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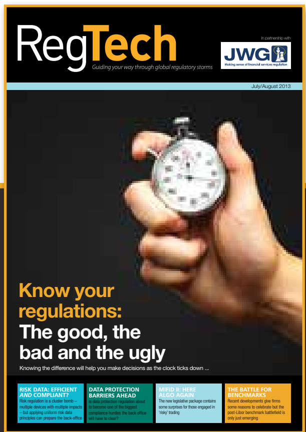
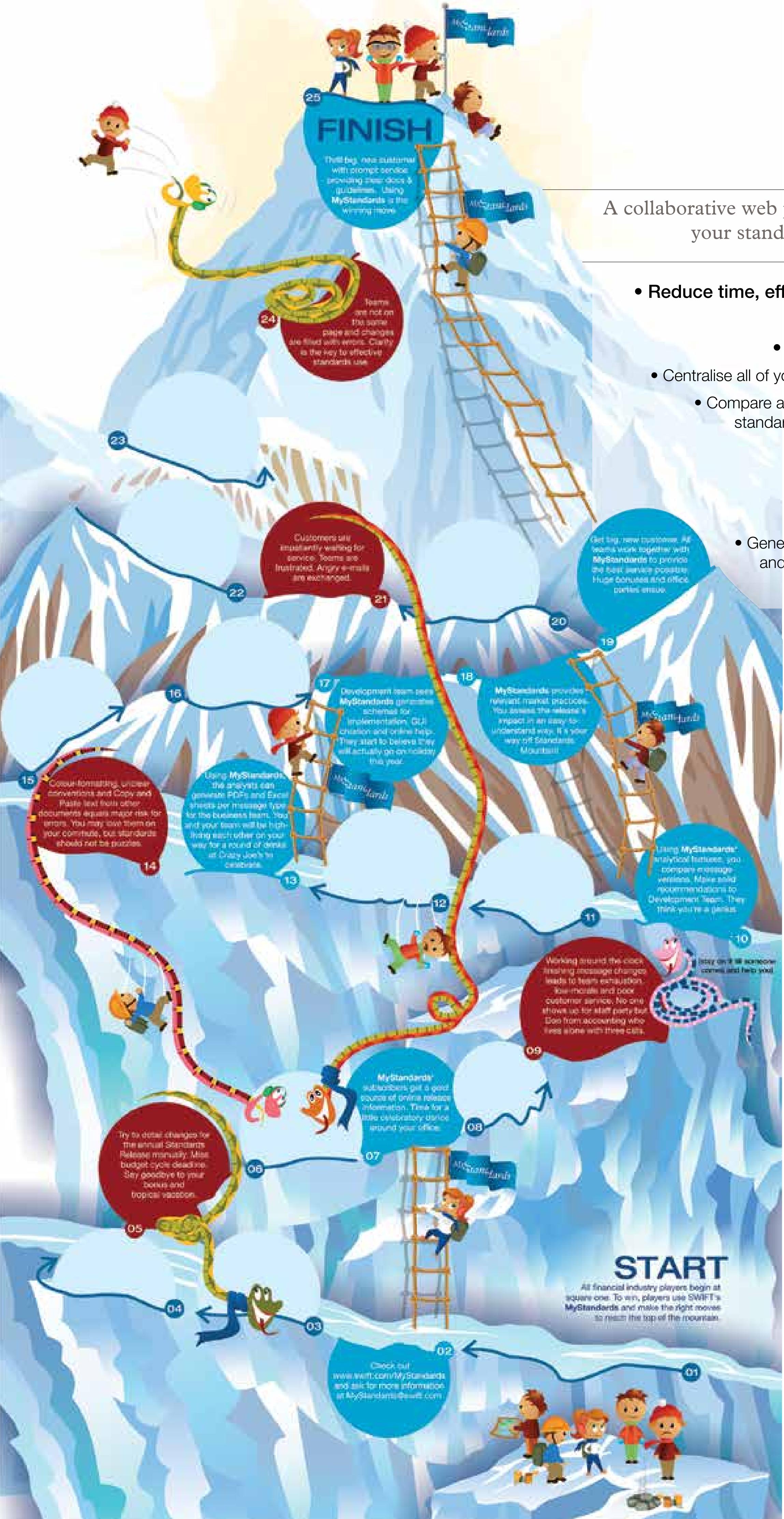


OUTSIDE BACK COVER – REGTECH

The latest edition of the collaboration between *Banking Technology* and JWG examining the technology impact of regulatory compliance looks at applying uniform risk data principles can prepare the back-office, how data protection regulation will be a big hurdle, the latest cut of MiFID II and the post-Libor benchmarking battlefield.



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Okay, I'm in …

When you first saw a mobile phone with a camera function, did you say, "That's good, I'll be able to take pics whenever I want to …"?

I didn't: I said, "Pshaw, tut-tut, what piffle." Quite probably, I sneered. Why would anyone want to take rubbish photos on their camera when they can lug around a 750g lump of the finest Japanese digital SLR and even heavier accessories in a nice canvas camera bag that lets the world know that one is no mere snapper?

Increasingly, however, my fine Japanese DLSR is spending a lot of time with its elder relatives from the photographic age of clockwork and chemicals, while the camera in the phone is used several times a day.

With the advent of the smartphone, things changed in ways that we are still working through. Calling it a smartphone doesn't help: one of the least used functions of mine is the ability to make voice calls – SMS and email are fine, thanks. Like the wartime telegram, an incoming voice call is a sign of impending bad news to me.

So – no big surprise – I've never really seen the point of payments using a mobile phone, and I have every sympathy with those who don't like the apparent lack of security in using a contactless payment card for low value payments, when no PIN or other security is used.

Over the past year, I've become accustomed to using contactless payments in shops across London – in pubs it has become the norm for the bar staff to simply tap the card for you – so I'm already past that point on the adoption curve.

There are assorted "wallet" apps on my smartphone, but they all involve preloading funds from my primary account, which is with a different bank, so forget it. What I, and I suspect many others, want is pretty much what I have at the moment: a contactless enabled debit card linked to the account my salary is paid into, and which is accepted pretty much universally. I have that on a standard card at the moment; make it live on my phone and I could be interested.

Getting all the elements of that together seems to have taken a long time (how impatient we've become: smartphones have been around like forever, right?) But at a recent tripartite demonstration from Visa Europe, Tatra Bank and O2 in Bratislava, I found myself asking when the bank plans to open in the UK.

Their approach fitted my criteria as above – see page 12 for the full report – and made it available easily by using an NFC-enabled SIM card, (or an NFC-enabled case for iPhone users).

The single thing that convinced me this approach has merit, was that on a smartphone you can opt to have a PIN for all payments, including those below the £20 limit for contactless.

That'll stop those pesky barpersons tapping my card without asking first … ***BT***

David Bannister

David Bannister, editor

Deutsche Börse claims cloud first

German exchange group Deutsche Börse has announced what it claims to be the world's first vendor-neutral marketplace for cloud services.

Friom the start of next year, German companies will be able to purchase infrastructure as a service from multiple providers through the online marketplace, set up as an independent company called the Deutsche Börse Cloud Exchange, and Deutsche Börse will be managing all of the transactions on behalf of the service providers.

