.

The trend has continued into 2015, with the PBOC and the Swiss National Bank agreeing a deal to establish clearing arrangements in Switzerland for RMB trading.

In addition to the clearing scheme, the PBOC is extending a pilot scheme for foreign investors to clients of Swiss banks, with a quote of up to 50 billion yuan ($8 billion). Switzerland joins the financial centres of Frankfurt, Hong Kong, London, Luxembourg, Paris, Seoul, Singapore and Sydney as global centres for trading the RMB.

The development of offshore RMB clearing centres in Europe was identified as an important factor in the internationalisation of the RMB by a joint Clearstream and Aite Group report released last year. More than half of interview respondents contacted during Aite research believed that Europe would play a key role in the currency's internationalisation process, though some raised questions around its long-term future once onshore markets had been liberalised.

The internationalisation of the RMB is seen as a three-step process in which the currency is first used as a global trade and payments currency, then as a global investment currency and finally as a global reserve currency. According to the research as a trade currency the RMB is now the second most used for trade finance globally. A lack of clearing broker readiness and translation issues are the main barriers to the use of RMB in trade finance and payments.

Aite says a main success factor for the international development of the RMB market will be the establishment of an efficient and recognised infrastructure to optimise liquidity. It is therefore crucial to facilitate the issuance, settlement and custody of RMB-denominated bonds in the European market, as well as to further develop RMB-denominated products and collateral management services. By doing so, market players will have the opportunity to optimise their access to what is still a limited volume of offshore RMB.

Financial institutions are also increasingly active in the RMB arena. Late last year, the New York branch of China Merchants Bank launched the first RMB-denominated certificate of deposit in the US from its global CD programme. Standard Chartered acted as sole arranger for the program and debut issuance. Proceeds from the offering will be used to finance RMB denominated trade between the US and China.

The issuance offers US-domiciled institutional investors a new way to invest in RMB-denominated assets. Previously, participation from this investor base was limited to select offshore RMB bond and discount note issuances which were registered with the Securities and Exchange Commission or issued by supranationals (such as the International Finance Corporation).

Around the same time the CMB launch was announced the London-Hong Kong RMB Forum met in London to discuss RMB internationalisation and the role of the city as a clearing centre. Participants at the Forum agreed that there has been an increase across the board in the use of the RMB as a trade currency, for corporate treasury management activities and also as an investment currency. Activities in offshore markets had also increased in breadth and depth, reflected in rising activity in foreign exchange and in the bond market, as well as in a broadened range of investment products.

London is in competition with Singapore, the biggest RMB hub outside Hong Kong, for RMB business. In January, ICBC Singapore announced it had cleared 40 trillion yuan (SGD8.6 trillion) since February 2013. The bank is the sole RMB clearer in Singapore.

ICBC is developing a 24/7 clearing service and a RMB real time gross settlement service with a view to reinforcing Singapore as an offshore RMB market. ***BT***

Japan's FSA sets ambitious growth targets as 'Abenomics' pursues renewed mandate

Government hopes of revitalising the Japanese economy are being supported by the country's financial services industry, reports *Elliott Holley*

Japan's Financial Services Agency has ambitious plans to more than double the proportion of foreign investors in Tokyo's securities market by 2020. The plans are part of a wider shift linked to 'Abenomics', the government push to revitalise Japan's economy.

Speaking at a Japan Securities Summit hosted by the Japan Securities Dealers Association and the International Capital Market Association in London, Shunsuke Shirakawa, commissioner at the FSA, said that the target for the Japanese market was to increase the trading of foreign stocks to 25% of total Japanese trading volume. The current figure is just 12%. Average daily stock trading volume on the Tokyo Exchange in 2014 was ¥2.9 trillion, meaning the target represents about ¥725 billion yen, or £3.98 billion every day.

"We believe that overcoming deflation and overseeing a growth strategy is essential for Japan," said Shirakawa. "It may seem strange for a regulator to be overseeing a growth strategy, but this is important. We are accelerating structural reform, we have brought in a corporate governance code, we are working to improve the securities settlement systems, promote standardisation of bond issuance documentation and to encourage real-time money transfers by financial institutions and companies. This is all about sustainable economic growth."

The reforms referred to by Shirakawa include the introduction of a stewardship code in November 2014, which was signed by 175 Japanese asset management firms, as well as changes to the Government Pension Investment Fund. They also include efforts to enforce International Financial Reporting Standards

The Japanese government hopes to breathe life into the country's economy

Japan's efforts on this front have been highlighted by Tak Ochi of the International Account Standards Board, which cooperates with the IFRS Foundation, an organisation that releases reports putting forward recommendations on best practice in financial services.

Much of the debate at the JSDA/ICMA summit focused on questions of corporate governance and macro-economics. Following the resounding victory of Prime Minister Shinzo Abe in December 2014, the government has a strong mandate to pursue its reform agenda – a point highlighted in a speech by Motoshige Itoh, professor of economics at the University of Tokyo. Meanwhile according to Atsushi Saito, chief executive at the Japan Exchange, a "mind shift" is taking place among Japanese asset managers, driven by 'Abenomics' – a mixture of fiscal stimulus, monetary easing and structural reforms designed to promote economic growth.

"Trading is at pre-crisis levels, and liquidity in Japan is second only to the USA," said Saito. "New equity derivative products have been introduced and new participants are joining the market. But this is just the beginning. For 20 years, Japanese stocks didn't appreciate because the use of capital in Japan was bad. We need capital efficiency and better governance in Japanese companies. The FSA's code of conduct has been taken up by 175 asset managers – a sure sign of confidence and progress. I am optimistic about the future."

The Japan Exchange has been seeking to grow its presence outside Japan, too. Last month, it launched a colocation service in collaboration with the Singapore Exchange, which creates a direct low-latency connection between Tokyo and Singapore. JPX has also opened a new office in Hong Kong, and been linked to ongoing plans to create a new stock exchange at Yangon in Myanmar. ***BT***

Customer segmentation

Customers are not all the same and simplistic classifications may lead to failure when it comes to rolling out innovative services, reports *Elliott Holley*

The key to success in digital banking is to understand that not all customers want it and segment service offerings appropriately according to a new report from analyst firm Celent.

In its new report, *Making Innovation Matter*, Celent groups users in three categories based on their use of various technologies: highly digital (22%), newly digital (36%) and analogue (42%). The study also divided people based on their level of engagement: active (36%), passive (43%) and rare (21%).

The factors that affect how a consumer is classified depend on behaviours such as using GPS to find a destination, researching products and services online, using a mobile device to access services, using social media, shopping online, using video chat services such as Skype and using various other online tools.

Despite years of marketing and hype in the banking industry around Generation Y consumers and the supposed 'digital native' consumer allegedly taking over the market in the next few years, the report's findings suggested that banks would actually do well not to forget the so-called 'analogue' customers, who still account for a third of their customer base. It also found that significant numbers of the younger generation born after 1982 are actually 'analogue' customers who prefer to bank in a branch. While age is a factor, Celent warns not to use it in isolation but in the context of other factors.

"A one-size-fits-all approach to innovation is likely to fail miserably," the report says. "Effective customer segmentation is necessary to turn a generic goal like 'we will innovate to meet our customers' needs' into something for more concrete and actionable."

Instead of lumping customers together or choosing to pursue one group of customers over another, the report says that banks should recognise that the hopes and expectations of a highly digital consumer will be very different from the analogue consumer who prefers to bank at a branch in person. These different customers need to be met with different approaches that fit their profile. Celent suggests that banks should be more specific when planning how to connect with customers using innovation.

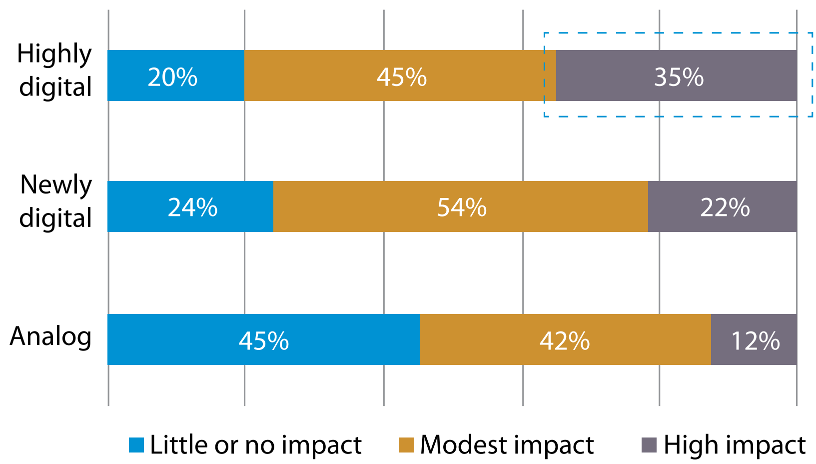
For example, "we will transform the experience of our older, passive customer segment by engaging them with high-touch innovations at the point of sale" would be a better example than a bland statement about generic innovation, as would "We will target our highly digital active customers for technology-led service transformation, using their early adopter tendencies and enthusiasm as a testing ground for approaches that will eventually allow us to deliver better services at lower costs."

The study also found that among consumers who were deemed 'active' users of financial services, innovation had a high impact for around a third (31%) and a modest impact for half (51%) of consumers, leaving only 18% for whom it had little or no impact. However, the same study also found that for passive users (the majority), over a third (34%) felt that innovation had little or no impact on their willingness to work with a particular bank. Just 16% in this group felt it had a high impact. The result suggests that if banks are going to pursue innovation, they should start with their most engaged customers first, and then work downwards from there, rather than seeking to engage all consumers at once.

"For perhaps 25% to 35% of a firm's customers, innovation matters a great deal and can be viewed as a tool to help capture their hearts and wallets," says the report. "In a world of finite resources, experience suggests there is value in targeting improvement efforts at the most receptive segments of a market. ***BT***

Factoid: Want Innovation Impact? Target the "Highly Digital"

What is the impact of a firm's ability to innovate on your willingness to work with that firm?



SIA sees mobile future in 2015

Italian processing specialist SIA is continuing its internalisation drive flowing a year under its new ownership structure, chief executive Massimo Arrighetti tells *Elliot Holley*

Nearly two-thirds of Italians will be able to make real-time peer-to-peer payments using a mobile phone by this summer, according to Massimo Arrighetti, chief executive of Italian payment processor SIA. That's not the end of SIA's plans however, as the company focuses on an internationalisation agenda that targets 400 million European current account holders.

In its 2014 results, which have just been published, SIA reports a 146% increase in payment transactions processed last year. Much of that increase comes from credit transfers and collections, which increased by 316% as a direct result of European harmonisation under SEPA. In February, banks moved from a domestic regime for credit transfers and direct debits to a pan-European standard. For Arrighetti, internationalisation is a key part of SIA's strategy to deal with an increasingly globalised world.

"The first thing that many people do when they wake up in the morning, is reach for their smartphone," he said. "Jiffy has already received a good response in Italy, even from its first week. It's SEPA-compliant and it requires little investment from banks. We expect there will be some competition.

Jiffy is based on the SEPA Credit Transfer, and is designed to work on Android, Apple iOS and Windows Phones. The idea is to allow consumers to pay each other via mobile, for example for a restaurant meal, collecting funds towards a gift, sending money to a relative or giving pocket money to children. Users will need to be a customer of one of the banks signed up to the service, of which there are ten according to SIA.

To use the service, customers register on their bank's home banking portal and provide their mobile phone number so that it can be used to send and receive funds. The system then links the IBAN code of the account to the phone number. Once the customer has downloaded the Jiffy app, they use an interface similar to WhatsApp to open up their contacts, select the beneficiary, enter the amount, along with an optional text message, and then clicks to send the funds. The recipient will need to also have Jiffy installed to be eligible to receive the funds.

> *"Banks can't do everything in-house any more. They need to outsource. Payments is very suited to being outsourced. We want to offer banks a white label solution"*

Apart from Jiffy, SIA plans to work on two other areas: cards and related technologies such as NFC and network messaging. The company is particularly keen to focus on the latter area, because of the SEPA messaging standard. According to Arrighetti, SEPA messaging through SIA's network is useful because it offers point to point encrypted messaging.

"Customers can use it to send both slow and fast kinds of messages – for example, a credit transfer, or a sophisticated trading strategy," he said. "All this through a single wire to 23 trading venues in the US and Europe. We are offering an alternative to Swift."

SIA is also continuing its internationalisation drive, managing relevant projects in Germany and Finland and several other European countries for payment services covering credit transfers and debit cards. In addition, the company is keeping a close eye on developments in the wider payments industry – include the rise of services such as Apple Pay and the ability in some countries to pay using social media website Facebook and Twitter. There are also other possible entrants, such as Amazon and others.

"The competition is not only coming from banks, there are also companies like the social media platforms," said Arrighetti. "No bank can compete with Facebook and Twitter because they have hundreds of millions of users. Banks can't do everything in-house any more. They need to outsource. Payments is very suited to being outsourced. We want to offer banks a white label solution. We aim to be a centre for banks and corporates to find the answer to the challenge of how to do payments faster and better."

The key elements from SIA's financial results are:

- Net profit +27.5% at €59.6 million
- Operating margin +22.5% at €81.9 million
- Revenues +7% at €336.9 million
- Proposed to the shareholders, distribution of an ordinary dividend with a total value of €35.68 million corresponding to €0.21 per share
- Strong growth (+146%) in payment transactions processed in 2014, which reached
- 12 billion including 9.2 billion relating to credit transfers and collections (+316%)
- and 3 billion with cards (+9%)
- Increase (+5%) also in trading and post-trading operations, rising to 30.2 billion
- 326 thousand billion bytes of data carried (+11%) on the 180,000 km of the SIAnet network, with service levels of 100% ***BT***

SEFs face reckoning with unintended consequences of regulation

Regulation of swaps trading in the US is fragmenting the market and increasing costs instead of increasing transparency and reducing risk, reports *Elliott Holley*

Like opening Pandora's box, the emergence of swap execution facilities in US derivatives markets has brought unexpected problems as well as benefits. In some cases, asset managers are actively looking to avoid trading on the new platforms and even turning to other asset classes, according to a new report by OpenLink.

Swap execution facilities emerged as a new kind of US trading platform in the aftermath of the 2009 G20 agreement, which sought to reform and regulate OTC derivatives markets by mandating reporting to trade repositories and central clearing on CCPs and pushing trades onto regulated platforms wherever possible. Although the purpose of SEFs was to improve transparency and reduce the size of opaque OTC markets, research suggests that the fragmentation of the market into multiple SEFs has created costs and inefficiencies that are impacting the ability of asset managers to trade.

"When we went out into the market asking questions, we found that there was an ideal of what participants wanted – and then there were regulatory and technological hurdles, market structure issues, clearing houses and the nature of SEFs themselves, that prevented that vision," said Phil Wang, senior analyst at OpenLink.

The report focuses on five areas where users of SEFs will face problems. The first is bunched and blocked order workflows. According to Wang, the allocation process is problematic. If a SEF uses an RFQ model where the user has to make allocations pre-trade, that introduces challenges because further decisions may depend on whether or not trades are successfully executed. But the timeframe between execution and clearing does not necessarily give enough time to the asset manager to keep track of their liquidity, margin and credit availability across multiple SEFs.

Lack of visibility into credit and the true execution cost of an order impacts decision making by traders. In addition, some asset managers change the terms of the deal so that it doesn't need to be executed on a SEF, and use more traditional ways of executing the trade that don't involve a SEF.

"While SEF trading volumes have gone up, if you look at values, larger trades are still not being executed on SEFs – they are still being executed by voice," said Wang. "It's the smaller trades that are being executed on the SEF."

The fragmentation of the market between multiple SEFs is also a major issue highlighted in the report. With liquidity spread across different SEFs, the liquidity in each is fragmented. Furthermore, while it was hoped initially that the new trading environment might help to lower costs for end investors by improving transparency, the reality according to Wang is that connecting to each SEF is an expensive business. Joining a SEF requires time-consuming legal agreements and audit agreements. If there are a dozen venues for rates products, most participants will only pick two, or at most three, that they wish to trade on. This undermines the ability of participants to gain the full benefits of competition.

Once there is a consolidation between SEFs and all the liquidity focuses on those few, then there may be enough liquidity and transparency to drive spreads lower and create better pricing for participants, but it will take time. Another issue is that users trading on multiple SEFs, the information isn't instantly transmitted between all the SEFs how much the user is reserving, so users tend to go 'ultra-conservative', which results in less credit availability for other participants. This inefficiency ties up resources and increases costs. Furthermore, none of the SEFs will know the net position that a participant has. At the clearing house, there is no view of whether a trade reduces overall risk. The same applies to initial margin. Lower availability makes credit more expensive – undermining the efficiency of the whole process.