The company has launched an early adopter programme which has attracted participation from notable companies like Equinix, Host Europe, Leibniz-Rechenzentrum, and T-Systems among other, and the services offered through the DBCE will be aimed at large enterprises in addition to small and medium-sized businesses.

DBCE will partner with TÜV Rheinland to create a streamlined auditing process for services being sold through the cloud marketplace.

"Trust will be one of our key success factors for the acceptance of the marketplace," said Michael Osterloh, chairman of the German Stock Exchange Cloud Exchange. "That is why it is important to have a partner TÜV Rheinland on our side. Specialists in information security have the know-how to this requirement to meet," Osterloh said.

While there are a number of vendor-neutral cloud markets in operation today, most of them aren't publicly available to private enterprises. Nasdaq OMX and the NYSE have developed similar marketplaces but they consist of cloud applications geared specifically for the financial services sector or their own organisations. The UK government has developed the Cloud Store (through the G-Cloud framework), which offers a range of IaaS, PaaS and SaaS services through an easy to navigate storefront, but it's only available to the public sector. *BT*

Libor is dead … long live NYbor?

The transfer of responsibility for managing the Libor interest rate benchmark to a NYSE Euronext subsidiary is only the first step in regaining trust. *Elliott Holley* reports

Uncertainty over the mechanism for calculating the Libor benchmark in future remains in the wake of the generally applauded appointment of NYSE Euronext as its new administrator.

In June 2012, Libor was at the centre of a major scandal when it was revealed that it had been used to commit fraud, illegally manipulate derivatives markets and deceive observers about the creditworthiness of various banks, all for the sake of financial gain by corrupt traders at Barclays and others.

Following a selection process overseen by HM Treasury and the Financial Conduct Authority through the Tendering Advisory Committee chaired by Baroness Hogg, NYSE Euronext Rate Administration, a subsidiary of NYSE Euronext, was chosen to administrate Libor. The rate was previously administered by the British Bankers' Association.

"This is the first step towards improving transparency and trust in the benchmark," said Robert Emerson, head of interest rate derivatives at SuperDerivatives. "Despite its troubles, Libor remains one of the most critical interest rate benchmarks. In addition to the fixing of Libor becoming regulated, structural measures to prevent manipulation, appropriate monitoring processes, and potential criminal sanctions for manipulation are all needed. We need public and institutional confidence in both our banking system and the structure of our financial markets, and these structural and legal changes are a good step in that direction."

However, it is still not clear exactly how the rate will eventually be calculated. It is understood that in the short term Libor will continue to be calculated by surveying banks. Martin Wheatley, chief executive of the UK Financial Conduct Authority, has expressed a preference for a benchmark more closely tied to real transactions.

According to Kevin Milne, chief executive at benchmark provider Rate Validation Services – which has been chosen as the software and services provider to NYSE Euronext – much has already been done to change the way Libor is created and disseminated . Most banks have moved the submission of rates away from the trading floors to separate departments, making it harder in theory for traders to influence the pricing process. Yet nothing at all has been done to change the actual calculation of the rates.

Were the industry to design a system from scratch today, the result would probably not be Libor. For example, the main source of bank funding in Europe today is the European Central Bank. The industry may not necessarily need Libor itself, but "it does very much need a rate that can be used as a reference point, and that rate needs to be as accurate and reliable as possible," said Milne.

A change in the way the benchmark is calculated could mean that banks and their suppliers will feel the pinch as they need to change massive systems portfolios and data feeds. Thousands of applications, spreadsheets, databases and online web portals would need to be modified to bring legacy systems up to date.

Adding to the difficulties opposing a change are the costs that it would likely impose on investors with loan agreements pinned to Libor. That would involve re-evaluating existing contracts, possibly followed by redrafting/termination, in order to rebase the contract on a new benchmark.

A totally new system would not be the best solution either. "It's very sensible to focus on achieving much better oversight of Libor and improving accuracy by adopting a more evidence-based approach than to throw away the whole thing," said Milne. "There's a huge demand from the industry for better prices. We are delighted that NYSE Euronext Rate Administration Limited have been selected. They have a profound understanding of Libor and related contracts and unparalleled experience of market operations."

He added that valuing assets in the OTC markets can be difficult, especially if the instrument is a stock option that has only traded once in the last three months for example. Meanwhile, should banks be required to provide millions of price points per day, a spreadsheet-based system would be nowhere near enough to cope with the volume of information. Having an automated system should help to improve the efficiency and reliability of the information provided by Libor, he said. RVS will provide software and services to NYSE Euronext as part of the Libor administration deal.

Despite the uncertainty over the exact form the benchmark's calculation will take in the longer term, NYSE Euronext has expressed its satisfaction at being chosen over rival applicants Thomson Reuters and the London Stock Exchange – and its confidence that it can play a positive role in returning trust to the battered benchmark.

"At the time of its publication, NYSE Euronext welcomed the findings of the Wheatley Review of Libor and today we are delighted to have been selected to become the new administrator for Libor," said Finbarr Hutcheson, chief executive of NYSE Liffe. "We look forward to working with BBA LIBOR Ltd in completing the smooth transition to NYSE Euronext Rate Administration Limited, and continuing the process of restoring credibility, trust and integrity in Libor as a key global benchmark." ***BT***

Data structures hampering banks' ability to monitor risk

The credit crisis highlighted the inability of financial institutions to aggregate risk exposures and concentrations quickly or efficiently enough. In particular, it demonstrated the difficulty of aggregating enterprise data without losing the significance of the underlying source data in the process.

According to a new white paper from Wolters Kluwer Financial Services, one of the key issues faced by data architects tasked with creating a unified data management infrastructure is the fact that operations in different countries often have different internal systems. As well as the obvious issue of inconsistent data formats, these systems often lack common vocabularies and definitions.

"The usage of data within a financial institution differs from team to team, and this is complicated by regulatory differences – for example, risk departments following Basel bank capitalisation rules will measure probability of default over a 12 month period whereas under IFRS, the finance department will look over the life of a product, such as a 20 year mortgage," said Wolfgang Prinz, vice president of product management at Wolters Kluwer Financial Services.

The paper, *Data Management – a Finance, Risk and Regulatory Perspective*, considers how firms should implement a best practice data management solution that ensures consistent data across the enterprise, and explores the benefits such an approach can offer. ***BT***

BNP Paribas adds collateral umbrella

BNP Paribas Securities Services has added Collateral Access, an integrated and comprehensive collateral management system for both buy-side and sell-side clients.

Incoming regulation, in particular EMIR and Dodd-Frank, has increased the need for collateral for all OTC derivatives, whether cleared or non-cleared and is creating problems for the industry (Banking Technology, last month). The new liquidity standards of Basel III will also affect future demand for High Quality Liquid Assets.

"Providing a solution to mitigate counterparty risk remains at the heart of customers' requirements. But our clients expect even more than that," said Patrick Colle, chief executive at BNP Paribas Securities Services. "Optimisation and protection of collateral are becoming critical decision factors; whether long or short, clients want to be able to maximise the use of their assets. Those in need of collateral must best allocate their limited resources or effectively source eligible assets. Protection of the collateral portfolio is also a key concern. "

Hélène Virello, head of collateral management at BNP Paribas Securities Services, added: "We are seeing increasing demand from clients to support them with a solution through the entire transaction process – from trade capture to reporting, including liquidity solutions. Collateral Access allows our clients to be fully compliant with new regulations through limited investments and within a short timeframe. We work with an open model, interfaced with multiple counterparties, clearers, custodians and market infrastructures. It has been carefully designed to address the challenges facing the industry in the years to come."

The firm has made collateral management a key strategic initiative across its business lines, and reinforcing that by bringing its offerings under the Collateral Access umbrella. ***BT***

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News in BRIEF

BNP Paribas Securities Services is to use Swift's value added network service to connect to T2S, the single European settlement platform due to roll out in 2015-16. BNP Paribas says it chose Swift based on its ability to provide a reliable infrastructure, its existing relationship with Swift, and Swift's pricing structure for T2S.

India's HDFC Bank has chosen to install risk management tools from Numerix, to help consolidate its risk management and reporting capabilities. The bank will use Numerix' Portfolio product to manage, monitor and report on market risk exposure for its entire range of portfolios across all asset classes. The Numerix tool allows the bank to aggregate risk, go into detail on all trades and price and calculate market to model, historical or stressed value at risk, as well profit and loss and back testing for vanilla and OTC derivatives. It is also designed to help the bank to capital charge calculations for Basel III. The system comes with audit-trail and user authorisation features.

Broadridge Financial Solutions is to acquire Bonaire Software Solutions, a provider of asset management fee calculation, billing, and revenue and expense management solutions. Bonaire offers three broad, enterprise grade systems: Revport is a multi-asset, revenue management platform that performs fee billing calculations based on asset performance. Payport is an accounts receivables and collections solution designed specifically for the asset management industry. Empower BI is a business intelligence and management information platform for developing management reports and dashboard metrics.

Grant Thornton UK has boosted its financial services team with the acquisition of the specialist UK financial services advisory arm of global consulting services firm, Navigant Consulting. The 45 strong team, incorporating three new partners and nine directors, bring a strong track record in the retail financial services market and a particular focus on the challenger banks.

Nasdaq OMX plans to implement operational performance monitoring across its US trading platforms using software from Corvil. The CorvilNet performance monitoring system will provide the exchange group with the ability to simultaneously analyse activity at the network, application and trading layers. The information that is captured will allow it to alert for anomalies in real time and improve systems performance. Diagnostic tools can be used to track the full life cycle of a trade, enhancing the exchange's ability to respond to queries relating to technical issues, performance levels, or trading outcomes and optimise its INET trading engine. The tool will also be used to support regulatory functions such as tracking outbound data feeds to member firms and securities information processors.

Saudi Arabia's Riyad Bank has chosen technology company Calypso Technology to help revamp its treasury operations and improve its back office. The Calypso system will be used by the bank to support its structured products and hedge accounting in FX cash and derivatives, money market, interest rate derivatives, fixed income and commodities markets. Riyad Bank will move from a process-based operation model to an exception-based model, a decision intended to improve its straight-through-processing rate. Also, the bank hopes to align its treasury operations with international and Islamic financial industry standards.

GBST's Capital Markets and Six Financial Information have teamed up to enhance GBST's solution for the Financial Transaction Tax that some European countries are introducing. Syn~FTT now interfaces with Six Financial Information's flagship Valordata Feed to calculate the tax payable on affected securities. From 1 July 2013, Six Financial Information's instrument data will identify additional futures, options, structured products and other derivative contracts that come into scope for the Italian transaction tax on derivatives. VDF is based on Six Financial Information's proprietary data model, which links all data elements associated with a security – from terms and conditions to prices, from institutions to markets, through to corporate actions and events.

GFT Technologies has taken an 80% stake in Italian IT consultancy Sempla for an undisclosed cash sum. It has the option to acquire the remainder of the company after five years. Sempla specialises in the commercial and private banking sector, offering comprises IT services, business solutions and digital marketing & design. GFT operates primarily in the investment banking sector.

GFT currently supports existing clients in Italy from its facility in Spain.

Omgeo and Eze Software Group have launched a high-performance interface to fully automate futures and options matching between the Eze OMS and Omgeo Central Trade Manager, a central matching solution for domestic and cross-border exchange-traded derivatives, equities and fixed-income transactions. The new interface has been developed using Omgeo CTM's native XML messaging format. The Eze OMS is a global multi-asset class order management system. The interface enables Eze OMS buy-side users and their broker counterparties to match trades in real time. The Eze OMS also links to Omgeo OASYS, an allocation and confirmation service for US securities. Together, Eze Software Group and Omgeo have more than 175 clients live on their joint offerings.

Danske Bank is to implement the Market Data Manager data inventory solution from UK company MDSL, which will provide a hosted service for accurate invoice reconciliation, reporting both to finance and to the business, as well as full permissioning control integration. Other key elements are multi-currency features, global customer service, and the ability to offer support and account management from its Northern Europe office in Gothenburg. ***BT***


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Making contact

The rollout of contactless payments in the retail environment has been patchy. *Heather McKenzie* thinks it will be a slow burn despite recent advances

Despite security concerns, contactless payments technology continues to be rolled out globally. Visa International recently estimated that the volumes of contactless transactions it will process during 2013 will quadruple. MasterCard's figures show that since 2012 there has been a 50% increase in the number of contactless cards it has issued.

Visa says 70 million of its contactless cards will be in circulation in Europe by next year. At the end of February 2013, there were 51 million contactless cards in circulation in Europe that could be used at 671,000 terminals available at major retailers.

Jeremy Light, managing director of Accenture Payment Services Europe, Africa and Latin America, reckons contactless cards represent "the most profound change in the cards market". At present, he doesn't think many people yet realise how significant contactless cards will prove to be. "They have been around for a long time and volumes are low, but growing, particularly in the past two years," he says. In the UK, for example, one in seven payment transactions below £20 at Marks & Spencer retail stores have been made via contactless cards; food outlet Pret a Manger, which was a very early adopter of contactless cards, has seen the use of contactless payments grow from 3% to 20% since they were introduced in 2008.

Light predicts that contactless could, within five years, reduce cash payments by 40%. "That will have a huge impact in terms of cost reduction in the cash cycle and cash handling for bank processing centres and large retailers such as supermarkets. Once contactless cards reach mass adoption it will be a small step to mobile payments using NFC technology," he adds. "There is a great deal of innovation occurring in the mobile and cloud arenas. But it is difficult to work out what and who will be successful. The clear trend, however, is towards contactless cards. Mobiles will displace cash because they will be used to make electronic payments, but it will take a while."

These comments should hearten industry observers such as David Birch, director at IT consultancy Consult Hyperion. As reported by bankingtech.com (*Unlocking the mobile wallet,* 19 June) Birch raised concerns during a digital services conference about the lack of progress in mobile wallet use in the UK.

But the number of transactions using Near Field Communication – contactless – either via a card or a mobile phone, remains low.

Elsewhere in Europe, MasterCard has rolled out its contactless system, PayPass and Tap&Go payments to 26 countries – eight of which were added during 2012. Retail acceptance during 2012 almost doubled, says MasterCard, and 255,000 outlets across Europe can accept such payments.

Among the leading countries in terms of contactless cards issued for MasterCard is Poland, where 50% of cards are enabled.

In the Netherlands, two of the largest banks – ING and ABN Amro – recently announced they will issue PayPass contactless payment cards to their customers by mid-2013. MasterCard says this will make the Netherlands the largest PayPass debit card country in Europe.