Asset managers are typically looking to execute a package of swaps and other derivatives to achieve an objective, usually rebalancing a portfolio. The net risk of such a move may not necessarily be very high. Whereas before the development of SEFs, institutions on the buy-side could generally count on their broker pricing such a group of trades based on the full net risk of a block, now that trading on SEFs is mandatory, each individual trade needs to have margin allocated against it – resulting in higher cost and margin payments than would have been the case if the whole trade were considered as a whole.

"Swaps require a lot more collateral and margin, and the cost of doing a cleared swap has gone up dramatically," said Wang. "That makes them look at other kinds of product like swap futures or interest rate futures. Some product evolution is happening as exchanges introduce hybrid instruments to capitalise on that. ***BT***

Banks warned to brace for the coming cyber-storm as malware steals $1 billion

News that a criminal gang has been syphoning funds from banks over several years has dispelled any lingering illusions that the industry has adequate defences

Financial institutions are being urged to revisit their cyber-security following revelations that an online gang using the Carbanak malware stole up to $1 billion from banks in 30 countries around the world in a series of highly-sophisticated attacks over the last two years.

Details about the gang's activities were revealed in a report by Kaspersky Lab last month. The thefts were initiated using spear-phishing, using an infected Word document to download the Carbanak malware onto a targeted individual's computer. The hackers then used their access to the network to see and record everything happening on the screens of the staff who serviced the cash transfer systems, before stealing the funds. The whole process took on average two to four months from infection to completion.

"These bank heists were surprising because it made no difference to the criminals what software the banks were using," said Sergey Golovanov, principle security researcher at Kaspersky Lab's global research and analysis team. "So even if its software is unique, a bank cannot get complacent. The attackers didn't even need to hack into the banks' services: once they got into the network, they learned how to hide their malicious plot behind legitimate actions. It was a very slick and professional cyber-robbery."

Funds were stolen from banks, e-payment systems and other financial institutions in Russia, USA, Germany, China, Ukraine, Canada, Hong Kong, Taiwan, Romania, France, Spain, Norway, India, the UK, Poland, Pakistan, Nepal, Morocco, Iceland, Ireland, Czech Republic, Switzerland, Brazil, Bulgaria, and Australia.

According to Kaspersky, the attackers were highly sophisticated, leaving some cash behind to mask their tracks. In some of the attacks,

"The attackers didn't even need to hack into the banks' services: once they got into the network, they learned how to hide their malicious plot behind legitimate actions. It was a very slick and professional cyber-robbery."

the hackers accessed accounting systems, artificially inflating account balances and then removing the extra amount. For example, if an account had £1,000, they would change its value to £10,000 and then remove £9,000 for themselves. The account holder would not suspect anything, since the original £1,000 is still there. In other attacks, the funds were transferred to banks in China or the US. The attackers also hijacked the ATM network, ordering specific ATMs to dispense cash at a specific time. At the pre-determined moment, one of the gang's members would be waiting at the machine to collect the payment.

Security specialists have put forward a number of suggestions for how these kind of attacks might be mitigated in future. These include tighter control on communication channels, encrypting data at the data field level (thus rendering it useless to an attacker) and more monitoring and cross-industry coordination, as well as data sanitisation, in which incoming files are converted into another format, rendering the attacker script useless.

"The hackers were able to gain access to the banking systems by sending out emails to banking employees with a malware laced Word attachment, which when opened, executed a backdoor for the attackers," said Mike Spykerman, vice president of product management at Opswat. "The problem with these attacks is that because they are targeted at only a small number of individuals, the malware can get past anti-virus engines. However, the Word files could have been converted to for instance PDF files, removing the exploit that the attackers had placed in the Word file."

Others were more pessimistic, and warned that solutions, while possible, would be difficult to implement since they required significant cooperation between banks, regulators and customers. They also worried that the Carbanak attack presages more – and more harmful – attacks in future.

"The fundamental big concern this type of attack raises is that security monitoring cannot just test for vulnerabilities that are obvious and noticeable such as distributed denial of service, where a website is shut down by two or more hackers, and data theft," said Mark Skilton, professor of practice and cyber-security researcher at Warwick Business School. " This is a cyber-threat of massive proportions, on an industrial scale, where eavesdropping and small changes need to be detected. I suspect this is just the tip of the iceberg of what may have been stolen and we may never know the full extent of the theft.

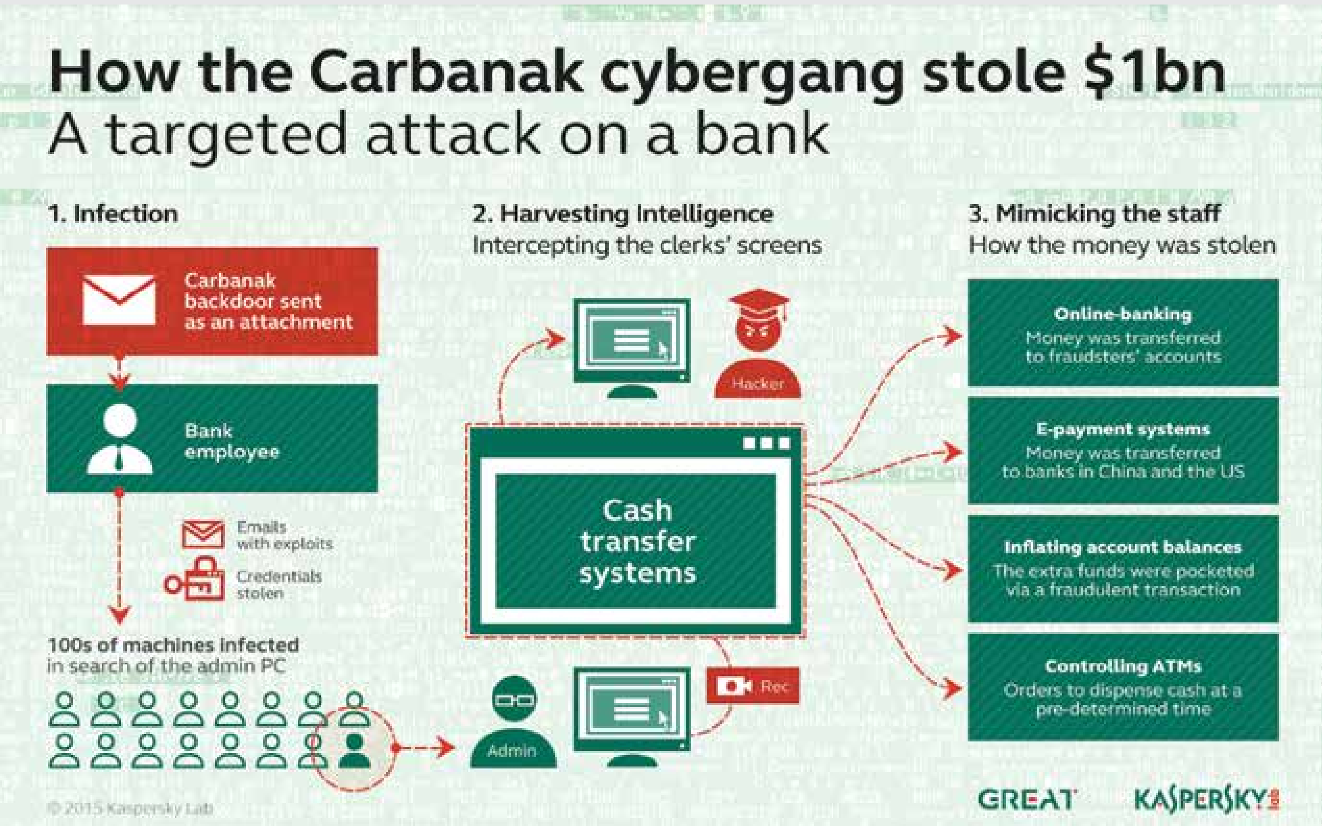
"It is possible to do several things about this from coordinated cyber-intelligence to specialised cyber-threat monitoring," he added. "It requires a much more rigorous monitoring and coordinated response system between banks and industry to combat the cyber-threats that can move and work across, and between them, in a virtual world. This is also not just a banking issue as potentially any website and company is a target."

For Mark Bower, VP product management at Voltage Security, the key issue is to use high-quality encryption on the data at the core of the business. "If the data driving transactions, ledgers, and balances is encrypted at the data field level with modern format-preserving encryption methods, as opposed to the storage level encryption which does not mitigate these threats, the data can be securely armoured so that data tampering without invoking multiple alarms or errors when it is manipulated is practically impossible," he said. "This technique is already in place in leading banks, payment processors and healthcare networks today as a primary defence against advanced threats and the data breach risks they entail."

The perception that hackers will inevitably be able to breach a company's outer defences was widespread. However, some security experts believe this does not necessarily mean large losses are inevitable. Attackers are vulnerable at the point of entry, since their initial moves may be detected as hostile. Even if this is not the case, their access once in can also be restricted, preventing them from carrying out a complex attack.

"Enterprises need to increasingly lock down the communications and patterns of their server, lower the attack surface available through open ports and communications channels, and reduce the lateral spread of attacks," added Alan Cohen, chief commercial officer at Illumio. "Modern security teams know hackers will get in. So, they watch them. When you reduce the real estate that the hackers have the ability to move in, it also reduces the overhead on the security teams who are watching them so they have a higher probability of catching issues just by virtue of having less attack space to monitor. It's like having a choice to fight a battle with your enemy on an open field where they could outflank you, or pushing them into a narrow canyon where you have the high ground. The probability of winning the battle increases." ***BT***

The full Kaspersky report can be read at: http://securelist.com/blog/research/68732/the-great-bank-robbery-the-carbanak-apt/



Capital markets firms must do more to protect IP

With the current demand for innovation, firms should be doing more to safeguard their intellectual property, says a new study. *Elliott Holley* reportson its recommendations

Capital markets firms are losing their intellectual property too easily to competitors, business partners and third parties. Most companies could benefit from a tougher approach to IP, including licencing agreements and more use of patents, according to a new report by analyst firm Aite.

Intellectual property consists of innovative new ideas, business practices and new technologies. So far, capital markets companies have largely focused on trademarks for benchmarks and indices and trade secrets such as internal software. But they have often left the patents up to the independent software vendors – with serious negative effects for their own business, according to the report, *Monetizing Innovation in Capital Markets: An Intellectual Property Primer.*

"Capital markets firms place relatively low values on their own internal IP and in many cases have failed to make the most of it," said David. Weiss, senior analyst at Aite and author of the report. "Too many firms manage to fall into enormous IP traps, essentially shooting themselves in the foot. The inevitable result is both competitive and economic harm to themselves. It is now incumbent on these firms to value, protect and monetise their IP, treating it as a core asset like any other they maintain."

Historically, it was more difficult to protect IP in the capital markets because these companies didn't produce any physical goods, and getting a patent in business processes and software programmes could be a challenge. But mostly the problem appears to stem from a lack of awareness. For example, one of the most straightforward ways for a company to lose IP is if an employee responsible for innovation leaves the company, taking the IP they created with them. Aite notes that often, companies haven't taken any steps to retain the IP the individual created while under its employ.

Another problem is that through agreements, independent software vendors may obtain proprietary business requirements or functional specifications from the firm. "What starts as a accustom project for a capital markets firm may end up in enhancements to the commercial product they're paying for and ultimately in the hands of all the other licensees of that product, including their competitors," warns Aite.

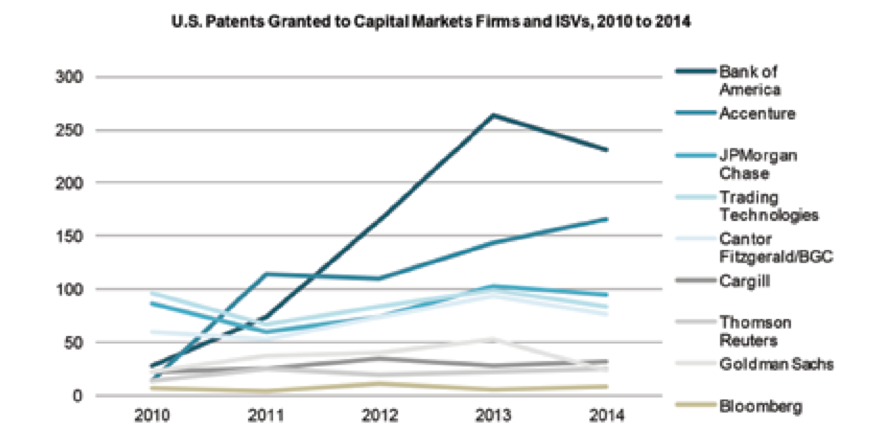
While some of the larger global banks have plenty of patents – Bank of America patented more than 200 in 2014 – most others produce far less. The same year, Goldman Sachs patented less than 50. Ironically, markets have been established for IP itself, built on the capital markets model. Cantor Fitzgerald operates an IP auction marketplace, while a number of patent brokers exist including GTT Group, Inflexion Point, Ocean Tomo (owned by ICAP) and Pluritas.

IP can also be converted into cash. Specifically, patents can be cross-licenced, and in a number of industries such as aerospace, this is commonplace. Licencing IP for use by others is a way to bring in revenue. For example, some companies have large patent portfolios that bring in annual licencing revenue of $250 million or more. A few even early billions from their IP.

Aite makes several recommendations for capital markets firms. Chief among these is to licence their IP, revisiting all relationships with independent software vendors to make sure that these are paying for any IP they receive. They should also licence their patents and trademarks to take advantage of new opportunities and solve problems. For example, each company should focus on what it does well and find partners to do the tasks it doesn't.

"Firms that hope to reap the benefits of innovation as an IP asset must develop firm-wide IP action plans," said Weiss. "Such IP action plans include elements of employee engagement, institutionalised innovation in business and technology, IP capture, patent filing and prosecution and IP monetisation." ***BT***

Capital Markets Firms and ISVs' U.S. Patent Growth



Source: IFI CLAIMS Patent Services, USPTO

Scepticism surfaces at Finovate London

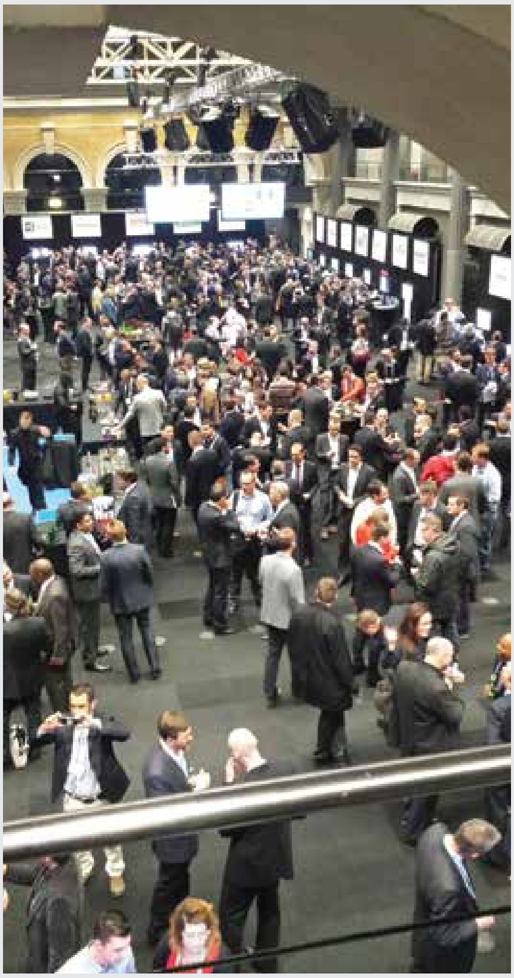
Some of the ideas and concepts in the fintech start-up space will turn into the services of the future – but some are gimmicks with no lasting market, reports *Elliott Holley*

Customers are busy and don't have time to deal with slow banking services and processes. Instead, they want social media banking and more sophisticated personal banking, together with benefits that are convenient to them. This was the message of presenters at the Finovate conference in London – but not everyone in the audience was convinced about the ability of new technologies to realise that vision.

"Why can't I use Facebook to pay my son some emergency cash, if he's taking his girlfriend for a Valentine's Day meal and suddenly realises he's run out of cash?" asked one senior executive from Delta Bank. "People don't want to use their internet banking they want social media. With our interface you can do it in 30 seconds. You'd still be logging in on a traditional interface!"

Other speakers talked about the ubiquity of mobile technology and how a customer should be able to walk into a store and receive a push notification of a customised offer, relevant to that particular individual, such as a 20% restaurant meal discount at his favourite Italian. But away from the presentations on the main stage, delegates privately expressed reservations. One senior Swiss banker told *Banking Technology* that his own bank's experiments with the technology suggested that there wasn't a market for it.

"We found that out of a large customer sample, the number of people who actually used it was tiny," he said. "That's because first of all, you need to allow the bank to follow your movements – and a lot of people clicked 'no'. And after that, you need to select the option to allow push notifications – which again a lot of people turned off or rejected. And even then, if they pass by the Bluetooth reader too quickly, it may not recognise them – and that's assuming they've even got Bluetooth switched on at all."



"We found that out of a large customer sample, the number of people who actually used the technology was tiny ..."

Several of the other companies presenting at Finovate focused on bringing aspects of personal financial management to retail banking services. These include Telenor, the Serbian telco working with Asseco to create Telenor Banka in Serbia. The company's visual personal banking display features coloured charts and an interface reminiscent of Moven, the online-only bank championed by Brett King. The interface features a selection of currencies including US dollar, euro, Swiss franc, sterling and Norwegian kroner. The interface also includes a shopping cart icon, which takes users to an Amazon-style store for further services, including deals on the Apple iPhone 6 Plus, offered through Telenor.

Many of the companies touched on themes that are not strictly new, but have steadily been gaining ground for the last five years and more, such as mobile services, social media and gamification. For example, ICICI Bank India has already been offering payment through Facebook since September 2013, and recently launched banking on Twitter. But one of the more notable presentations was by Tivitz, a company that has built a gamification system aimed at children and young adults to help them learn about money and to save for a university education by playing games.

"We run gameathons and the children raise money from their community," said the Tivitz representative. "Banks can use this platform to engage new banking opportunities. The annual college savings gameathon teaches kids maths, it saves money for their education and it increases the customer base of banks. Its also youth targeted marketing, that accesses the families of children and their social network. And by the way – student debt increased by a million dollars in the last seven minutes, while I was on the stage." ***BT***

Skills shortage holding back growth in financial services

Chief executives of financial services organisations are looking for a blend of skills as they grapple with technological changes and increasing competition – and they are finding it hard to come by

Limited availability of key skills is seen as a threat to growth prospects by 70% of chief executives in the financial services sector a global survey by PwC shows.

Based on interviews with 410 financial services chief executives, the survey finds that the disruptive impact of new technology and new competition in the sector has created new challenges for employers looking to hire in the months ahead.

Technology is named as the most significant challenge for banking, insurance and asset management executives. "From the development of sharper human resources analytics to tapping into new pools of talent, most financial services firms are only just beginning to face these hurdles, creating opportunities for forward thinking and faster-moving businesses to pull ahead," says PwC.

At the same time, a report from specialist recruitment firm Robert Walters suggests that firms may only have themselves to blame. According to its studies several years of reduced investment in the training and development of professionals in the UK have led to a situation where 72% of businesses say they are affected by severe talent shortages, resulting in decreased productivity for nearly one in five firms (18%). A further 64% of employers say they are lacking candidates with the right technical knowledge.

Robert Walters says that this means 43% of businesses are struggling to meet deadlines and client expectations as a result of these shortages, which in turn is taking its toll on staff morale. Nearly a quarter (24%) of employers report that morale has reduced as unfilled vacancies heap pressure on existing staff.

The PwC report, *A new take on talent*, shows that more than half of financial services business leaders are planning to increase their headcount over the next year, but the number of executives seeing skills shortages as a threat has risen from a previous high of 59% last year.

According to the report, concerns centre on the shortage of employees with the right combination of skills, with more than three quarters (78%) of executives looking for a broader range of skills when hiring than they did in the past. Only 5% are confident they can secure all the skills they need.

"The key challenge financial services chief executives are faced with is how to attract, train and retrain people who for example, combine digital and industry-specific skills – few as yet possess such hybrid capabilities," said Jon Terry, PwC's Global Financial Services HR consulting leader. "The findings show that industry leaders do recognise the extraordinary challenges they face. A new take on talent and how it is deployed are going to be vital in turning the challenge of industry disruption to an opportunity."

Almost half of those surveyed by PwC say they plan to enter into a new joint venture or strategic alliance over the coming year. Nearly 40% see this as a way to access new and emerging technologies and to acquire the talent required.

Changing needs within the sector mean that employees with breadth rather than depth of knowledge are most sought by organisations creating more flexible and customer-centric experiences. These workers may lack specialist product expertise but their broader skills mean they are better able to move between clients, countries and assignments with flexible

"Businesses aren't just competing for seasoned financial services professionals, but also the more diverse and hybrid types of talent demanded in a sector facing the disruptive impact of new technology, more complex regulation and increasing competition from new entrants. Most organisations are only just beginning to get to grips with these challenges, creating opportunities for forward thinking and faster moving businesses to pull ahead," said Terry.

The Robert Walters research suggests that training is more of an issue than availability of candidates. More than half (56%) of employers have struggled to recruit for some roles, less than a third (32%) say that there is actually a lack of candidates in the market, suggesting the problem lies in the need for training and development programmes to get available candidates qualified and equipped with the right skills.

"It is evident that there is not an acute candidate shortage, but more a lack of people with the right skills and qualifications to serve businesses. After several years of under-investment in training and entry-level recruitment, businesses are now playing catch-up. Until their staffing requirements are met, employers must be particularly mindful of how the added pressure is impacting morale or risk more people leaving and exacerbating the problem," said Chris Hickey, chief executive of Robert Walters UK. "Obviously training is an essential solution, but employers also need to look outside the pool of active job seekers and consider 'passive' candidates that aren't currently hunting for a new job. There is talent out there, but it needs to be sought out. Employers also need to be more open minded about who they recruit, looking to individuals that have potential to acquire skills on the job."

Appointing interim or contract staff is the most popular strategy for managing talent shortages. 41% of employers saying they are doing this, with only a quarter (23%) recruiting from new talent pools and just 10% looking for new staff internationally.

Employers are also changing workplace policies to deal with the problem, with 42% up-skilling staff and 25% seeking to fast-track career progression opportunities for current personnel. And when staff look to leave, nearly two thirds of businesses (65%) say they use counter-offers to retain staff.

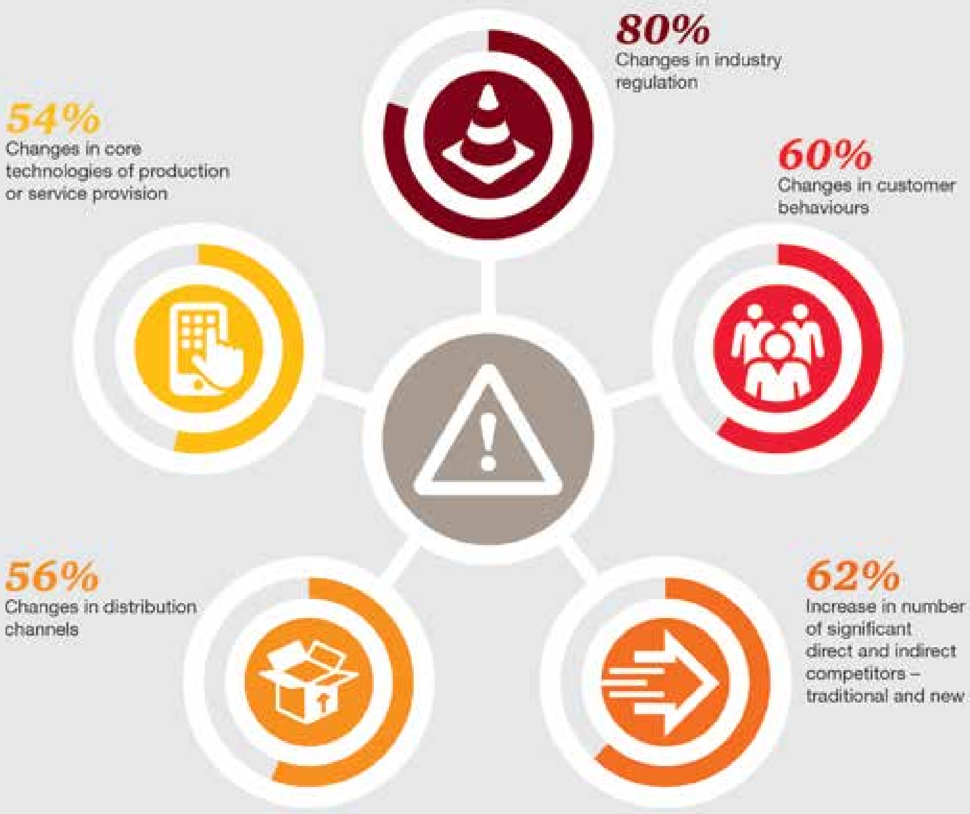
"The shortage is forcing employers to nurture they talent they have, and many are willing to fight hard to keep important individuals. Employers must react to what employees want and for many this will mean improved work-life balance, career progression and pay," said Hickey. "To overcome staffing challenges in a talent-short market, hiring managers must couple staff retention programmes with long-term recruitment strategies."

According to PWC, the difficulties faced by the financial services industry are wider. "The sudden demand for more people in areas such as technology, customer service and risk and compliance has created inevitable shortages. The image of financial services has also suffered in recent years, making it harder to compete with other industries for people with analytics, relationship and other prized skills. Further challenges centre on the reduced funds available for rewards as a result of bonus caps, pressure on returns and higher capital and compliance costs," says the report.

And of course, cyber-security is driving a need for specialist skills security. PwC says this means financial services organisations are looking for people with expertise in encryption and biometric verification, but "as the threats grow, we're also seeing people being brought in with intelligence backgrounds and even former hackers," it says.

Industry disruptors and their impact

Q: How disruptive do you think the following trends will be for your industry over the next five years?
Respondents who stated 'very disruptive' or 'somewhat disruptive'



Source: PwC 18th Annual Global CEO Survey – Key talent findings in the financial services sector
Findings are based on interviews with 410 financial services CEOs in 62 countries

A balancing act

When the first commercially available mobile phone was released in October 1983, the first step was taken towards a different kind of banking – where consumers would have to be served in real time. It is a path that is steadily transforming the ways in which financial services are delivered, writes *Elliott Holley*

Mobile banking and payments have burgeoned in the retail channels, but their need for real time processing has existential implications for a bank's internal systems, where batch processing has been the norm for decades.

When end of day accounting was good enough, end-of-day processing was fine, but now retail customers are being offered real-time balance updates on their phones – without even having to launch their banking apps – and corporates want to better monitor their cash flows, the old systems are redundant. In the new highly-regulated world, banks also benefit by being able to monitor liquidity and managing risk.

As Capco partner Bernd Richter puts it, the rise of consumer engagement via mobile presages a shift towards a new kind of economy – but banks will have to improve their systems to make that possibility a reality.

"Real-time payments are the key to unlocking the real-time economy," he says. "Customers expect real-time services, so banks will need to move towards faster processing of payments. As the banks get more transactions through, they move from end of day settlement to settling three times a day or even more often."

Signs of the shift are everywhere, especially in retail. The decline of the bank branch over the last 20 years has gone hand in hand with the rise of mobile. A study published in February 2015 by budgeting account provider Think Money found that almost half (46%) of UK adults say they access their online banking through their mobile phone or an app, while seven in 10 (69%) of 18-24s use their mobile to bank. This process goes all the way back to 1995, when Motorola began work on a system that would allow mobile internet – and it is still accelerating. Last year, analyst firm Juniper Research predicted that more people will be using mobile apps for banking than web-based options by 2019, as the 800 million people who used their phones for banking more than doubles to 1.75 billion.

But if retail banking services are to be destroyed and remade in the image of a new, real-time mobile world, as financial services author Brett King and other proponents of the mobile revolution such as Moven, Holvi, and mBank claim, how should financial institutions repsond?

John Gessau, head of product management for mobile at ACI Worldwide, agrees that the growth of mobile technology in financial services has brought pressure on the industry to make sure that payment processes run in real time. For example, he says, M-Pesa in Kenya was real-time from day one. "Real-time service is the beating heart that underpins all mobile initiatives," he said. "We are seeing a sharp rise in the number of 'faster payments' projects in countries around the world, and this is the building block that will allow the growth of real time services."

Given this reality, some businesses are starting to question the logic of long-established business paradigms – including some of the most ubiquitous forms of payment. According to Richter, the rise of real-time mobile technology presents an opportunity to cut out the card companies and the merchant acquirers, realising huge cost befits for end consumers. Capco is working on a pilot programme with a group of corporates and banks in Germany to create an infrastructure system that would connect them with retail businesses without the involvement of card schemes.

"Why do I really need a card? Now that digital services exist, what value is it adding? I can bypass all that and lower the cost to zero."

Bernd Richter, Capco

"The card schemes and merchant acquirers are making a lot of money from interchange fees without benefiting the consumer or adding any value," he said. "If the merchants lower the interchange, as they have been doing, then that service becomes unattractive for banks. The whole system will no longer work. We may end up having to pay for cards instead. But the question is, why do I really need a card? Now that digital services exist, what value is it adding? I can bypass all that and lower the cost to zero."

Cards can be expensive for merchants as well as customers. In some cases, the merchant will simply pass on the fee to the customer in the form of an extra charge, but many merchants would prefer not to have to do this as it may alienate the customer. For that reason some merchants encourage their customers to pay with cash below a threshold, often £10. In some countries, such as Germany, there is a giro interbank system for cards, in which the banks bypass the Visa and MasterCard network domestically and simply allow them to brand the cards for a fee. However, even these banks still use the credit schemes for payments outside Germany.

Richter added that he believes card schemes will eventually disappear. In their place, he says, new business models will emerge based on data, rather than on physical cards. Customers should be rewarded for their loyalty with offers and discounts. The project Capco is working on is informal and doesn't have an official title, but he calls it mobile payments ecosystem. The idea, he says, is to create an interoperable system open to anyone who wishes to join, including third party services.

However, Gessau at ACI Worldwide cautions that while it may be possible to realise some costs savings by making the payments network more efficient, the card schemes would need to be replaced by something better first, rather than simply being removed in the hope that such an improvement will materialise. Even relatively new payment options such as Google Wallet and Apple Pay ultimately rely on cards, since all they do is effectively aggregate a customer's cards into a single app based on a mobile device. The reliance on cards is in no way challenged by these services, as far as they go.

"MCX in the US have been quite bold in pushing back against the card associations, but they've really struggled," said Gessau. "It's fine to take the rails away, but at the end of the day you need to connect with all the issuers and you need a way to validate that. Who else might step in? There's a lot of suspicion about mobile operators, because they have been greedy and wanted to keep a larger slice of the pie for themselves, and that has put a lot of people off, especially the banks. Perhaps the card schemes could reinvent themselves successfully, particularly if they are not too greedy – but I don't see any sign of that yet."

Mobile also faces obstacles in the consumer sphere. Retail customers

are still concerned about security. Fear of fraud is the main factor slowing the adoption of smartphone-based payments among UK consumers, though a third believes that credit and debit card payments will no longer be the preferred method of payment in 2020. A recent study, *Banking Moving Forward*, by information services specialist Experian found that half 46% fear identity theft online while 60% of smartphone users said they had no malware protection on their devices, leaving them vulnerable to hacking by cyber fraudsters.

Even assuming customers are not held back by fears about security, there is no guarantee they will use a mobile payment service. In some markets such as Japan, text-based banking was already popular in the early 2000s thanks to NTT Docomo and the launch of the Osaifu-Keitai mobile wallet in 2004. This early success led some companies to believe that mobile money was the future. But not every initiative has fared nearly so well. Launched in 2011, Google Wallet's struggle to gain traction has been well publicised, and there are plenty of examples of other mobile wallets that became casualties – notably the 02 mobile wallet, which ceased operation in March 2014 after it failed to attract customers.

According to Gessau, part of the problem is that platforms such as ApplePay haven't done enough to add value for consumers and merchants. It is not enough to launch a service that offers mobile payments – instead, the value proposition should be carefully scrutinised. A more interesting example, he says, is AliPay, the mobile payments tool launched by Chinese e-commerce business Alibaba in 2004, which now has 300 million users. Alipay allows users to verify whether they are happy with a purchase before making payment. This can be useful in China, where there is limited consumer protection and where customers may be concerned about quality control. Alipay does not charge transaction fees.

Whichever way you look at it, the range of choices consumers face when moving their money is increasing. Last month India's ICICI Bank launched Twitter banking, in which customers can transfer money to anyone in the country who has a Twitter account. The bank had previously launched a similar service on Facebook in September 2013. Meanwhile, in October 2014 Italian payment processing specialist SIA released a new P2P payments service called Jiffy, which allows users to send and receive funds on their smartphone using their phone contacts. SIA has big plans for the service, which it aims to roll out to 400 million European current account holders over the next couple of years. Other services, such as Paym in the UK, allow consumers to send payments to their contacts using their mobile number, rather than their bank details. Virtually all the major UK banks support the service, which is based on network technology built by payments processor VocaLink.