Of course, you can lead a horse to water but you can't make it drink. While infrastructure is being deployed to enable contactless payments and eventually mobile contactless payments, some hurdles remain. Foremost among these is security; mainstream media articles about contactless payments focus almost exclusively on security concerns. One UK-based 24-hour news channel reported that "millions of contactless payment cards contain a security loophole that allows vital security information to be stolen ..." before mentioning in the final paragraph that the loophole would be closed by the new generation of contactless cards being issued by banks.

Visa addresses security concerns by pointing out that its cards have no power sources to transmit data and work only when a card reader is in proximity with a contactless point of sale terminal.

US-based industry association Smart Card Alliance, has also addressed contactless payment security concerns. Contactless payments devices and the payments processing networks and systems have specifications and security standards "above and beyond" those used in basic RFID applications, says the Alliance. Further, card issuers protect consumers' personal information and use the same payments networks that are used for magnetic stripe cards.

One concern raised by consumer groups and the media is that contactless payment cards can be read by devices without the consumer knowing. The Card Alliance. It says fraud based on reading information from a contactless payment device has not happened other than in demonstrations of safety concerns. "The cardholder information that is used during a contactless payment transaction is of little to no use in creating fraudulent payment transactions," says the Alliance. "The security implementation currently used by the different payment brands causes the contactless device-generated transaction information to change every time a reader reads the device."

Like so many other innovations, contactless is likely to be a slow burn. ***BT***

Nasdaq OMX pulling ahead of rivals in exchange technology markets

The relative youth of exchanges in the Middle East makes them fertile ground for established exchange groups, as a flurry of wins for Nasdaq OMX show. *Elliott Holley* reports

The adoption of trading technology from Nasdaq OMX by three stock exchanges across the Middle East – Bahrain, Iraq and Turkey – in recent weeks highlights the strides the exchange's technology business has made in recent years.

Selling technology now accounts for 11% of Nasdaq OMX revenue, according to the firm's 2012 annual report. That compares against 9.1% at rival NYSE Euronext and 6.5% at the London Stock Exchange Group over the same period.

All three exchanges are relative newcomers. In Iraq, the exchange was created in 2004 as a new independent company to replace the Baghdad Stock Exchange, which was closely associated with the deposed Saddam Hussein regime. In Bahrain, the Bourse was also established to replace a predecessor – in this case the Bahrain Stock Exchange – in 2010. In Turkey, the Borsa Istanbul was created from the union of the country's equities, derivatives and gold markets at the end of 2012, as part of a bid to make Istanbul an international financial centre.

Both Iraq and Bahrain were already using older Nasdaq systems, while Turkey is adopting Nasdaq technology for the first time. In Iraq, the Nasdaq OMX 3 system is currently being installed and is due to be operational by Q1/Q2 in 2014. In Bahrain, the target is late 2014. No date has yet been confirmed for Turkey.

By comparison, Deutsche Börse has focused on selling its technology in the central and eastern European markets, notably Prague, Ljubljana, Budapest and Vienna, all of which are members of the CEESEG group of exchanges. The primary rival of the CEESEG Group, Poland's Warsaw Stock Exchange, has just installed a system provided by NYSE Technologies, the technology arm of NYSE Euronext. Meanwhile, the London Stock Exchange has sold technology to Peru's Lima Stock Exchange, including smart order routing capabilities.

New Horizon

The Bahrain Bourse is to replace its Nasdaq Horizon trading platform with the newer Nasdaq X-stream system, which is expected to increase the number of assets tradable as well as provide lower latency and increased capacity.

Located to the north-west of neighbouring state Qatar and to the east of Saudi Arabia, the island kingdom of Bahrain is one of the more notable markets of the Persian Gulf. Nasdaq OMX's involvement with the country goes back to 1999, when it provided the technology that helped the original Bahrain exchange switch from manual to electronic trading. Located at new premises in Bahrain Financial Harbour, the Bahrain Bourse is not to be confused with the nearby Bahrain Financial Exchange, which opened in November 2011 and offers trading in both conventional and Islamic finance.

"Upgrading our trading platform is part of our implementation of BHB's strategy that aims to improving all aspects of the bourse's operations," said Fouad Rashid, director of Bahrain Bourse. "Bahrain is dedicated to developing the capital markets sector in Bahrain, boosting regional investment and continuing our partnership with Nasdaq OMX through upgrading to its X-stream technology. We are very optimistic about our future growth, and building our regional and international footprint."

Turkey's newly-merged Borsa Istanbul is perhaps the biggest win for Nasdaq, as the new exchange will take up Nasdaq trading, clearing, market surveillance and risk technology.

Borsa Istanbul was created at the end of December 2012, by the merger of the former Istanbul Stock Exchange with derivatives market TurkDex and the Istanbul Gold Exchange. Under the deal with Nasdaq OMX, the two companies will collaborate in the region as Turkey attempts to build Istanbul into an international financial centre and global trade hub.

"This is a notable milestone for Borsa Istanbul, as well as for Turkey, the surrounding region and the whole exchange industry," said Ibrahim Turhan, chairman and chief executive of Borsa Istanbul. "We are delighted by this partnership with such a powerful global brand, which covers not only a technology and know-how transfer, but also cements a strong operating union to capitalise jointly the commercial opportunities in the broader Eurasia region. Borsa Istanbul will have full control and deep knowledge of the technology and thus will be self-sufficient in this regard."

Turkey has been a paragon of virtue in attracting foreign investment to its capital markets in recent years, as strong GDP growth (9.5% in 2011) underpinned an influx of foreign investment and the rapid adoption of modern technology in finance, communications and the wider economy. ***BT***

Coming into alignment

A new report says that US and European regulation on OTC derivatives market reformation are aligned. *David Bannister* reports that intense lobbying by EU officials was a factor

As European securities regulator ESMA starts the latest round of consultation on OTC derivatives clearing, research from Deloitte, the business advisory firm, highlights how the US and EU regulatory regimes for these markets are "highly aligned".

Deloitte's report *CFTC and EU OTC Derivatives Regulation – An Outcomes-based Comparison* is published as the US Commodity Futures Trading Commission (CFTC) meets to agree how its rules will apply to EU banks operating in America.

According to the firm:

- The regulatory objectives in the EU and US are aligned across all 15 regulatory categories identified by the CFTC.
- Overall, regulators are adopting a similar approach to reducing systemic risk and improving transparency.
- The categories where there is the greatest degree of variance are swap data reporting and clearing and swap processing.
- Despite differences in approach both regimes lead to broadly similar outcomes.

"The global OTC derivatives market needs a consistent and co-ordinated approach from regulators, if it is to work effectively. Without it, market participants will be subject to conflicting and over-lapping requirements," said David Myers, financial services consulting partner at Deloitte, said. "Deloitte's research indicates that the approaches used by regulators in the US and EU are highly similar in improving transparency, reducing systemic risk, promoting financial stability and combatting market abuse."

Myers said that complete alignment is not realistic: "There are, of course, differences in the detail of how rules are implemented. However, without some form of recognition that rules work differently in different jurisdictions but lead to the same result, firms will be faced with the risk of meeting duplicative costs and continued uncertainty in their implementation plans."

If Deloitte is right, European firms have intense lobbying of US legislators and regulators by European Union officials to thank. At the beginning of July, Patrick Pearson, head of unit, Financial Market Infrastructure, internal Market DG, European Commission, told the European Clearing & Settlement conference in London that US regulators – particularly the Commodities Futures Trading Commission were pushing hard to have US rules implemented globally.