Mobile financial services are not only about retail payments, either. Corporates represent another major segment of the market – albeit one that typically follows behind the retail market by two or three years. Gessau believes that there is a shift towards banks offering mobile services for corporates as well as retail consumers. "We are increasingly seeing mobile corporate services, for example to allow corporate executives to approve a payment or to deposit a cheque electronically," he said.

A world, then, of challenges and opportunities – but hasn't it always been so? ***BT***

HCE: SECURING MOBILE PAYMENTS IN THE ANDROID WORLD

While Apple Pay's use of the Secure Element approach to tokenisation of card information has hogged the headlines, the alternative cloud-based Host Card Emulation is also gaining ground in the world of Android development.

MasterCard, which announced support for HCE a year ago, says that more than 25 pilots and programmes are underway in more than 15 countries including Australia, Canada, France, Germany, Italy, Russia, Spain, the United Kingdom and the United States.

Albert Figueras, retail banking director at Banco Sabadell, said: "Our pilot was a great opportunity for us to partner with MasterCard in our first HCE solution launch in the market. The project provided useful information that enabled us to define the SabadellWallet and to offer our clients the best experience in mobile payments."

Santander has also been working with MasterCard since the introduction of HCE. "During the coming months, we will see new payment services being launched as part of Santander's innovation roadmap, offering our customers new, more convenient and more secure payment experiences that take advantage of new capabilities from mobile devices," said José María Fuster, general manager and innovation head at Santander. "The goal of Santander is to be at the edge of innovation by providing new services to our customers across all markets where we have retail banking business, and using innovation to build simple, personal and fair value propositions for our more than 100 million customers."

According to Alberto Naef, head of global marketing at Unicredit Group, HCE is "one of the best available technologies" for mobile payments services on a large scale. "In the digital payments industry, we are witnessing a convergence between mobile payments and eCommerce. As such, UniCredit Group and MasterCard are working together to develop a project based on HCE technology, which will prove of paramount importance, not only in Italy, but also in all the other countries where our Group is present," he said.

Who's afraid of the big bad cloud?

Not so very long ago financial institutions were pooh-poohing the idea of migrating systems to cloud-based platforms: now it's routine. So what changed? Nothing much, writes *David Bannister*

If banks and financial institutions are so worried about the security of cloud computing how come they are confident enough to offer cloud storage services to clients using their security credentials as a selling point?

Over the past year a number of big institutions have played on the safe-deposit model – give us your valuables and we'll take care of them. Barclays offers cloud based storage of valuable documents to its retail customers and Santander has recently gone down a similar route for commercial customers.

Two things are in play here: firstly, it was never true that financial institutions found the cloud scary – reduction of capital and operating expenditure is something bank CIOs have always been keen on, as their enthusiasm for offshoring and business process outsourcing attests.

Secondly, despite the financial crisis and the public excoriation of 'bankers', the fact is that survey after survey shows that when it comes to looking after things, banks retain a far higher level of trust than almost every other sector, with the possible exception of healthcare.

As a result, and as alternative service providers such as PayPal eat away at the bank's traditional revenue streams, the idea of offering services that will increase customer loyalty becomes very attractive.

Even so, these emerging service offerings would not be possible if the banks hadn't already embraced cloud, but it was a topic of contention up till about two years ago, when many banks CIOs looked around them and realised that they'd been implementing 'cloud' platforms for years: just 18 months ago a CIO from JP Morgan told a conference audience that while on the one hand he was pooh-poohing the role of cloud in financial services, the reality was that "we have four industrial grade production systems around the world that are cloud-based and that any of our staff can access from any device, anywhere". None of the bank's customers, though.

One of the most prominent technologists in the banking world, Cathy Bessant, global technology and operations executive at Bank of America, was initially sceptical about the potential of cloud, but has mellowed. "I'll step away from a blanket statement that I used to make, which was that Bank of America won't ever find full application for a public cloud because of the nature of the data that we keep and store," she says. "Although I do think that it is highly unlikely, I've just learnt in this space never to say never. Ultimately there will be a public view whether or not it is appropriate for certain things to be housed or reside openly in a public way."

Two things were seen as barriers to cloud adoption for financial services: data and regulation, and to some extent they are interlinked. Data security is clearly important, but increasingly, data location is an issue: some governments insist that data used in trading, for instance, is stored in that county. Equally, many banks have customers who don't do business in the US and don't want their data stored on servers in the US, usually because of the US Patriot Act which allows government agencies to access data.

More importantly, until relatively recently, central bank regulators were very proscriptive in about how banks managed data, especially sensitive customer data. "We have to be able to tell the regulators which of our own servers we have some data on. How can we do that in the cloud?" asked one panellist at a (relatively) recent banking IT event.

In practice, growing understanding of the issues among regulators means this is rarely an issue now. In fact regulators are taking the initiative in green-lighting projects where cloud is having a big impact – the creation of brand-new banks.

The UK Government has been trying to loosen the domination of the big four banks – which have 77% of the personal current account market and more than 85% of the small business banking sector. To this end it has relaxed the rules governing the application process for a banking licence, announcing two years ago that potential new entrants to the UK banking market that have "the development backing, capital and infrastructure to allow them to set the bank up at speed" – such as where they are able to use existing IT and other infrastructure – will also be able to take advantage of an improved authorisation process that should allow them to be fast-tracked through in as little as just six months.

This streamlined process reduced the time taken to get Hampden & Co, a new UK private bank, off the starting blocks (*Banking Technology, February 2015*).

According to Ray Entwistle, founder and chairman of the Edinburgh-based bank, the authorities have lived up to this promise. "Behind the scenes, things were happening very quickly," he says. "The big change was that previously you had to get everything in place first including the systems, and then apply – which is not a good way to raise capital."

Under the new approach, the Bank of England, the Financial Conduct Authority and Prudential Regulation Authority effectively issue a provisional license to the new institution and monitor it for a year. This so-called mobilisation process – which Hampden was one of the first to go through – has improved the procedure by allowing the management team to raise capital against a more tangible business plan, according to Entwistle.

Hampden selected Oracle Flexcube to manage its core banking, direct and mobile banking operations through Oracle Managed Cloud Services to provide a "comprehensive, secure, and compliant digital banking platform that is scalable in-line with business growth.

The choice will mean little capital expenditure and "significantly lower operational costs". The software will be hosted at an Oracle UK data centre in Linlithgow, Scotland, and the bank says it expects the applications and technology to play a "significant role in helping the bank meet today's rigorous compliance requirements" outlined by the FCA and PRA.

More established banks have a different problem – legacy systems, some of which go back 30 years. These are a major headache for all the normal reasons associated with ageing systems – inflexibility, increased maintenance cost, the declining number of people able to carry out maintenance of old languages like Cobol.

They also have the additional problem that many of them grew by acquisition – JP Morgan, for instance, bought Chase Manhattan, which had bought Chemical Bank, which had merged with Manufacturers Hannover and so on back in a list that reads like something from the Old Testament.

The upshot was that at one stage it had some 60 core systems, all with differing architectures, subsystems and data dependencies. (In this world, 'core' means more than central, it's a jargon term for the systems that run the general ledgers where all transactions are recorded.)

Even more important for banks is that most of those systems will be based on overnight batch processing and so are wildly out of sync with the needs of today's real-time mobile and internet banking world.

Into this market are stepping new vendors offering cloud-based systems and services that can be used for both legacy modernisation and by new-entrant banks.

One such is Mambu, which offers cloud-based core banking systems to existing retail banks – Banco Macro, the largest domestic private bank in Argentina, for instance – new entrants and microfinance providers in places like Africa.

Eugene Danilkis, chief executive and co-founder of Mambu, says that speed and flexibility are the key benefits that cloud brings to financial services, but cautions that there is a need for existing players to adopt a different approach as they modernise.

"It isn't about replacing a massive in-house system with a massive system in the cloud," he says. "The general ledger has to be part of the mind-set of banks, and while you can say you're in the cloud by moving your servers to another building, that's not really what it is all about – the business agility is the benefit."

Danilkis also says that the security issue of cloud computing has largely been dealt with by the providers, but adds that the addition of social media to the mix brings a need for education of the end user. "Just as Amazon has addressed security at the infrastructure level, we have moved that up to the application level," he says.

In a very different part of the sector, Abacus Group has just signed the 200th client for its private cloud-based service for hedge management firms – a market that has traditionally been technology-light.

Jason Elmer, director of business development at New York-based Abacus, says that when the firm set up in 2008 the technology was not widely accepted, particularly because of the off-site data issues, but it has won through because it offers three principle benefits in this market.

For new start-up funds, there are the benefits of reduced time-to-market and low initial costs coupled with a scalable resources-on demand model, while some of the larger, longer established funds are turning to the technology either to reduce their costs or to improve resiliency.

While there remain issues – "security comes up in every meeting, because as a vertical it has a lot of sensitive data that has to be protected", Elmer says, the "mental roadblock" about cloud platforms that the company encountered in its early days has largely evaporated: "I think that it has become very well-received – it's almost regarded as best practice, in fact." ***BT***

A Cinderella story

Since the financial crisis, transaction banking has gone from being the poor relation of investment banking and the invisible relation of retail to a reliable source of revenue

Transaction banking has evolved to the point where it is a complement to the other parts of large banking groups rather than a loose agglomeration of services and capabilities that simply support the parent.

The importance of this was noted several years ago by observers such as PwC, which produced a number of reports on how the post-crisis landscape was reshaping the role of transaction banking, putting it at the forefront of customer relationships and providing reliable revenue streams.

It's perhaps not surprising, then, that senior management in the sector felt that they should have more of a voice, particularly in dealing with regulators, central banks and other agencies.

Appropriately, this was bubbling under at the time Swift's Sibos 2008 event was held in Vienna, in the same week as Lehman Brothers collapsed.

One of the results has been a rejuvenation of BAFT, formed by the merger of the existing Bankers Association for Finance and Trade and the International Financial Services Association into what is now a leading association for transaction banking.

As one of the instigators of the change put it "we thought it would be a really good idea to ask the leaders of the big transaction banks to get together from time to time because there was no forum to talk at that level and at that stage the transaction model had become pretty well established".

Since then the association has grown and now consists of most of the largest transaction banking businesses from around the world, along with suppliers and some government agencies such as the US Department of the Treasury. They meet once a year in person at Sibos, and by telephone three or four times a year.

Characteristically, they tend to focus on specific issues of importance rather than as one described it, "boil the ocean". For instance, it was BAFT that said to Swift and the industry at large that something needed to be done about KYC inefficiencies.

It also holds an annual European Forum, which this year was held in Amsterdam. Attended by global heads of trade, heads of transaction banking and even some bank chief executives, the event is held under the Chatham House Rule*, which allows reporting of the subject but not the identity of the participants.

Aside from sessions on regulation and compliance, three themes affecting the industry were discussed: the quasi-political role of banks in society, relationships with corporate clients; and the role of transaction bankers within that.

"In the post-crisis world society's expectations of banks is to provide products and financing and play a much broader role," said one delegate. "You can see conversations in Europe about turning banks into something much more like utilities. In Asia, Africa and the Middle East there is a very big emphasis on growth and there is an expectation of banks that they will facilitate this growth. Either way, we are dealing with a number of markets that are in political transact transition."

This is a widely-held view. "To my mind this business has become a lot more strategic to our different constituencies – be that the clients, economies as a whole, policymakers and the banks themselves," said another. "There are several reasons for this: first and foremost is that what this business fundamentally does is facilitates and services the capital, commercial and financial flows of our clients around the world and

by that logic, it provides impetus to globalisation and economic growth."

Because of this, panellists told the audience, "there is a structural shift – particularly in the relationship between banks and regulators, which is not going away – that banks need understand and embrace".

The relationship between bank and client has also changed, putting the transaction bank closer to the client. "Historically, we think of the transaction bank as an aggregation of capabilities that are more technology and operations driven – ranging from payments to short-term capital to the safekeeping of securities and security services," said one delegate. "Increasingly it is about working capital as much as about operational needs. Transaction bankers have a way of embedding themselves in the clients' organisations which is very powerful and helpful from the client perspective. If you think about some of the trends we can see quite clearly it's not just about product delivery. It is about a consultative approach and solutions: clients need people to help them better understand the world they are in from the regulatory perspective – and optimising their cash and payments is always a core area."

For the banks themselves this almost goes full circle to the conversations that started BAFT in the first place about how the sector is evolving from a fairly narrow product capability to one that is increasingly client facing, and critical to the building and cementing of client relationships. "Culturally that is very interesting: traditionally transaction bankers looked upwards to their global banking groups, whether that was an investment bank or a markets division, or whatever," said one speaker. "Transaction bankers or transaction banking as a sector, is increasingly gaining confidence in its ability to not just supply products to those organisations, but also shaping the culture of client relationships."

Another pointed to a fundamental attribute of transaction banking that became clear in the wake of the crisis as investment banks revenues dried up: "This is a business, if you look at its attributes and the kind of relationships, that creates returns and predictability of the revenue streams of a bank. If you have a very strong transaction services business, you are able to take volatility on the other side, which could be very good businesses in capital markets or merchant banking, but episodic – it balances out; in many instances they complement each other," he said. "The relationships that we have built with many clients around the world in transaction banking can serve as an anchor to other products and other solutions for them. I really think this the next frontier in banking and why we as a group have focused on helping our constituencies to develop a better understanding and appreciation of this business."

Among the many signs that the sector is reaching a maturity is the adoption of standards. "In the natural evolution of any industry or organisation, if you are evolving towards a value addition then activities that become more commoditised are either handed over to scale providers or the industry starts subjecting them to a standard infrastructure," said one delegate. "An example is SEPA. When that started everyone was of the view that it was going to eat into revenues but, while we are still dealing with a fragmented infrastructure because the convergence hasn't happened fully, the important point is that the banks are generally better off because they were forced into more value-added services."

While this is true, a lot of the work done on SEPA was focused on the rules "which is critical and necessary but not sufficient," said one panellist. "The question is how you actually add more value and improve the outcomes. KYC and AML are a common area of focus for the industry: is it really value if we have to run our own proprietary systems? In an ideal world, we should have somebody developing certain rules and industry standards to a reasonable extent that all of the industry can work from. What it will really do is converge fixed costs into variable costs and the ability to invest in more value-added things will increase."

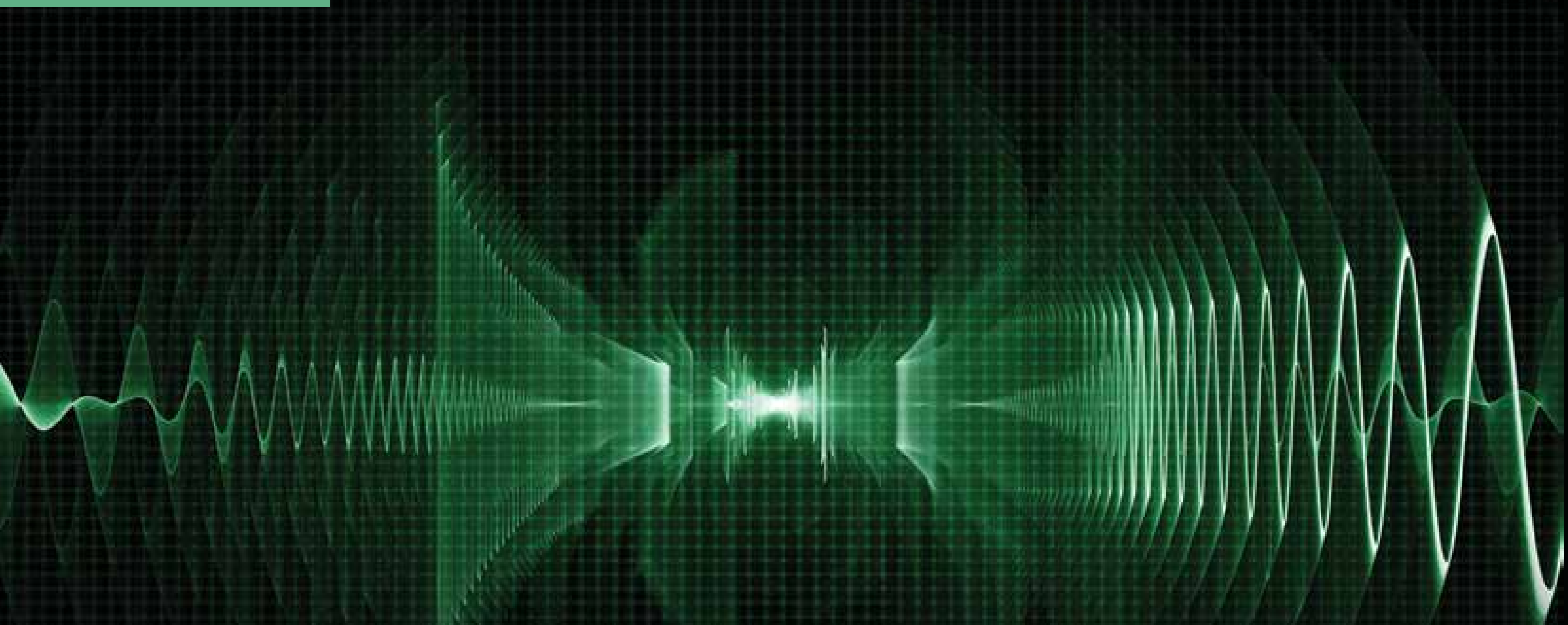
Another speaker said that the same logic can be applied to data: "There are a lot of important things happening in data, both from individual banks and as an industry, to provide better insights for clients. There is data going into your pipes that is proprietary, you have data from public sources, and then the client can provide their own data, which is typically not transactional. If you combine the three together you can create very good business insights for your client. Simultaneously what is happening is that all the big firms are really standardising their own databases. At some stage you reach inflection point as an industry where you see more and more standardisation."