"The perception in the US is that we are lagging behind, that we don't have a regulatory plan and don't have laws in place," said Pearson. "There is politics behind this, obviously: there are some in the US that want to use this to push through their own regulatory reforms, but a lot of it has to do with ignorance – lack of understanding , lack of effort to try to understand what other jurisdictions are doing beyond the US. In the past month we have received representations from the US Congress, the US regulators, we've had phone conferences with the US Treasury and the Basel Financial Stability Board where we have had to explain that our reforms are not behind the US – if anything, we are ahead of the US."

Pearson said: "The US Congress believes that the rules in Europe, even if they were in place, are not as strict as those in the US, hence the US really needs to push forward with the Dodd-Frank Bill and all of the extraterritorial components that it contains. Wrong. That is why we had to write an op ed in the *Wall Street Journal* and published articles in *Bloomberg BusinessWeek* – to explain that in many respects European reform is not only ahead of the US but is also stricter. We've met with disbelief from the US Congress, from the SEC and from the CFTC. We had to demonstrate to them that our rules and requirements for CCPs in a number of objective areas really go much further and are much tougher than in the US."

> *"There are some in the US that want to use this to push through their own regulatory reforms"*

The EU's latest round of discussion centres on a new discussion paper designed to help ESMA decide which classes of OTC derivatives need to be centrally cleared, and how long market participants will be given to prepare.

EMIR attempts to improve transparency in global derivatives markets by mandating the central clearing and reporting of the bulk of OTC derivatives, establishing common rules for CCPs and trade repositories. The overall aim is to risk systemic risk in OTC derivatives markets, which have been blamed for their contribution to the global financial crisis.

"Our consultation is a first important step in shaping the details of how central clearing of OTC derivatives will work in the European Union," said Steven Maijoor, ESMA chair. "Having these trades centrally cleared and ultimately making post-trade data available to investors will increase the robustness, transparency and stability of the financial system." ***BT***

Additional reporting by Elliott Holley

Slovakia shapes up as centre of excellence for mobile payments

A three-way partnership between Visa Europe, Tatra Bank and Telefónica's 02 – along with an array of local retailers is making Bratislava a showcase, reports *David Bannister*

The on-going turf wars that have held back the adoption of using mobile phones as a payment device at the point-of-sale will soon be a thing of the past if the progress made in the Slovakian capital Bratislava over the past year is any indication.

The success of a project involving Visa Europe, Tatra Bank, Telefónica Slovakia's O2 operation and a substantial number of retailers makes Slovakia a showcase market for contactless technology, said Sandra Alzetta, senior vice president, innovation at Visa Europe (*above*).

Reeling off the numbers for contactless transactions in the country – 1 million contactless payments per month, 60% of issued cards contactless enabled, 36 % of the PoS terminals and 10% of all Visa transactions now using contactless – Alzetta says that this is just one of 40 projects that Visa expects to have running in Europe by the end of this year.

Oh, and by the way, Visa and Samsung are working on embedding the Visa application into the hardware of future handsets. Currently Visa has certified 40 NFC enabled handsets and expects this to reach 80 by the end of the year as the 40 pilots roll out.

Open partnerships are the way ahead after years of alliances and consortia forming an regrouping, it seems.

For Visa, the physical point of sale is a major focus – "it is our heartland, really" she said. Contactless has gone well, but it is really only a stepping stone on the road to Near Field Communication based around the mobile phone as a replacement for the contactless card. "Contactless is an important step to NFC – tapping is a part of consumer education," said Alzetta.

By 2020, Visa Europe reckons that 50% of its transactions will originate with NFC enabled phones, largely replacing the contactless cards currently being carried by 60 million Europeans.

For now, there is still an element of chicken and egg in mobile adoption, though as Alzetta said, contactless adoption has been positive, said Lucia Sud'ová, head of the retail products division at Tatra Banka. Almost 100% of the cards issued by the bank are now contactless and adoption has been swift – "Slovakians like innovation and adapt very quickly," she said. "We can now say that people trust the cards: after three years there have been no customers reporting fraud (and there is zero liability). Big fraudsters are not interested in the small limits of card on cards." Tatra's offline limit for contactless card payments made without a PIN is €60.

Tatra, part of Raiffeisen International Bank, focusses on the private banking and mass affluent markets. "Card and mobile innovation is one of the strongest layers in our innovation strategy – it's not the only area, but it is one of the strongest," said Sud'ová.

The bank's first foray into mobile contactless was using a Wireless Dynamics-supplied NFC-enabled iPhone case branded as the iCarte in May 2012. "We are following the habits of our customers," said Sud'ová. "They want everything to be on their mobile, and that includes banking and payments."

The iCarte solution was always seen as a temporary approach – as Apple continues to leave NFC functionality out of the iPhone, the bank has recently started offering a version for the iPhone 5, also supplied from Wireless Dynamics. "The iCarte won't last for ever, but it gave us the ability to provide instant card issuance and it wasn't a big investment – it wasn't small either but it was worth it: it is very hard to get a "wow" effect

in retail banking and this got it," said Sud'ová. "Innovations don't always have a business case; sometimes you just have to have faith and invest because you believe that something is going to be a market leader. You have to invest for the future and not expect to make money from day one. Do we believe that consumers will pay by mobile in the future? Yes, so we have to fight for the share of wallet."

At the beginning of this year, working with Telefónica/O2, the bank begun offering a "SIM-centric" solution, using NFC-enabled SIMs. These work in conjunction with the NFC aerials inside the handset, so current iPhones are not an option for this route.

The partners have worked together to develop an infrastructure that allows Tatra – and any future banking partner – to remotely manage the devices without having to go through Telefónica . Security of the customer's data is taken care of on the bank side of the system.

Such an infrastructure is expensive to develop and maintain, which raises one of the other interesting things about the Slovakian pilot: its openness.

"It is not in our interest to be the only one doing it. We want all the banks and all the operators involved," said Tomáš Masár, strategy & business development director at Telefónica Slovakia. "We have to co-operate and share the infrastructure with our competitors to make it as cheap as possible. We don't want to end up with three infrastructures."

This works all ways, said Sud'ová, who expects to announce a similar collaboration with one of the other Slovakian network operators before the end of the summer. She wouldn't be drawn on which of the two – Orange or T-Mobile – it would be, but it's rather academic as the point is to sign up both at some stage.

According to Masár, handset manufacturers are proving less co-operative. Currently five of the six handsets O2 supports for Tatra are made by Samsung – the sixth is a Sony device.

The proliferation of handset makers and handsets does create a complex set of problems, said Masár – every change of firmware has to be checked across every market to ensure that it isn't going to interfere with the payment app and disable it in some way.

"As adoption rates go up, hopefully they'll realise it's themselves they are hurting," he said.

As the adoption rate accelerates, Sud'ová says that new features and services will enable the bank to keep pulling ahead. Voice biometrics will soon be added to allow direct secure contact with the bank's call centres, and the smartphone app will interface directly to online payments engines, driving more mobile-originated online purchasing.