Some participants said that might be all very well for the top transactional banks, but what about the smaller people? As in other areas of expenditure, the trickle-down effect is expected to apply as technology costs tumble and the experience of the larger players percolates throughout the industry. One delegate give an example of a project in 2000 to host a single web-based application in the cloud that cost $150,000 a month to run – today the price is $1,500.

"If you're big or small the technology is accessible enough and economical enough for you to build and exploit it," he said. ***BT***

***The Chatham House Rule**

When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.



Banking on biometrics

Biometrics have long moved out of the labs and into consumers' lives, but there is more to the technology than simple security, writes *David Bannister*

The introduction of fingerprint recognition on smartphones and Apple's Siri voice-recognition and synthesis digital assistant have pushed the erstwhile science fiction technologies of biometrics into the consumer mainstream over the past few years.

At the same time, while biometrics have been in used by banks for many years, their use has generally been as a security application. As the industry lurches towards digitally-driven customer-oriented services, they are now being seen as a way of "improving the customer experience".

This is particularly true of voice biometrics, which allows a human to answer an incoming call while the software runs in the background identifying the caller.

One of the leading companies in the field is Nuance, whose voice biometrics solutions are now in wide use. "Organisations around the globe are demonstrating first-hand that voice biometrics is a desirable alternative to PINs and passwords," said Robert Weideman, executive vice president and general manager for the Enterprise Division of Nuance. "The 'password problem' is universal, and voice biometrics offers a proven alternative for organisations to enhance security and at the same time improve their customer experience."

In the UAE Abu Dhabi Commercial Bank deployed Nuance as a means to authenticate customers and allow them to perform banking transactions via phone or mobile devices more easily and securely. ADCB is the first bank in the region to offer voice biometrics in three languages: Arabic, English and Hindi.

Banco Santander Mexico was the first bank in in the country to deploy voice biometrics on its automated phone system, reporting that authentication success rates have doubled and 2.3 million customers have enrolled.

Nuance's voice biometrics solutions have been adopted globally by other large organisations as well, such as Barclays Wealth & Investment Management – which won a 2013 *Banking Technology* Award for its implementation – ING Netherlands, Tangerine Bank, Tatra Banka, TD Waterhouse, Turkcell, T-Mobile and Vanguard.

One of the latest customers is Investec in South Africa, which is using the system to authenticate its private banking and wealth management clients.

Investec worked in partnership with One Vault, a South Africa-based specialist voice biometric company, conversation, to install the FreeSpeech software, which will be rolled out to the bank's international offices following the go-live at the end of last month.

Craig West, head of Investec's Global Client Support Centre, says that the bank had been considering the technology for around 10 years as it fits with the relationship needs of private banking and wealth management clients, but the technology has now matured to the extent that it is very reliable and easy to install. In total, the bank went from pilot to live use in about six months.

West says that it takes around 30 seconds to record the client's voice print and just five seconds for subsequent verification when they call into the bank's call centres. "It's a bit of a game-changer, and it is not an expensive project," he says. "The telephone infrastructure didn't need changing and we mainly used in-house project teams and worked with Nuance and One Vault to bring the project in on time and under budget. I have to doff my hat to them."

But improving the customer experience is not the only application of the new generation voice biometric solutions – improving compliance thorough compliance is the goal of Banco Bilbao Vizcaya Argentaria, which is rolling out a linguistic analysis and trading compliance system to proactively monitor and prevent trading malpractice at its London and New York headquarters.

The bank is extending its use of a system supplied by Fonetic to improve its trading-floor surveillance and compliance operations by looking directly into the trading floor audio patterns, detecting languages, pronunciations and accents, to actually understand the context of calls and detect potential compliance risks, flagging them before they occur. In doing so, BBVA will no longer have to carry out manual trade monitoring on its London and New York trading floors – which traditionally requires significant manpower. The bank has been using the system on its trading floors in Spain for nearly almost seven years.

"BBVA selected Fonetic as our provider for implementation and delivery of our Trading Record Keeping Compliance solution into our bank in 2009," says Pedro Molpeceres, private banking global projects executive at BBVA. "Fonetic delivered and executed on this solution extremely professionally and continue to enhance the product and service level they provide to us."

A glimpse of the future integration of biometrics into everyday life appeared at a recent ATM Industry Association event in Las Vegas, when digital infrastructure security company Hoyos Labs demonstrated its new biometrics-based ATM that will eliminate the need for cards and PINs.

While most of the major ATM suppliers have used biometrics to a greater or lesser extent, Hoyos aims to let banks embed its software into their respective mobile banking apps to seamlessly enable customers to access their bank accounts and withdraw money from them by simply looking at their phones to authenticate their identities, using to use any form of biometrics – facial, fingerprint, iris or periocular (which looks at the geometry of facial features around the eye, presumably rejecting users whose eyes are too close together).

To access the ATM, customers can use the app to scan a QR code that's displayed on the ATM screen to link the ATM with the smartphone and authenticate their identities. Once the identity has been verified, customers can access their accounts to withdraw money using the ATM or automatically get amounts of cash that have been queued up in the app beforehand. The app also uses a proprietary "liveness" detection system that is capable of distinguishing a real person from an image or video.

This app is built on the HoyosID identity assertion platform and operates without using Near Field Communications , eliminating the risk of a user's financial information being stolen via proximity attacks. It does not store PINs, passwords or bank card numbers on smartphones at any time.

Customers can download the mobile banking app on their phones to link the ATM with bank accounts – no additional hardware is needed. The HoyosID-enabled ATM software, which requires no retrofitting of ATMs, establishes a secure two-way SSL communication between the ATM and Biometric Open Protocol Standard compliant bank server. BOPS was developed by Hoyos Labs and is an IEEE standard. It comprises a set of rules that govern secure communications among a variety of client devices including mobile phones, desktop computers and ATMs, among others, and a trusted server managing the acquisition and manipulation of biometric data captured by those devices.

"Every time that bank customers use ATMs, they are at risk of being skimmed, as 50% of ATM fraud now originates from cards that are skimmed at bank-owned ATMs and the figure is rising every year. Our app allows people to access their bank accounts and withdraw money by doing nothing more than taking a selfie to authenticate their identities," says Hector Hoyos, chief executive of Hoyos Labs. "Two things are paramount when it comes to financial transactions – privacy and convenience. Using biometrics as a means of authentication ensures that you, and only you, are granted access." *BT*

BIOMETRICS: KEY TO ALLAYING CONSUMER FEARS?

Fear of fraud is the main factor slowing the adoption of smartphone-based payments among UK consumers, but nearly half would be comfortable using some form of biometrics to validate a payment

A study, *Banking Moving Forward*, by information services specialist Experian found that 14% of respondents believe that biometrics, such as retina or fingerprint scans, will become commonplace by 2020 and 44% say they would be prepared to make payments via biometric scanning. A fifth (19%) would consider paying for goods and services using voice authentication.

Half (46%) of respondents fear identity theft online while 60% of smartphone users said they had no malware protection on their devices, leaving them vulnerable to hacking by cyber fraudsters.

The study examines how people bank now and how they expect to bank in the future and found that that while cash and card payments still dominate, people believe that alternative methods of payment such as smartphones will become more widely used over the next five years. In this timeframe, 67% of respondents said cash will decrease in popularity, while 41% think there will be a decline in the use of credit and debit cards in their current form.

When asked about other forms of payment 80% said that secure online payment platforms such as PayPal, that let people shop using their debit card, credit card or bank account without sharing their financial details, will become more popular by 2020.

Nurturing innovation

Recently appointed president of investment and advisory firm Anthemis *Amy Nauiokas* talks to *Elliott Holley* about her plans to reinvent the world of financial services

When Amy Nauiokas left her job as chief executive of Barclays Stockbrokers in 2008, she was taking a risk. Two years earlier, at just 34, she had become one of the most successful women in finance. Before that, she'd been head of e commerce at Barclays Capital. She was already known for her efforts rebuilding the team at Cantor Fitzgerald in New York in the years after 9/11.

But the world was changing fast, and the rising star felt that the time was right to do something different – to embrace change as a force for good in the financial sector and in wider society.

"I had all the things you are supposed to have – the degree, the analyst programme, the experience – but I just didn't want to follow the linear path to the CEO room," she says. "I saw my peers moving to the dot-coms. I could see the world changing before my eyes, and I thought, 'There has to be a way to take advantage of this'. There is so much more we could achieve."

Nauiokas identified a number of places where technology was driving growth in the business. The decision helped to separate her from the pack – and to get noticed. But it was hard to be an evangelist for new ways of doing business within one of the world's largest financial institutions. "You spend all your time convincing people," she says. Eventually, she decided to leave. "And that's when we started putting Anthemis together."

Nauiokas and co-founder Sean Park called the company Anthemis after a flower related to camomile. It was, she says, a name that was carefully chosen: the flower is said to nurture other plants around it, so like its namesake, the company's advisory and investment arms aim to have a nurturing role – in this case, for innovative fintech start-ups. Anthemis has a portfolio of 27 smaller companies, including the likes of eToro, an online social investment network, as well as cross-border payments company Azimo, online-only Fidor Bank, Moven, The Currency Cloud and many others.

From the beginning, the new company set out to be different. At its London office, there is a bookcase near the lobby filled with books, each on a different country, city or region. A note explains that these represent the home of each individual Anthemis employee. Inside Nauiokas' office, there is another bookcase, containing a far more varied range of books on all kinds of topics.

"Each employee has to bring in three favourite books," she says. "We really focused on hiring the people with the right DNA. We wanted people that have interests outside the office. They also need to have the right mix of experience in the industry, combined with being something of an 'outsider' with a fresh perspective. Once you join a large institution, you have perhaps eight months of adding value, before you become sucked into the internal culture and start to lose the value-add. We all come from this space, but it's that outsider perspective that's so important for our clients, because we know how those ideas can make a difference on the inside."

The business idea behind Anthemis was that the world is changing. For years, themes such as Big Data, cloud computing and mobile payments have been gracing the agendas of financial services conferences such as Sibos (where these were the primary themes in 2010). But according to Nauiokas, the big difference now is that for the first time, people within the major financial institutions are actually listening.

"We have seen an interest in transparency and a cry for openness and fairness of markets. Some of it is not new – at Barclays from 2006-8, a big part of the driver for what we were doing was giving the customer the tools to manage their own future. But 10 years ago, only the super-wealthy could access these kinds of tools – the kind of people that were already making investments and getting into day trading. Now the tools are much more sophisticated."

They are also different from previous tools in other ways. Nauiokas points to a company in the Anthemis portfolio is called Trov – a service that is designed to act as a kind of 'digital treasure trove' that values a customer's non-financial assets. That means things such as furniture, art work, jewellery and other items, most of which are usually found at home. Trove has an e-commerce and a social aspect, since once priced these items can then be placed up for sale on the site's online marketplace. They can also be 'shared' with friends and family. The idea is a reflection of the idea that entrepreneurs are increasingly used to living in a mobile, digital world where everything is accessible via smartphone and internet connection.

While the emphasis and standards in financial services may be evolving, often prodded along by regulation, the underlying demography is also playing a role, particularly in wealth management. Much of the new wealth generation taking place in the 21st century is taking place away from the developed markets in North America and Europe. Instead, places like the Middle East, India and Asia are accumulating wealth. Many of the newly affluent members of society in these regions are relatively young.

All this is not to say that banks are behind in any sense. In many cases, financial institutions are eagerly partnering with or acquiring promising new start-ups in the fintech sector. Events such as the Citi Mobile Challenge tour the world in search of talented developers with bright new ideas. Other events such as Swift's Innotribe Startup Challenge have become an established fixture in New York, London and Singapore every year. Other banks such as RBS are also exploring their own partnerships. According to Nauiokas, it would be unfair to categorise these banks as behemoths – in fact quite the opposite. Many of the individuals 'get it' from a technological point of view and are very focused on acquiring the right startups to keep their business cutting edge. Those that look seriously into the future, she believes, will be the winners.

"We love incubating new companies," says Nauiokas. "A big part of our role is not just as a provider of capital – it's to really get into deep conversation with these companies, and understand how our experience can help them. Yes, there is a commercial aspect – we wouldn't invest if we didn't think they could succeed – but it's very positive to take time out to help incubate young companies and entrepreneurs. It's better for everyone. In this world where ideas are being encouraged, everyone wins."

One of the challenges the company faces is to go one step beyond current abilities, interesting as these might be. For example, a service such as Netflix is able to successfully recommend films and TV programmes to users, based on the user's browsing habits and history. But Nauiokas points out that while such abilities can give the customer what they needed yesterday, it may not necessarily be so good at predicting what the customer wants tomorrow – or even learning when it might be time to try something different.

"It can use what you put in, but is it aware of context?" she says. "Finding ways to anticipate what you need instead of repeating what you did previously is the future." ***BT***

Real-time clearing – the next level in cross-border digitisation of payments

John Falk, Nets International Clearing Solutions
Per Terp, Nets International Payments

"I want it all, I want it all, I want it all, and I want it now ..."

The refrain from the song performed by Queen[1] in 1989 sounds in our ears as we discuss how to begin this article. Since Brian May wrote *I Want It All* 25 years ago, a lot has happened in the world, and although bank customers were probably the last thing May had on his mind, his lyrics perfectly coin the expectations of the modern-day bank customer.

Fast-paced innovation in technology in recent years has created a business environment characterised by immediacy, and consumers all over the world are demanding universal Internet access, seamless information circulation, and instant availability of services. These expectations are also natural among bank customers, who expect money transfers to be processed instantly and with a high degree of usability and convenience.

Fuelled by this consumer demand, a tsunami of new payment solutions is emerging on the market these days: mobile solutions, contactless solutions and e-commerce solutions, all offering additional functionality and convenience. However beneficial for the users, many of the new solutions are still immature and often limited by the type of phone, telecom carrier and bank the customer uses – and sometimes they are only accepted by certain retailers

Many of these solutions are built as layers on top of the present global card infrastructure and credit transfer infrastructure using local Automated Clearing Houses,[2] but the question is whether new payment solutions will disrupt the whole payments system and replace some of the current core elements such as a bank account, cards or cash, just as the Swedish music-streaming service Spotify is disrupting the music industry, enabling us to listen to Queen from a streamed playlist instead of a record or CD.

While banks may not be first to introduce innovative payment solutions, research shows that customers prefer banks as their provider of digital wallets, as they consider banks more secure and trustworthy than retailers, technology companies or alternative payment providers when it comes to personal and financial data.

However, it is unlikely that the present infrastructure can keep up with the pace of innovation set by the new entrants onto the payments scene. In addition, pressure from the political side for lower costs for payment acceptance has grown. Consequently, the current infrastructure and payment schemes will have to change.

One significant change is the demand for an infrastructure that supports real-time payments, so that the recipient actually receives the money and a notification within seconds after the sender has initiated the payment.

Real-time vs. traditional clearing

A clearing[3] infrastructure that supports real-time payment systems differs from traditional clearing systems in relation to the following characteristics:

- Always available: Accessible every second, all year round
- Real-time payments: Payments are sent and received within seconds
- Finality: Once payments are sent, they can't be recalled (as they are received instantly)
- Certainty: Immediate acknowledgement or rejection of payment
- Deferred settlement: Periodic net settlement between participants after the payment has been made, or line-by-line settlement, depending on the clearing solution.

It appears, though, that the financial industry has recognised that the age of digital commerce, technology and very capable personal electronic devices is here, and that corporate customers as well as consumers are demanding faster, global, more convenient and cheaper ways of making payments.

Real-time payments (RTP) are on the top of the agenda for financial communities around the world. While a few countries have had RTP for years, others are on the verge of implementing it, and more are still debating how to do it in next 5–10 years.

While there is still no clear preferred definition of what constitutes a real-time payments system[4], international conferences, newsletters, large consultancy firms and the global industry are eagerly discussing this hottest trend within payments.

The predominant drivers for moving towards real-time payments seem to be:

- Regulatory pressure or regulation – often from national central banks
- Mobile offerings demanding real-time payments
- Corporate and consumer demands for richer functionality or faster payments – also outside typical banking hours
- A need for an instrument to reduce requirements for cash
- And, last but not least, the fear of competition from new players such as Google, Facebook, Starbucks[5] – consider these statistics:
    - Starbucks customers add $3 billion annually to their cards, a figure that rivals many banks.
    - One-third of all Starbucks transactions in the US are made using prepaid cards.
    - Starbucks expects its rewards membership base to double this year, to nine million people.
- But also, more locally oriented players are showing determination to enter the market for payments. As an example, the four major

telcos in Denmark and Sweden have joined forces and launched two similar but not identical mobile payment solutions, Paii (now sold to Swipp) in Denmark and WyWallet in Sweden. It will be interesting to follow their development on the market.

No matter the result, RTP systems are here to stay and will significantly change the way banks, companies and consumers make national and international payments.

Examples are changes to cash and card based customer behaviour, enabling of new business models and new product opportunities.

For consumers, real-time payment systems bring many benefits.

Convenience, security and speed are the main advantages, regardless of whether the recipient is another individual, a business, or a retailer, consumers have control of their money. Consumers can pay for groceries, fuel, clothes, utility bills, association dues and almost anything imaginable using their smartphones. In addition, services like person-to-person payments, fraud protection, and constantly updated budgeting/liquidity management are new possibilities which help consumers to maintain an overview of their finances. Also, when real-time payment is fully embraced, integration with data from retailers and/or producers about previous purchases combined with immediate offers or loyalty rewards will be among the services offered to consumers.

A new payment clearing infrastructure is not a simple project to specify, design, develop and implement. The vast majority of such projects are multi-year national-sector projects involving almost all of the banks, the central bank, and the "clearing owning" utility – either a particular national clearing organisation or the national banking association, and in some cases also consultants and other stakeholders.

The most recent surveys on real-time systems suggests that today there are about 15 RTP solutions in operation around the world, and at least three are currently being developed.

The first wave of early adopters included countries such as South Africa, Mexico, Chile, the UK and Poland.

The next wave is gradually building on the new best practices, e.g. Singapore, Sweden, Hong Kong and India.

In November 2014 the Danish banks went live with a new state-of-the-art fully ISO 20022[6] based real-time clearing solution, designed, developed and operated by Nets. The real-time solution had a very good start, and the number of real-time payments have already exceeded the expectations.

The Australian Payments Clearing Association (APCA) is in the process of designing a new RTP solution planned to go live at the end of 2015, and the Finnish Federation of Financial Services has announced an RFI for a real-time payment system, possibly followed by an RFP and eventually the implementation of a real-time payment system.

In the USA, four banks (Bank of America, Capital One, JPM Chase and Wells Fargo) have joined forces and established a closed RTP solution called clearXchange, covering 50% of mobile payment users in the US.

The US Federal Reserve Board is pushing ahead with plans to further the introduction of faster retail payments as part of a broad effort to modernise the country's payments infrastructure. The Reserve Banks released a consultation paper in September 2013 soliciting comments on gaps and opportunities in the payment system. The response was overwhelming interest and concrete feedback, and the Fed is moving forward with its process.

Going forward, countries in Europe and Asia/South Pacific are expected to be the next movers.

Some surveys indicate that there will be 20 more countries with RTP systems during the next 5–10 years and 40–50 more in the subsequent 10 years.

This is in line with current trends, which indicate that the market is going to converge towards more standardised solutions based on best practices and with common characteristics.

Cross-border real-time payments

A common denominator for all current real-time solutions is that they are domestic solutions. A cross-border real-time payments service would be welcomed by customers, and is thus interesting for banks to look into. A standardised cross-border real-time payment solution would potentially reduce customers' transaction fees. Real-time 24/7 service could open up trading opportunities across borders (e.g. e-trading) and across multiple time zones.

The foundation for successful implementation of a cross-border real-time payment solution should be a set of common standards and scheme rules. On the other hand, it is not likely that a global "one-size-fits-all" approach would be the best way to accommodate the implementation of cross-border real-time payments.

The experience from implementing the Single Euro Payments Area in the Eurozone countries was that it demanded much more in the way of resources and was much more time-consuming than first anticipated, and this was only in some of the countries in Europe. What would it be like on a global scale? Even more time-consuming – or at least so time-consuming that innovators would have plenty of time to disrupt the industry long before anything was harmonised.

Instead, real-time payment solutions should be launched domestically, based on best practices and industry standards and, where possible, also standardised solutions or components. Rather than maintaining or building unique domestic schemes, each country should adapt and re-use existing real-time payment solutions from similar countries whenever possible. In addition, regional collaboration could accelerate the

User benefits of real-time payments

- **Enables person-to-person payments** where the recipient instantly has access to the funds.
- **Faster service** – Business/e-shop payments give the business instant access to the funds and thus the ability to provide the product or service paid for without delay, resulting in faster delivery of the goods.
- **Easier to use** – Person-to-retailer payments that are more convenient than cash/card or other payment methods.
- **Better information level** – Also enables immediate information transfer – e.g. current account balance immediately before and after the transaction.
- **Less cash carrying reduces the risk of robbery and crime.** Sweden especially has seen the reduction of cash usage as reducing the overall level of violent crime in society. Additionally, increased digital usage greatly reduces the most significant forms of fraud – tax and cheque fraud.

implementation of cross-border real-time payments.

Real-time payments are here and are changing the way that banks, companies and consumers make payments. UK banks were early adopters in 2008 with the Faster Payments Service initiative, but 5–10 years from now we should expect a very different clearing landscape around the world, with those nations that don't yet have real-time or at least same-day payment and clearing platforms catching up rapidly.

According to ECB figures, there were a total of 94.5 billion payments in the EU in 2012.[7] The EU's share of total global transactions is estimated at 20–25%. It is estimated that global growth in transactions will be 5% over the next five years, whereas growth in the EU will be 2–3%.

This predicts a global volume of some 500–600 billion transactions annually five years from now. Assuming a conversion rate similar to the FPS in UK (25% in five years), this indicates that the number of annual real-time transactions will exceed 100 billion.

With a transaction volume that big, the cost saving per real-time payment transaction, due to high efficiency, standardisation and security compared to today's credit transfers or card transactions, need not to be significant in order to entail a very positive business case for the banks.

There are many examples of cost savings when real-time payment processing is introduced. Most existing retail payment instruments involve a certain processing time that results in settlement lags, which are eliminated or reduced with real-time payments.

Settlement lags give rise to counterparty credit risk and liquidity risk. For example, a merchant who has sold a product to a customer paying by credit transfer faces the risk that the transaction amount will either arrive in his/her account late (liquidity risk) or will not arrive at all (counterparty credit risk).

Real-time payment processing can mitigate these risks. It also gives financial intermediaries less scope for exploiting liquidity caused by processing delays (bank float) at the expense of the users.

Real-time payment processing may also increase cost efficiency by (i) shifting customers to more efficient access channels for initiating payments (e.g. from paper to Internet), which reduces the need for manual processes and thus reduces cost; (ii) modernising and consolidating the payment infrastructure (e.g. establishing economies of scale); and (iii) facilitating straight through processing (STP) which, similar to changing to more efficient channels, reduces the use of manual processes, thereby cutting processing costs, reducing the use of cash reducing handling costs; (iv) reducing the number of failed payments, resulting in cost savings.

According to a survey from 2012 by the Reserve Bank of Australia and the Centre for Economics and Business Research,[8] cost savings from reducing the number of failed payments are likely to be the largest potential saving from a real-time infrastructure in Australia – estimated at between A$612 million and A$1.7 billion in 2020.

It should be noted that the business case for implementing real-time payment systems is not universal. From country to country and from region to region, there are variations in the existing payment infrastructure, payment habits and the general technological maturity of the market. It is therefore quite difficult to give an exact estimate of the total global savings potential that real-time payments represent.

Extrapolate the above figures to a global scale, however, and the business case for real-time payments is huge, so perhaps real-time payments may gain traction much faster than we could expect, leading to faster and more widespread replacement of existing infrastructure than anticipated. And perhaps real-time payments are the missing link which, at long last, will lead to the cashless society or at least reduced usage of cash.

"I want convenience, I want convenience, I want convenience and I want it in real-time"

– definitely not as catchy as the way Brian May expressed it – but nevertheless the request from users, driving future payments from batch-oriented towards real-time payments all over the planet.

1 http://www.queenonline.com/

2 Automated clearing house (ACH): an electronic clearing system in which payment orders are exchanged among participants (primarily via electronic media) and handled by a data-processing centre.

3 Clearing: the process of transmitting, reconciling and, in some cases, confirming transfer orders prior to settlement, potentially including the netting of orders and the establishment of final positions for settlement. Sometimes this term is also used (imprecisely) to cover settlement. For the clearing of futures and options, this term also refers to the daily balancing of profits and losses and the daily calculation of collateral requirements.
See also https://www.ecb.europa.eu/pub/pdf/other/glossaryrelatedtopaymentclearingandsettlementsystemsen.pdf

4 Although an official definition is not yet in place, and payments experts are now discussing the exact definition, real-time payment systems are often described as a basic infrastructure, which all financial institutions, and through them businesses and consumers, can connect to. This way, financial institutions can make payments quickly between their customers' accounts. The system will enable funds to be accessible almost as soon as payment is received – even when the payer and payee have accounts at different financial institutions.

A real-time clearing transaction is an inter-bank electronic credit payment instruction issued by the payer to the paying bank to transfer funds from the account of the payer to the account of a beneficiary; the payment instruction is delivered by the paying bank to the credit of the beneficiary account within few (split) seconds.

The infrastructure is accessible via interfaces, and supports various tailored services which individual financial institutions may choose to offer their customers, the so-called "overlay services". Examples are mobile wallets, mobile payment solutions, online banking, etc.

5 http://www.fool.com/investing/general/2013/05/05/the-bank-of-starbucks.aspx
6 See also the interview with Stig Korsgaard, Nets, about "The golden standard ISO 20022" and how ISO 20022 brings profound benefits to the financial services industry and paves the way for true cross-European digitisation. On page XXX in this magazine MICHAEL INDSÆTTER KORREKT HENVISNING

7 https://www.ecb.europa.eu/stats/payments/paym/html/payments_nea_n_I00.NT.Z0Z.Z.en.html
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Doing things the hard way

Mark Davies, managing director of Avox, explains why the accuracy of legal entity reference data is a labour-intensive process, but essential in the drive towards improving STP rates.

Fans of Terry Pratchett's Discworld novels will be familiar with Commander Vimes's dictum, "the difference between the hard way and the easy way is that the hard way works".

It's a phrase that comes to mind as Mark Davies, managing director of Avox, describes the process through which the DTCC subsidiary sources and cleans legal entity information from its data centre in Wrexham, North Wales.

"There's a lot of checking needs to be done," he said. "We're doing it the hard way because it is the only way that you can get the right information. We recognise that our clients require high standards of data accuracy and completeness and now more than ever the timeliness of updates is critical. This is a critical step to help our clients to achieve their aim of much needed STP in the sourcing and ongoing maintenance of legal entity data."

Much of the corporate information available is incomplete, out of date or both, so the Avox analysts – currently there are 400, a headcount that has doubled over the past two years – collate it and cross-reference information from multiple sources to improve the data quality. According to Davies, one of Avox's selling points is taking the burden of having to do this from its clients.

"The sole focus of the business is information on companies and how they fit together," he says. This is becoming increasingly important as the usefulness of the Legal Entity Identifier has come under some criticism recently for its incompleteness, notably a study by New York-based Alacra and Tabb Group that showed existing LEIs only covered 17% of organisations with a Swift BIC code and only 51% of European Banking Association entities.

Davies says this problem will be addressed by the LEI issuing side of the DTCC – it is only mandated for use in derivatives at the moment, but this will change over time.

"There are two sides to the LEI solution within DTCC. One is the Global Markets Entity Identifier that issues the LEI codes, and that very much follows the ISO standards, and Avox, with Chinese Walls between them," he says. "There are 64 mentions of LEIs in MiFIR, so clearly the LEI is going to be used in lots of new ways it hasn't been used before, and that will improve take up.

For instance, there is clearly a focus on tracking instruments within MiFIR, so the issuer needs to be identified, and also the ultimate parent at the top of the tree. That is going to be quite a big change. What Avox does is essentially go into regulators, stock exchanges, central banks, chambers of commerce and gather information to build up the profiles of the records. Sometimes that means going into companies, annual returns, and we have a database of 1.7 million companies globally that have been requested from us by our clients, for whom we manage the data."

Avox recently launched a series of web-based application programming interfaces designed to support faster access to data, including legal entity identifiers, legal names, addresses, industry classifications and corporate hierarchies.

Previously, Avox services were available via a web portal or in a flat file for end-of-day delivery. The introduction of web services means data can now also be delivered on a request/response basis, and will enable clients to draw Avox content directly into in-house applications or using vendor-supplied enterprise data management technology platforms. ***BT***

APPOINTMENTS

BATS Global Markets has chosen **Chris Concannon** as its new chief executive, following the departure of **Joe Ratterman**, who will now become chairman of the BATS board. Concannon has been BATS president since December 2014, and recently played a major role in the firm's acquisition of Hotspot FX. He has 20 years of industry experience. During his six years as executive vice president at Nasdaq, his leadership helped transform the company and the exchange industry and, among many responsibilities, he was in charge of Nasdaq's US stock and options markets and also led numerous acquisitions and integrations, including Brut, Inet and the Philadelphia and Boston Stock Exchanges. Concannon also served as a chief liaison with Nasdaq's customers and regulators, led the launch of the Nasdaq Options Market and was on the Nasdaq Stock Market board. Most recently, he was president, chief operating officer and a partner at Virtu Financial, a global electronic market maker, from 2009-2014. Ratterman was BATS chief executive for eight years. He will remain closely involved at the company and will continue to represent BATS as a member of the SEC Equity Market Structure Advisory Committee.

Financial technology specialist **Fidessa** has hired **Jay Biancamano** to head its equities business in the Americas. Based in New York, he will report to James Blackburn, global head of equities product marketing. Biancamano is considered an expert on electronic trading market structure, having built and designed many products in this space. Prior to joining Fidessa, he founded Hoyvin, a trading technology firm that used artificial intelligence and human-computer interaction to help traders 'source alpha from social media.' Before starting his own company, Biancamano was the executive chairman and chief executive of Pipeline Trading, a predictive analytics and algorithmic trading company.

LCH.Clearnet has chosen **Lex Hoogduin** to succeed Jacques Aigrain as chairman of the board. This follows Aigrain's decision to step down as a result of his extended activities with Warburg Pincus. Aigrain has been chairman since 2010. Hoogduin has been a member of the LCH.Clearnet Group board since September 2012 and has previously chaired its Limited, SA and LLC Risk Committees. He brings expertise to the role, having been executive director at De Nederlandsche Bank from January 2009 until July 2011 where his responsibilities included economic policy and research, financial stability, financial markets, clearing and settlement systems. He has also held senior positions at Robeco and managing director of the IRIS research institute. **Jonathan Eliot**, currently a non-executive director of LCH.Clearnet, also joins the boards of LCH.Clearnet Group, LCH.Clearnet SA and LCH.Clearnet LLC. He will chair the Risk Committees across the business. He is currently chief risk officer at Man Group, and has had a 27-year City career with companies including JP Morgan, Deutsche Bank and Barclays.