Visa Europe's Alzetta is also looking beyond simply enabling contactless payments with an NFC-enabled phone. "The use of mobile payments at the point-of-sale is interesting, she says, "but enhacing the payment experience at the point-of-sale is even more so," she said. ***BT***

Polish banks collaborate on mobile infrastructure

Bank-centric mobile payments look set to receive a boost in Poland after six banks announced they will collaborate to create a new standard in the country, writes *Elliott Holley*

Alior Bank, Bank Millennium, Bank Zachodni WBK, BRE Bank, ING Bank and PKO Bank Polski intend to build a common infrastructure including standard authorisation and settlement. The system will be open to all market participants, including other banks, and will support abilities such as mobile cash withdrawal from ATMs and mobile money transfer.

The new service is expected to reach 70% of banking customers in Poland, according to estimates provided by Bank Zachodni WBK, while BRE Bank says it will bring four million BRE customers to mobile payments.

"Customers want comfortable, versatile, fast and secure payment methods," said Margaret Kołakowska, chief executive at ING Bank Slaski. "We can see how quickly customers start to use mobile banking and new ATM services. That is why we have decided to proceed with the project with other banks, to provide customers with the highest level of service in daily payments."

In March, PKO Bank Polski launched IKO - its "fourth generation" mobile banking service, which combined balance checking, account history, transfers, and paying for items both in stores and online. The app currently has 40,000 users, accounting for an estimated $16 million in transactions between them. This system will be the basis for the local standard. However, the client application will be prepared separately for each of the participating banks.

"The creation of a common infrastructure for mobile payments in Poland is one of the elements of our strategy for 2013-2015," said Zbigniew Jagiello, chairman of the Management Board of PKO Bank Polski. "The standard is flexible and open to other market participants, so that customers who pay phone can use this feature in as many places, no matter which bank are tied."

Misys targets branch innovation in Middle East

Rising technological sophistication offers the chance to reinvent retail banking in the Middle East. Software and systems vendor Misys plans to get a piece of the action. *Elliott Holley* reports

Rising technological sophistication offers the chance to reinvent retail banking in the Middle East, says Chris Weddell, business solutions group director Middle East and Africa at bank software and systems vendor Misys.

"Everyone is expecting quality and speed," he told *Banking Technology*. "The branch is still a key asset in the Middle East. It's part of the shopping experience. Banks are working hard to focus on the customer experience – and that means using technology to segment customers quickly."

Misys is currently working on several projects in the Middle East, including providing kiosks that allow customers to enter information about what kind of transaction they want from the bank. The information is then shared with the branch staff, so that when the customer reaches the cashier, the cashier is ready and prepared. The idea is to cut costs by saving time, while simultaneously reducing queues and making the customer feel empowered.

"As you enter a branch you are sorted into three classes, from the high-value client to the simple low-value transaction," said Weddell. "There's more self-service, and banks are adding sit-down areas to make the customer feel more comfortable. Banks are investing heavily in customer relationship management. They know that it's better to explain something to someone sitting down than in a queue."

A bank in Oman is said to be strongly interested in the kiosk concept, but Misys declines to name it. Misys has also started to develop a modular strategy, in which banks can purchase channel solutions and add them to an existing core banking platform, rather than replace the entire infrastructure. The firm recently built a portal internet banking solution for a bank in Saudi Arabia, which was installed by Misys over the existing platform built by another provider.

One of the challenges for banks in the Middle East is the dominance of cash and cheques. For example, in Egypt an estimated 90% of customers are currently unbanked, according to figures from Ernst & Young. Families pay their rent using cash or cheque – often in large, inflexible instalments designed to cover six months or even a year.

Mobile technology is advancing fast in the region and is likely to skip the M-Pesa-style mobile money transfer stage seen in Africa in favour of smartphone apps, according to Weddell. "I expect to see the demise of plastic cards," he said. "We will have a phone-based service in the future for consumers and store-based devices for accepting mobile payments."

Misys has also developed tools designed to use the mobile as a conduit to improve the customer banking experience. One such tool is called Bank Fusion GeoGuard, which enables customers travelling abroad to 'check in' at a new country using their phone. The aim of the tool is to inform the customer's bank of their new location, helping to avoid scenarios where the bank blocks a customer's debit or credit card because of an unexpected transaction abroad.

In addition, Misys also worked on a project with a well-known bank in Pakistan that involved rolling out a browser-based update, instead of placing servers in each of the bank's 1,500 branches to install the improvements. A separate project in Qatar involved setting up a hub for Swift messages. Both initiatives essentially focused on saving costs by creating a central infrastructure.

"If you centralise traffic in one location you reduce the cost and make it easier to manage reporting," added Weddell. "Centralising payments processing is quicker, faster and cheaper than the alternatives."

Another common feature of the Middle East is the presence of bank agents. At least in Dubai, offices are commonly visited by bank sales staff, peddling current accounts and other personal financial products and services. Misys, he says, is currently working with some of these banks to equip those staff with smart devices to replace the pen and paper working methods currently employed. With the rise in big data, a smartphone-enabled strategy could help banks to target potential customers more effectively using information on what has worked where and when in the recent past.

Weddell is less enthusiastic about the prospects for social media – banks that tried it in the US have had to close down their 'Facebook banking' units due to lack of consumer interest, he says. However, in internet banking, he believes that personal financial management systems will be increasingly built into internet banking services, helping customers to manage their expenses and set up savings goals.

"This is going to be a real differentiating factor going forward," he said. ***BT***

Misys shows post-merger mettle at user show, Page 18

Sifma Tech: a virtual event

The annual Sifma Tech securities trading technology seems to be playing to its strengths with a more accessible and relevant conference programme, reports *David Bannister*

It has become a commonplace to say that the annual Sifma Tech event in New York is not what it was. Falling audience numbers and the lack of big name exhibitors are partly to blame for this, but don't tell the whole story.

For starters, the attendance figures don't reflect the fact that Sifma Tech has a strong "shadow" following, largely focussed around the coffee shop area of the New York Hilton where the show is traditionally held.

For nearly all of the two days of the event, this area is crowded with executives from pretty much most of the financial technology companies you'd want to meet, including some of the big names that previously took large stands and hosted lavish cocktail parties.

One of the things that has struck me most often in the past few years is not what the Sifma organisers can do about getting more of these people upstairs to the main event, but why the management of the Hilton doesn't sell them coffee – the central bar remains resolutely closed all through the day, despite the fact that it's in the middle of a free-wheeling press conference/industry get-together.

Upstairs, things had changed quite a bit this year. Yes, the exhibition area is smaller, but that helped – the venue is a sprawling mess on several floors, so reducing the number of halls in use meant it was easier to navigate and created a reasonable buzz on the floor.

More importantly, an aspect of Sifma that has never really been as prominent as it deserves to be was exposed and accessible – the conference sessions.

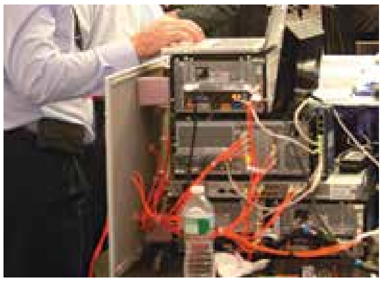
Traditionally, Sifma conference sessions have been pretty dull – back in the 1990s, when *Banking Technology* might send several staff to the Sifma event, it was the most junior reporters who got assigned to cover the conference sessions. It was character-forming.

Personally, I can't remember ever sitting in on one that could be described as anything other than "mildly informative".

This year I found myself taking copious notes, and most of that material will find its way into articles over the next few months.

This new focus on the conference side perhaps reflects the challenges the industry faces – in previous years there has tended to be a self-congratulatory Mother, God and Apple Pie aspect to proceedings, but there are real issues to be addressed these days.

"There's no question that we meet here today during a pivotal time for the finance industry," said Randy Snook, executive vice president of business policy and practices at Sifma, at the opening of the event. "We are also halfway through implementation of the Dodd-Frank Act, the most significant reform of our industry since the 1930s. Indeed, this is not the same industry as 2008. Firms are better capitalised and much more resilient, with a greater focus on risk management. Technology is a driving force that enables this change. Tech



has become more important than ever as regulators and firms seek better data analysis capabilities and more efficient ways to manage risk and ensure regulatory compliance. Additionally, new innovations continue to shape the way we do business, and technology has become the skeletal support of our industry. Technology is the enabling force for all of the various processes and functions that keep the financial system running."

A big theme for Sifma – as it will be for Swift at the Sibos event in September – is the threat of cyber-attacks. In 2011 alone, the FBI investigated over 400 reported cases of attempted corporate account takeovers worth nearly $300 million.

Sifma will be conducting an industry-wide exercise that will that will simulate a broad cyber-attack on the financial system. This simulation will force both individual firms and the sector as a whole to test response plans in order to maintain effective and orderly markets and ensure business resiliency.

Meanwhile, the exhibition hall seems to have morphed from the fancy booths with leggy hostesses and shiny giveaways to something more akin to a cross between a computer hobbyist fair and a platform for start-ups seeking funds. A striking fact is that many of the processor boxes on show had their backs to the viewer, the better to show off their custom-made interface devices.

A changing event, then, but still central to the industry in subtle ways. As one very-well know fintech character said: "Sifma really just needs to tell us when the show is going to be and most people will come to town. Then they need to get us to go upstairs ..."

Keeping it simple: market data management made easy ...

New York start-up Simplified Financial Information is piloting a market data analytics system prior to release later this summer. The firm is also developing a system intended to provide trading organisations with a better understanding of how their applications and strategies respond to volatile market conditions, scheduled for launch in Q4.

SFI's systems are based on the TipOff monitoring system developed by UK company TS-Associates to provide metrics in trading systems where latency is a particular issue. SFI has adapted the network and data flow monitoring capabilities of Tipoff to create a platform for a range of products that capture, analyse and report market data message and transaction flow.

The company was formed earlier this year by market data industry veteran Emilio Mercado, who is chief executive. Another well-known financial technology figure, Barry Thompson, the founder of trading systems vendor Tervela, is chairman.

Handling of market data in investment houses is a considerable expense, and often wasteful as data is duplicated across feeds from different information vendors. Diverse formats complicate the issue, and testing of new systems becomes problematic, said Mercado.

Mercado declined to name the "major international bank" – understood to be RBC – which is currently piloting the system.

Oil firm offers analytics system to financial services

Case-based reasoning tools developed for the oil industry are being re-engineered for financial markets by a new division of the Swedish firm Verdande Technology with the intention of creating a systems monitoring tool for trading firms.

Jo Kinsella, chief executive of the new division, says that the company is currently working on a prototype with a client and expects to bring the system to market by the end of the year. She declined to name the client institution. At the same time, the company is "scaling up the teams in New York and Houston", she said.

Case-based reasoning uses data about certain conditions and events to try to predict when those events are about to recur so that action can be taken beforehand. Currently Verdande is working on creating a library of cases and their characteristics that are common in financial services.

Data for the Verdande system will be supplied from the network and system monitoring tools created by London-based ITRS, whose US operations Kinsella used to run.
www.verdandetechnology.com

DataArt, a custom software development company, and 10gen announced a partnership intended aimed to enhance big data management for DataArt, with a particular focus on financial services firms. The partnership uses 10gen's MongoDB NoSQL database and DataArt's Big Data and Data Visualization Competence Centers to ease data aggregation and cost of management. The first offering, no cost, is Opera – Open Protocol Enabling Risk Aggregation – a risk reporting suite.
www.dataart.com

Storage Engine was showing its QLogic FabricCache QLE10000 Series Adapter, which combines QLogic's optical fibre channel adapter, intelligent caching and I/O management with connectivity to a server-based PCIe flash card. Simple to deploy and manage, the basic model provides an 8Gb/s fibre channel to PCIe, and a 200Gb PCIe daughter card to transform single-server, captive cache into a shared, performance-enhancing resource for a wide range of enterprise applications that rely on SAN storage.

Cloud-based security specialist demonstrated its approach of putting the burden of security in the cloud, not the device, to provide protection against modern malware, phishing, and zero day attacks. The company also provides access to collective, global security intelligence that pools knowledge to improve its effectiveness. Rather than using static, out-of-date public blacklists, the Webroot IP Reputation Service delivers dynamic IP reputation data in near real-time to network devices using a sensor network to generate security intelligence quickly and identify key IP threats, such as spam sources, BotNets, Windows exploits, scanners, and others.

OP3Nvoice, and Digital Reasoning announced a partnership to deliver a solution for the monitoring and analysis of electronic communications. The solution will use Digital Reasoning's Synthesys machine learning platform, which transforms structured and unstructured data into the underlying entities, facts, relationships, and associated temporal and geospatial patterns. By integrating it with the OP3Nvoice platform, which monitors all conversations – by audio, video or text – the combined platforms will provide a powerful and compelling conversation analytics solution designed to uncover critical information within human communications.

Misys shows its post-merger mettle

In Budapest, Misys, the banking and capital markets technology provider, demonstrated it has the means to win back the confidence of its bank and asset manager clientele. *Dan Barnes* reports

For the first three months of 2012, Misys was the subject of a protracted bidding war. The company's falling revenues were exacerbated by this period of uncertainty, shaking client confidence, said one banker at the recent Misys European Forum in Budapest.

"[Misys] either needed to do something innovative or it would be dead in three years," he said. "A few weeks ago I was of the latter opinion, but now I think it looks like they have done what they should have done."

Before looking what Misys has achieved, it is important to understand where it has come from.

In 2011 a $2.27 billion (£1.47 billion) takeover by core banking technology provider Fidelity had fallen through. In February 2012 chief executive Mike Laurie left the firm when merger terms were agreed in a £918 million all-share deal with Temenos, another major rival in core banking platforms. However, that deal subsequently fell through. Tom Kilroy, interim chief executive, acknowledged in March 2012 that customers were delaying orders as a result of the on-going uncertainty.

In the long term, the failure to successfully iron out a deal with a rival core platform provider may have been a saving grace for Misys, which like its rivals had yet to see a big Tier One bank take up a core system replacement. The core banking market has been suffering in the downturn; Temenos shares fell from CHF35 (£24.28) in January 2011 to a low point of CHF 15 (£10.40) in January 2012 and two years on have not yet broken back through the CHF25 (£17.34) barrier.

Private equity firm Vista Partners stepped into the breach, fending off a bid for Misys from private equity rivals CVC Partners with a £1.2 billion offer of its own in June 2012. It brought more than money to the table: in February 2012, Vista Partners had bought Thomson Reuters Trade and Risk Management, a capital markets technology firm, for an undisclosed sum. Rebranding it 'Turaz', the firm brought with it the Kondor+ derivatives trading and risk management system.