Financial data and messaging specialist **Volante Technologies** has selected **Nadish Lad** as head of payments product and **Peter McKenna** as global marketing director. Volante has also hired additional development and testing staff and opened two new offices in Jersey City and Hyderabad to accommodate team expansions. Lad joins from Ernst & Young where he was senior manager in the financial services advisory practice focused on the development of corporate banking transformation for UK banks. Prior to Ernst & Young, Lad held senior positions as payments lead for business advisory services at Wipro Technologies UK and as a vice president at Citi for its Global High Value Payments product. Prior to that, he spent more than a decade in the check payments industry in similar roles. McKenna has been appointed to "direct and harmonise" Volante's global marketing strategy and operations. He was most recently at DST Global Solutions where he was responsible for establishing and implementing the firm's global marketing strategy and operations for its investment management systems division. Previously, he was group marketing director at Temenos and has held similar roles with Gissing Software, Misys Asset Management Systems and Reuters.

ATM maker **Wincor Nixdorf** has hired **Richard Broadbent** and **Gary Mahon** to its UK & Ireland banking division as general manager, banking and head of professional services, banking respectively. Broadbent brings over 25 years' experience of working in the financial services industry to this role. Prior to joining Wincor Nixdorf, he was vice president of strategy and channel development at Fiserv where he was responsible for international strategy. Mahon joins from SAP UK&I where he held various senior roles, most recently as sales director, field services. Prior to this Mahon held the role of UK&I head of banking for Sun Microsystems Professional Services following 17 years' of experience within the industry.

Bitcoin custodian **Elliptic** has appointed **Kevin Beardsley** as its new head of business development. Beardsley joins from the Bitcoin Foundation, where he served as director of membership. He will be responsible for growing the client base for Elliptic Vault, an enterprise-grade insured storage for Bitcoin holdings. Beardsley was at Bitcoin Foundation for most of 2014, where he worked closely with Bitcoin companies globally and helped introduce Bitcoin to traditional financial service companies throughout Europe.

E-distribution specialist **Caplin Systems** has chosen **Michael Wee** as its new general manager and head of Asia sales. Wee will be based in Caplin's new Singapore office, which opened in October 2014, and will report to Adam Hawley, global head of sales operations. He brings over 35 years' experience to the role, having previously worked at Thomson Reuters, FSS and IBM. As general manager, Wee will lead sales and business development for the Asia Pacific region.

Earthport, the cross-border payments service provider has appointed web entrepreneur and former banker **Daniel Marovitz** as president of Europe. Marovitz is responsible for the company's European commercial operations, reporting to Hank Uberoi, Earthport's chief executive. His experience includes leadership roles in e-commerce, transaction banking, media and enterprise software. He spent eleven years in Deutsche Bank, most recently as a managing director and global head of product management of its Global Transaction Bank; he began at Deutsche Bank as head of the internet division and then went on to serve as chief information officer of the investment bank. Prior to that he was chief executive of buzzumi, a start-up technology company he founded in 2011. He is a founding member of Swift's FinTech innovation initiative, Innotribe.

Risk data and analytics specialist **Jaywing** has appointed **David Ramsden** to its risk team. Ramsden was previously head of credit risk at Alliance & Leicester where he was responsible for managing Basel II implementation programmes. More recently he was collections strategy manager at E.ON. At Jaywing, he will focus on capital adequacy and regulatory work. Also joining Jaywing are recently appointed risk consultants **Sonia Caverzan** who joins from Vanquis Bank where she was senior decision science analyst, and **Elliot Poynter** who joins from Barclaycard where he was credit strategy manager for corporate risk.

Broadridge Financial Solutions has hired industry veteran **Erik DiGiacomo** to lead the expansion of its professional services practice He joins Broadridge with 20 years of experience in technology, operations and consulting within financial services, including 10 years at JPMorgan Chase, where he held senior operations roles. DiGiacomo will report to Arun Sharma, chief operating officer of Broadridge's global technology and operations business unit, which provides technology and trade processing solutions to investment banks, broker-dealers and hedge funds. ***BT***

EVENTS

MARCH 17-20 2015
Payments International, London
The long-running International Payments Summit gets a new name to mark a complete overhaul of its format. A modular approach will allow delegates to customise their own agenda from a range of new elements including 'problem-solving working groups' and interactive thought leadership briefings.
www.informaglobalevents.com

MARCH 22-25 2015
ISITC Industry Forum & Vendor Show, Boston
The US messaging standards body's annual tech-focussed conference regularly features stimulating panellists and discussions.
www.isitc.org

MARCH 24-26 2015
City Week, London
The three day-long City Week is organised under a partnership between the UK Government, TheCityUK and City & Financial. with support from UK Trade & Investment and HM Treasury. The 2014 event attracted 800 delegates from 55 countries.
www.cityweekuk.com

APRIL 13-16 2015
Sifma Ops, San Diego
Sifma's 42nd annual operations conference & exhibition will discuss the operational processes needed to achieve efficiency and build resilience in the financial services sector.
www.sifma.org/ops2015

APRIL 14-15 2015
TradeTech Europe, Paris
A return to its old home in Paris boosted the event in 2014, with plenty of boisterous panel sessions addressing a range of issues faced by market participants.
www.wbresearch.com

APRIL 19-22 2015
NACHA Payments 2014, New Orleans
NACHA Payments has blossomed over the past few years to become a focal point for industry discussions in the fast-changing US payments scene and beyond.
https://payments.nacha.org

APRIL 23 2015
Swift Business Forum London 2015, The Brewery, London
Swift's second largest event after Sibos, with an expected 800+ attendees, has the theme of 'harnessing change in financial services' as part of an interconnected three-day event on disruption and innovation. Apart from senior Swift personnel, confirmed speakers include Craig Donaldson, chief executive, Metro Bank, Cate Kemp, global transaction compliance director, Lloyds Banking Group, Mark Gem, member of the executive board of Clearstream International, Phil Rolfe, head of operations shared services, head of AML Services, RBS Group and Thomas Piontek, head of regulatory services at Commerzbank.
www.swift.com/events

MAY 12-13 2015
EBAday 2015, Amsterdam
The Euro Banking Association's flagship event moved beyond the SEPA debate in Helsinki this year. Programme details are yet to be finalised.
www.ebaday.com

MAY 20-21 2015
Building Societies Annual Conference, Harrogate
The annual gathering of the UK's building societies in the spa town of Harrogate will feature two days of talks and interactive sessions covering retail banking, the rise of new technologies and the effects of new regulation in the UK.
www.bsaconference.org/

JUNE 9-10 2015
International Derivatives Week, London
This major showcase for the derivatives industry in Europe attracts participants from the world's leading financial centres as well as emerging markets. *www.foa.co.uk*

OCTOBER 12-15 2015
Sibos, Singapore
Returning to Singapore for the second time as the world's economic centre of gravity shifts to Asia, Swift says that Sibos 2015 will be the one of the largest ever.
www.sibos.com

Complaints: stopping the next scandal

Alan Fahey, head of retail banking, DST

As 2015 begins to gather momentum, it looks like the end is finally in sight for PPI claims, according to the Financial Conduct Authority. Back in September, the FCA announced a further drop of 11% in complaints from the first half of 2014, continuing a downward trend that began back in 2012,

Any sustained reduction in complaints certainly comes as welcome news, but in truth, the banks are unlikely to celebrate. Complaints volumes may be dropping but the industry still faces significant unfinished business from the scandal. Even though the FCA's thematic review of complaints handling noted that some improvements are already in evidence, it also identified significant weaknesses in firms' ability to return fair and consistent outcome.

The problem is that scandals like PPI are caused by two interlinking issues. The first is the mis-selling itself, but the second is the operating models that are currently being used, as these often make it difficult for firms to be confident of delivering the right outcomes for their customers. This is largely because such models are underpinned by important data which is poorly organised and difficult to retrieve from back office systems that aren't integrated to the complaints management platform.

Any future mis-selling scandal is likely to reveal this same weakness in banks' systems. With small volumes of complaints, banks' current systems and processes can usually cope well enough to ensure that a compliant, consistent process is in place, but such a 'tick box' approach will not always deliver the right outcome for the customer. Instead, the firm's management team needs to ensure that treating customers fairly is at the heart of everything they do.

In order to deliver on their promises consistently, banks not only need to define a control framework to ensure that tasks and activities are carried out in accordance with their compliance requirements, but they must also provide their customer service staff with solutions for information sharing and collaborative working.

The ideal situation is to adopt a personalised approach in which customers are treated as individuals and each case is weighed on its own merits. In this way a thorough understanding of each case becomes mandatory and banks will be able to establish the root cause of each complaint very quickly.

At the moment, processes are often too inflexible, with prescribed workflows and a tick box approach preventing customer service staff from engaging with customers and understanding the true nature of their complaints adequately. The lack of a case management approach, with a case owner able to define and assign tasks and activities for others to complete, means that complaints are often not captured, investigated and resolved in a timely fashion.

The presence of multiple, poorly integrated systems also means that capturing, retaining and efficiently retrieving the information necessary to adjudicate claims is difficult. Ironically, a complaints management solution that requires such extensive data capture, or at least duplication of it, is likely to deliver a poor customer experience in itself, leading to new complaints that have nothing to do with the original problem at all. The challenge for firms, therefore, is in finding a balance between the volume of data needing to be captured and the delivery of a positive customer experience that still drives the best outcome for the customer.

Most complaint handling systems are still failing to provide banks with the tools they need to identify the next potential scandal so they can stop it occurring – and, unfortunately, there is no shortage of candidates for what this might be.

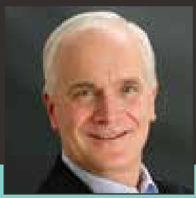
At the end of last year, the FCA revealed that British banks are paying out more than £1 billion to small businesses that were mis-sold interest rate swaps. Packaged accounts are also now the subject of an FCA probe. The Ombudsman's latest figures have already shown that complaints about these products are on the rise. The next scandal could be any of these – or something else altogether. Arguably, the real danger is the mis-selling practice that we've yet to hear about, and which could be dominating the headlines in a year or two.

The FCA's thematic review underlined the fact that current systems often don't support an effective operating model, especially where those initially capturing complaints and those actually dealing with them don't operate from the same platform. The resulting duplicated processes leading to repetitive and disjointed conversations are undesirable for both consumers and firms.

By adopting efficient operational procedures for root cause analysis, firms can quickly improve their ability to identify the origin of problems, whether it's product design, the sales process, or cultural issues.

It is in addressing the potential scandals of the future where banks can have the biggest impact right now, and where they should be starting to focus.

If the banks can't identify where those issues are likely to arise, it's very probable that their complaints handling system is part of the problem.



Sharing threat intelligence is challenging, but it's the only way forward

Rich Bolstridge is chief strategist, financial services at Akamai

Protecting your infrastructure from cybercriminals is one of the toughest IT challenges in banking.

It keeps getting harder, even though banks are working tirelessly to protect both customers and assets. Attacks are growing in size, and new developments such as the Internet of Things mean attack surfaces are growing, as well as the number of endpoints that can be used to launch attacks.

It's not just the size or frequency of attacks, but the speed with which they can be launched. The tools are available to allow a novice to launch an attack if they wish, not just from their machine, but from compromised servers across the internet giving an attack huge scale with little technical knowledge.

Attack styles are also changing, almost like fashion. Reflection attacks are not new, but they are back in fashion, with new ways to be executed and billions of new connected devices on the Internet each year to be exploited. There is also a new wave of vulnerabilities being discovered that are so severe it will take a long time to patch all the affected hardware on the web, leaving backdoors for cybercriminals that will persist for a long time. Heartbleed and Shellshock are perfect examples of this problem, and we should expect to see more in the future.

Hackers attack for a number of reasons, but more often than not the prize is not simply bringing a bank website to its knees. Several banks have confirmed to me that they have observed fraudulent money movements occur during DDoS attacks. DDoS attacks are also used to create a diversion while customer data is downloaded and then sold on the black market to aid financial fraud and identity theft. These data breaches are hugely damaging to brands and their customers, and there are already too many public examples to point to.

Sharing information is the obvious answer, but it is more complex than it sounds. For example, the idea of sharing information is not universally accepted in the industry. In some countries, like the US, it is advanced and commonplace, but there are regions and countries in the world where threat intelligence is still regarded as a sensitive and competitive issue. Speaking with banking executives in some countries, I have been told they are three or more years behind the more advanced countries in terms of threat intelligence sharing. There are more than legal uncertainties to consider regarding privacy and liabilities associated with disclosing sensitive information.

When you do commit to information sharing for the wellbeing and security of the industry, it needs to be effective. Nobody wants to be the boy who cried wolf, and spotting an attack is not always easy.

Attacks are not always obvious. If your public website is suddenly unavailable, and customers are going crazy on social media, is that an attack, a problem with your systems, or a problem with your service provider?

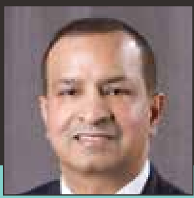
Of course if an attack is volumetric, it will be easy to spot, but a data breach can be difficult to see, either because it is disguised by a DDoS attack, or it fails to trigger an alert. Even when an alert is triggered, there are several possibilities that need to be investigated before sharing information: is it an attempted breach? Is it a legitimate penetration test by your own IT group? Or is it a harmless (or otherwise) scan by a third party?

Having absolute certainly is critical when sharing information with the industry if the mechanism is to be trusted and effective. Finally, what if you are attacked, and your security solution successfully defends against it? There is an industry debate to be had about whether that should be shared outside of legal requirements, and positions vary around the world.

There are challenges to making it effective, but threat intelligence sharing in the financial services sector works and there are public examples of its success. You may remember, or have the scars from, Operation Ababil in 2012 and 2013. These DoS attacks were launched at US financial institutions and at its peak more than 20 banks a week were being indiscriminately attacked on a daily basis. The banks fought back by not only raising their defences, but by sharing information with each other, and the part this element played cannot be over-estimated.

Threat intelligence sharing is the future, and the manual processes being used today are being replaced by machine-to-machine systems. The DTCC and FS-ISAC have been working on a system called Soltra Edge, an open standards-based threat intelligence ecosystem to pool knowledge and accelerate the speed at which it can be shared. It is gathering momentum and rightly so.

The truth is that there are no real barriers to sharing threat intelligence. Your peers are already doing this, and if you don't you will find yourself weaker in the fight against cybercriminals. If we all share information, then all banks are stronger. The next threat is never far away, and it will be bigger. Better that we stand shoulder to shoulder, don't you think?



Code Halos: the key to improving banks' Net Promoter Score

Tony Virdi, VP of banking and financial services UK and Ireland.Cognizant

A company's Net Promoter Score has become an important measure of customer satisfaction. It asks them a simple question: how likely they are to recommend that company to a friend. The responses split the audience into three groups: promoters, passives and detractors. By subtracting the percentage of detractors from the promoters, banks obtain their NPS

Everyone wants a better NPS, and the secret to achieving this is simple: know your customers better. Improved understanding of customers means an enhanced service; as a result, loyalty will potentially increase and your clients are more likely to be an advocate.

NPS' emergence in financial services, and particularly retail banking, is partly due to increasing competition and a greater ease with which customers can switch provider. Traditionally, NPS has been seen as less relevant in industries where there are significant barriers or costs associated with changing to a rival provider, since peer recommendations are not such an incentive to change. In the UK at least, several changes are making it much easier for consumers to switch banks. Firstly, a Parliamentary Commission on Banking Standards, which reviewed standards and culture in the country's banking sector back in 2013, resulted in a new scheme designed to help customers switch current account provider by removing penalty charges. One year after the scheme was introduced, current account switching increased by 19%, with over a million customers moving. Further changes, including the ability to port account numbers from one provider to another, are planned. As it gets easier for customers to switch, exceptional service and product innovation become more important in making sure customers are not tempted by a rival.

Secondly, consumer behaviour has been altered significantly by the rise of social media and mobile technology. Today's banking customers are always connected, always online and heavily influenced by social recommendations and word of mouth. In years gone by, customers' frustrations or bad experiences with a bank would largely be limited to their immediate personal network. Now anyone who has problems with their bank can broadcast their complaints much further. If several customers are experiencing the same problem at once and all begin talking about it online, the issue can escalate into a major, highly visible reputational crisis that lingers in customers' minds – such as when a glitch suffered by a bank in December 2013 left customers unable to use their debit or credit cards on 'Cyber Monday', one of the busiest online shopping days of the year.

In order to address these modern challenges and improve their NPS, banks must turn to the wealth of digital information that surrounds their customers. Every digital click, swipe, 'like', buy, comment and search produces a unique virtual identity around every one of us – what we at Cognizant call a Code Halo. Code Halos offer unprecedented insight into consumers' behaviour, preferences and needs. By tapping into this data and analysing it, banks can understand their customers better, react faster when needed and anticipate their future requirements.

Social media has a massive part to play here. Banks' own social media channels have become critical to customer responsiveness and therefore NPS. In the event of any unexpected problems, the social detractors that emerge have to be tackled quickly and ideally turned into advocates or even promoters. To do this, banks have to actively monitor for and identify customers talking about a poor experience or problem and provide direct, timely support. It is no longer acceptable to ignore these posts – customers want personalised responses and regular, informative updates. Even if the issue cannot be resolved right away, good responsiveness can calm detractors down and prevent the problem being broadcast more widely. If a bank can immediately solve an issue reported on social media, the original detractor could even be turned around completely and made into a promoter if they share a positive resolution.

In the longer term, analysing banking customers' Code Halos can improve product development and service innovation. Analysis on a macro scale can reveal evolving customer habits and preferences, enabling a bank to meet new requirements as they emerge, and crucially, before its rivals can react. A new video banking service recently announced in the UK takes full advantage of the huge popularity of smartphones, tablets and ever-changing disruptive technologies to offer its customers face-to-face, online service. This kind of innovation comes from understanding how customer behaviour is evolving alongside technology, and then developing new solutions and experiences to match. By providing services that customers value, a bank is more likely to retain them and turn them into promoters.

The importance of this thinking will keep growing as consumers continue to become more connected and social. For example, the current boom in wearable technology might lead to a whole new range of insights that could drive a new wave of banking services. The key for banks is to never stop listening and analysing the data on their doorstep.

The Theory of Everything – and TCA

Michael Sparkes, director of analytical products and research at ITG

In the recent Oscar-winning film *The Theory of Everything* the lead character Stephen Hawking lays out his vision of a single equation that explains all physical aspects of the universe.

The scientist explains in lay terms the challenges of integrating the two broad areas of theoretical physics that have emerged over the last century – Einstein's general relativity and quantum field theory (analysing the properties and effects of sub-atomic particles) – into one over-arching 'Theory of Everything'. One approach looks at very broad aspects of the universe and space and time, while the other focuses on infinitesimally small objects as the basis for broader theories and interpretation.

This rarefied scientific debate has echoes in the more prosaic world of Transaction Cost Analysis in financial markets, where the availability of more granular data coupled with pressure from regulators is driving a whole new wave of research and analysis.

There is a risk that these latest tools may be thought by some to be able to answer all the questions on trading costs and best execution. This is clearly not the case, and a combination of methods of analysis is vital.

Traditionally TCA was conducted at a relatively high level, focusing on the outcome of orders and looking at the implicit costs incurred by price movements caused by market impact or by delays in the execution process (as distinct from explicit costs such as commissions).

Every institution has an investment process, which forms a sort of investment DNA for everything it does. It is reflected in activities such as portfolio construction, stock selection, decision timing and trading strategies. Some firms are value-oriented and incur relatively low transaction costs, as they are typically trading against the consensus. Others are more event-driven and momentum-oriented; inherently they need to trade more quickly than others, incurring higher impact costs in order to capture as much alpha as possible before others do so. Similarly some portfolios are made up of many small positions which can be easily and cheaply traded, while others consist of fewer positions which may be highly illiquid, and cannot be readily and quickly traded without severe loss of value.

All of this should be reflected in the approach to TCA a firm employs, and the metrics used to monitor efficiency.

There have been calls in some quarters for a standardised approach to TCA; such thinking should be firmly resisted, given the wide range of needs and types of analysis. The high level analysis must take into account many aspects of the underlying process, since the costs will be linked to factors beyond the control of the trader.

But a whole new level of complexity has been introduced to European markets, starting with the fragmentation of trading that resulted from the first MiFID set of regulations in 2007, making the trading landscape considerably more complex. At the same time new trading systems allowed asset managers to record and analyse details of every fill generated by their orders. With algorithms often slicing a large order up into very small pieces, this can mean thousands of separate executions for just one order. The final element of complexity has been the use of data tags to track and report on these individual fills.

Together these factors have driven a rapid evolution in analytical approaches which have taken on added urgency since the publication of the FCA's *Thematic Review on Best Execution* and the final draft of the proposed MiFID II regulations. These stipulate that investors must not just monitor the venues on which their trades are being executed, but must describe the steps they take in the choice of those venues and their strategies to achieve best execution. This will entail much more precision and forensic analysis of the tactics used at the most granular levels in terms of sizes, timing and venues of trades.

The linking of venues to execution strategies is more than coincidental – indeed, it is crucial: the way in which an algo is designed to route an order is inextricably linked to the execution strategy selected. This may be a fixed participation strategy, or liquidity-seeking, or aimed at trading only in the so-called dark pools or crossing networks. Each strategy will tend to execute in different venues, or in different sequences, or in different volumes at different times. Hence it is essential for the latest applications of TCA to link the analysis of venues to that of execution strategies.

With this new granularity of data, new metrics also come into play. Looking at simple average price or implementation shortfall calculations may not be as relevant in comparing venues – shorter term statistics on reversion or spread capture may be more revealing. Similarly the number and sequence of venues used can be analysed, as can the costs or benefits of trading in lit or dark venues.

Traders now regularly use such data to monitor the ways in which their brokers execute their orders, for instance in the differing patterns of behaviour of smart order routers or algo strategies. And this data can be used to predict the most efficient way to execute a given order type, so as with more traditional approaches, post-trade data can be a vital input to pre-trade decision making.

What do banks need to know about their customers, but don't?

Steve Goldstein, chief executive, Alacra

Banks know many things about their customers.

They know these things for three reasons. The first is that they have to. There are many regulations that require a bank to know its customers, primarily to prevent money-laundering and combat the financing of terrorism.

The second reason is to assess risk. Banks need to know about their customers to determine whether the product the customer needs from the bank is suitable and if the return outweighs the risk.

The final reason is that they want to: the information banks collect about their customers helps them cross-sell different products to the same customer.

At the time of onboarding, different types of customers need to provide banks with different types of information. A residential mortgage applicant, for example, will need to provide information about the property they're buying and a significant amount of personal financial information. The bank will run consumer credit checks and perhaps civil and criminal record checks. This happens thousands of times a day.

The borrower of a multi-million dollar project finance loan will not only need to provide information about themselves, but will also need to provide information on everyone associated with the project. Anyone whose financial or legal status might jeopardise the repayment of the project's financing will come under scrutiny. In almost all cases, banks are supposed to use a "risk-based approach" when collecting due diligence information to meet know-your-customer regulations

I suspect that somewhere in the world there are rigorous, very demanding, regulators who can think of dozens of things banks really need to know about their customers, but currently don't. My view is that the things that banks need to know about their customers but don't fall into two categories – additional information that should be collected at the time of onboarding and changes to that information which occur during the life of the banking relationship.

The key set of data that is only partially complete at the time of onboarding is beneficial ownership information. Who actually owns and controls the entity on the other side of the banking relationship? Requirements to obtain beneficial ownership information vary by jurisdiction. A bank's ability to verify this information is often very limited, or indeed non-existent, and frequently cost-prohibitive. This is such a significant issue that improving beneficial ownership collection is a critical part of the EU's Fourth Anti-Money Laundering Directive as well a recent FinCEN Notice of Advanced Rulemaking. The gathering of this information will be costly for banks and will lengthen the time it takes from initial contact with a customer to revenue generation.

One proposal to deal with the beneficial ownership issue in the UK is to create a central registry of beneficial owners that is open to the public. Just recently UK Labour Party leader Ed Miliband threatened that if Labour wins the next election, overseas territories such as Bermuda, Guernsey and Jersey will be blacklisted if they don't become more transparent. In the US, the FinCEN requirement will be to know and verify the identity of the ultimate beneficial owners (anyone owning more than 25%) of their entity customers.

While these proposals make sense in theory, in practice their value may be limited. With regard to a beneficial ownership registry, to the extent it was strictly enforced, new companies who did not want to share their ownership information might decide to register in less rigorous jurisdictions. And the FinCEN requirement is only for newly established banking relationship entities. Financial institutions practically rebelled at the suggestion they would have to collect beneficial ownership information from existing customers.

Let's assume that regulators were successful in their quest for greater transparency across a majority of jurisdictions. The challenge then becomes keeping the information up-to-date. A wide range of events can cause a low-risk, fully transparent banking relationship to change without the bank being aware. These can range from the simple – a change in the customer's domicile – to the complicated – a significant ownership interest in the bank's customer has been sold or transferred to another entity that did not go through the required KYC checks at the time of onboarding.

As a rule-of-thumb low-risk entities get a periodic review every three years, medium-risk every two years, and high-risk every year. But changes can happen quickly (especially in a criminal enterprise), leaving the bank vulnerable.

What can be done? In addition to stricter KYC requirements, financial institutions should consider two things. First, more comprehensive monitoring of basic KYC and reference data information. Banks should be looking for domicile changes, changes in regulatory status, adverse news and changes in PEP status of principals, officers and directors on a regular basis. Second, they should consider sharing basic reference data and due diligence information that is non-competitive. Regulators have started such an initiative with the Legal Entity Identifier but the information available is limited and it is only updated once a year. More data and more frequent updates would allow banks to better know their customers.

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peterevans part of the Equniti group, creates discrete, efficient and automated processes for the financial services sector building on over 30 years' experience.

Our *xanite* suite offers a configurable, fully integrated, browser based, comprehensive solution providing multi-entity, multi-currency, and multi-language support. *xanite* can delivered using a software-as-a-service (SaaS) model, minimising the hardware resources clients' need, cutting implementation time and cost, creating a faster release cycle for new services and upgrades. *xanite* supports: wealth management, custody, corporate actions, clearing and settlement, private client and on-line stock broking

xanite is a modular solution developed with tried and tested components and used by clients across the financial services spectrum.

SLIB

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Always in line with the latest changes in the European securities landscape, SLIB is a leading securities software solutions provider and a trusted partner to the financial industry.

SLIB provides its customers with innovative software solutions to streamline their securities processing and improve their performance, whilst mitigating their risks. SLIB is both a software publisher and an Application Service Provider (ASP).

SLIB solutions portfolio encompasses 5 software suites, built themselves with 19 software components that you can select to match your current specific requirements and evolve later as your business develops:

- SLIB Order and Trade
- SLIB Clearing and Settlement
- SLIB Position Keeping
- SLIB Voting
- SLIB Risk

Also recognised as an infrastructure provider, SLIB operates VOTACCESS platform for electronic voting prior to general meetings.

Today, 50 financial instructions in Europe are using SLIB solutions for securities order and trade management, clearing, settlement, custody, risk monitoring and electronic voting at general meetings.

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SUNGARD

About SunGard
With annual revenue of $5 billion, SunGard is a global leader in software and processing solutions for financial services, higher education and the public sector. Visit SunGard at www.sungard.com

Adaptiv
SunGard's Adaptiv provides enterprise-wide credit and market risk management and operations solutions for financial services institutions. Adaptiv assists institutions of varying size and complexity to deploy technology to meet both internal and regulatory requirements for risk management and operational control. Adaptiv helps financial services institutions from the banking, hedge fund, asset management, insurance and corporate sectors with its deep understanding of risk management and operational processes. www.sungard.com/adaptiv.

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A trading solution serving a range of financial institutions, SunGard's Front Arena solution provides straight-through processing by integrating sales and distribution functions, trading capabilities and risk management. Institutional asset managers and brokers, traders, and market makers use Front Arena to trade equities, fixed-income, interest rate derivatives, and credit. For more information, visit www.sungard.com/frontarena

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TCS FINANCIAL SOLUTIONS

TCS Financial Solutions, a strategic business unit of Tata Consultancy Services, enables transformation in financial services through a holistic suite of solutions for firms in banking, capital markets and insurance, and diversified financial institutions. Each solution in the TCS BαNCS family runs as a scalable and robust service, integrated with existing enterprise infrastructures and technology architectures.

Our mission is to provide best of breed solutions that drive growth, reduce costs, mitigate risk and offer faster speed to market for 240+ institutions in over 80 countries.

TCS BαNCS is an integrated financial services platform. Its embedded transformation intelligence enables flexible, open and collaborative deployment and distribution of financial products and services.

TCS BαNCS aspires to be better than established benchmarks, which is why we've embedded an Alpha ("α") consciously within our brand, to remind ourselves of the superior returns that we strive to deliver. Our ability to foster rapid time-to-market with new products allows organisations to transform themselves into nimble competitors with scalable offerings.

Our Co-Innovation Network is a true partnership for sharing best practices and innovation, and our 'Experience Certainty' mindset ensures the brightest of futures for all our customers.

For more information, visit www.tcs.com/bancs or contact us at tcs.bancs@tcs.com

About Tata Consultancy Services
Tata Consultancy Services is an IT services, business solutions and outsourcing organisation with over 143,000 IT consultants located across the world delivering real results to global businesses through its unique Global Network Delivery Model™.

TCS BαNCS

TCS Financial Solutions
Web: www.tcs.com

VOCALINK

VocaLink designs, builds and operates world-class payment systems and ATM switching platforms. We operate the UK national payments infrastructure, a national grid for payments.

VocaLink's innovative, sustainable, and highly efficient payment services touch the lives of almost every person and business in the UK. Through our systems we process over 90% of UK salaries, more than 70% of household bills and almost all state benefits. VocaLink technology powers the Bacs and Direct Debit schemes as well as connecting the world's busiest network of over 65,000 ATMs through the LINK scheme.

Our platforms have made it easier to make payments confidently, securely and cost effectively. Last year we processed over 10 billion UK transactions with a value of £4.9 trillion.

VocaLink, with its vision and proven capability, is leading the way in payments. We provide the infrastructure for the Faster Payments Service, which helps businesses and individuals realise the value and benefit of real-time payments. VocaLink is at the forefront of mobile payments, driving a new era of ultra-convenient commerce.

VOCALINK

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OUT OF OFFICE

Nice bankers …

UK educational charity Ark, which specialises in improving children's arithmetic through its Mathematics Mastery programme, has been presented with a pleasingly simple sum: what's £100,000 + £650,000?

The £100,000 comes from a recent sale, at London auction house Sotheby's, of artwork created by Ark students. The higher-than-might-be-expected takings from school student pieces is possibly explained by the fact that they were complemented by works donated by Bank of America Merrill Lynch from its corporate art collection and included works by Ivon Hitchens, David Hockney (*above*) and Henry Moore.

The £650,000 comes in the form of a $1million gift from BAML to expand Ark's Mathematics Mastery programme to schools most in need, with new opportunities for GCSE and A level students.

Helen Drury, director of Mathematics Mastery, said: "Our goal is to transform the long term mathematical achievement of pupils. This support will help us to build a partnership of over 500 schools, who work closely together to innovate and improve maths teaching across the country. By doing this we hope to transform achievement for over 300,000 pupils over the next five years."

The auction follows similar donations in 2014 to the San Francisco General Hospital and Trauma Center and The School of the Art Institute of Chicago which raised more than $2.3 million. ***BT***

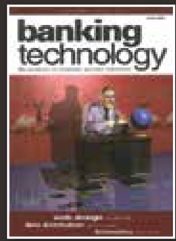
… silly bankers

Meanwhile, we hear that some banking organisations are so concerned with their standing in the eyes of the wider world that they are sensitive to Swift's choice of venue for this year's Sibos event in October.

At first we assumed that this must be because of Singapore's notorious rules on smoking in public, and the obvious limitations this will place on cigar-smoking fat cats as they walk to their chauffeur-driven limos, but it turns out that the problem is the place they will be walking to and from: the Marina Bay Sands.

Like us, you'll have seen the words marina, bay and sands and assumed some sort of tropical idyll, possibly involving palm trees. Not so some European bankers, who instantly made the connection with the Sands in Las Vegas, and refuse to exhibit in a casino. ***BT***

FROM THE ARCHIVE

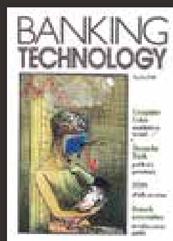


15 YEARS AGO

Tradepoint plans first pan-European electronic exchange … PayPal.com is rapidly gaining ground … ECNs see market data as a value-added service … ING Direct trials biometric identification for online banking … banks embrace WAP mobile data service …

20 YEARS AGO

NatWest first with cable TV banking … neural networks combat money laundering … UK sets standard for cheque printing to combat fraud … Misys creates largest financial software group with ACT acquisition …



25 YEARS AGO

Electronic bridge dispute slows development at Euroclear and Cedel … CFSB plans to integrate European stock trading across borders … German banks push for electronic banking … UK retail banks gearing up to revamp the branch … electronic unit trust exchange planned …

30 YEARS AGO

Bank of America to $5 billion on technology over five years … China concerned about credit card fraud … Bank of Scotland first with home banking service … UK's LINK ATM network prepares to go live … international trade unions concerned as banks close branches …