Misys had itself acquired risk management technology supplier Sophis in 2010 which brought numerous buy-side clients, adding to the user bases of its own Opics and Summit FT treasury and trading systems, alongside the Midas, Equation and Universal Banking core platforms.

As a consequence, when Vista Partners merged its two acquisitions, it created a systems provider with considerable breadth.

But breadth alone does not create a successful company.

Inevitably, the provision of separate technology platforms and private ownership draws a comparison with financial software provider SunGard, owned by private equity firm Silver Lake Partners. Where Misys differs is in the direction it has taken with its systems. Rather than operate its product teams on a 'competitive' basis, as it perceives rival SunGard as doing, Misys has decided to integrate the systems and create an open-access architecture to integrate better with third party systems.

The road ahead

These innovations were announced in two parts: Misys BankFusion Digital Channels was launched in March year at the Misys Middle East North Africa Forum, and Misys Capital Markets Fusion at the MEF this month. These are the integrated product sets that have caught the imagination of users.

The drive for the delivery of Misys Capital Markets Fusion had stemmed from the Kondor+ business unit which had been exploring systems integration since 2011 explains Juerg Heidtmann, global head of integration and innovation at Misys.

"We thought it would be a good idea to break down what the system is doing into components, and implementing them in a generic way so they could easily be replaced and extended without going through the release upgrades, and to be open to external systems," he says.

The firm had realised that its release cycles were too long; clients had to upgrade an entire system even if they only needed to upgrade one component. They also often wanted to use some of their existing systems.

"We redeveloped what we had on this new architecture. The systems had been designed at the end of the 1990s on client server architecture and this would not be suitable for clients in a couple of years' time. Given the increased volume of trades that will have to be processed with predominantly algorithmic execution, a client server simply architecture wouldn't hold up," said Heidtmann.

The Kondor+ team kept this idea and after the merger with Misys spent the first six months examining how the new systems worked and then extended the model to all of the other products. The new service-oriented architecture uses in-memory processing and is distributed across compute nodes in order to make compute power scalable.

This Misys Application Fabric offers integration between systems but also allows users to take the best elements of the different Misys platforms and use them as standalone options.

For example its back office processing capabilities have been transformed into a standalone application, its risk and workflow capabilities have been united into a compliance server. Its curve tools and pricing models have been isolated into separate curve and pricing servers, each containing the calculations and algorithms necessary to support full service levels. It has also developed a position management component to provide cross-asset and cross-system position management capabilities.

One of the European bankers attending MEF expressed optimism on seeing the launch of the new Fusion product: We have Kondor+ at the moment and in the next year we will be starting a Kondor+ and Summit upgrade," he said. "This looks good to us. It remains to be seen how it works but if it works it should make things easier."

The change

Misys is making a point of emphasising continuity of product and brand. The only change that clients at the event highlighted was in the delivery of customer service; with the majority saying that it had improved. (One or two Sophis users said it was less personal, but emphasised that did not make it worse.)

The amount of change internally has been significant. Of the 10-person management team, five are from the Thomson Reuters/Turaz business. Only two are from Misys; former chief operations officer and recently-appointed chief executive Nadeem Syed had joined Misys in 2012 from SumTotal. Global head of engineering Robin Crewe joined in 2010. Grace Van Til, Misys's recently appointed head of customer support, was previously Syed's troubleshooter in the same role at SumTotal.

Chief financial officer Himanshu Raja and chief operating officer Amanda Mesler, who both joined Misys this year, were both part of the executive committee at Logica that successfully sold the company on to Canadian vendor CGI in 2012.

The firm says that since January 2012 number of people in research and development has increased from 1866 to 2028. The number of people in professional and customer services has increased from 1189 to 1312.

A Misys spokesman would not give an exact figure regarding the number of job losses following the merger but said, "We have had very little attrition and have been able to focus efforts in building and strengthening the customer-facing teams."

Misys is clearly not the company it was a year ago: the firm has endured some painful change, but it has at least been quick. It has also produced what promise to be tangible benefits for users. The year ahead will allow banks running Misys platforms to cast their judgement on how successful its efforts have been. ***BT***

Stand by for light speed

Most debates about High Performance Computing in financial services quickly turn into conversations about high frequency trading, but there are many more reasons for getting the best of out of systems. *David Bannister* reviews some examples

Electronics and computer technology have always been pushing the boundaries of smaller, faster, cheaper (or at least, 'more affordable') and financial services firms have always been quick to take advantage of the latest advances.

High frequency trading, co-location and using line-of-sight microwave comms links between tethered balloons to reduce signal delays all make for exciting headlines, but the reality is that understanding the hardware limitations of a system and the way that it interacts with software can make an enormous difference to the efficiency of almost any system.

In a world that is moving rapidly to virtualisation and the cloud, there is every reason to look at the code structure and tweak it as much as possible – it may not matter too much that a few clock cycles are being shaved off routing programs but they all add up, and if you can get more onto your servers, you'll be paying less for more.

It's a highly specialised world, though and there are many different approaches touted by their evangelists – in-memory processing, solid state drives, DRAM drives, Field Programmable Gate Arrays, General Purpose Graphic Processor Units and so on. Quantum entanglement is likely to be a game-changer.

Typically, it is about getting the right element of the system doing the right job at the right time, rather than having a hugely powerful CPU waste its resources on trivial tasks or sit around waiting for data to process.

"What we are doing is having a FIX offload engine, in the same way that you have a TCP/IP offload engine," says Kevin Houstoun, chairman of Rapid Addition, which specialises in the processing of FIX Protocol trading messages. TCP/IP offloading is used in high speed networking such as 10 Gigabit Ethernet, and improves performance by having the TCP/IP packets processed by the network controller rather than the attached computer.

"What our FIX offload engine does is handle the FIX packet processing. This is taking a function that is normally always serial and offloading it so that it isn't being done by the CPU, and that has multiple advantages, including lower latency: in a software-based FIX engine the round trip from tick to trade through a CPU is around 10 microseconds – with this technology it drops to 5 microseconds."

The second benefit is that, in an Intel CPU environment, the parsing of FIX messages isn't taking up any cache memory, which can then be used for whatever process you are running, such as a trading algorithm.

Currently the software based FIX engines from Rapid Addition handle some 100,000 messages a second. "By offloading it – and we have yet to get the final results to see how much the CPU can cope with – but we can actually process FIX messages at line rate, and line rate on a 10G card is 6.25 million 200 byte messages a second. It is a step change," says Houstoun.

CASE STUDY: PROCESSING TICK DATA

RSJ, the biggest trader on NYSE Liffe and a large trader on other derivatives exchanges, uses Kx's kdb+ to support its algorithmic trading.

RSJ is the largest trader of financial derivatives in the Czech Republic and needs to process vast quantities of data at very high speeds. The company collects data on numerous instruments, with over 10 million records per day on Eurodollar futures alone. It uses several months of tick data of the most liquid securities in the world, mostly Eurex, NYSE Liffe and CME futures, to run intra-day trading simulations and what-if scenarios.

During the evaluation process RSJ pushed potential systems to the limit before concluding that Kx Systems had won in terms of speed and the ability to process complex requests and large data sets, the key requirements.

Martin Ducháček, head of algorithmic system development at RSJ, says: "We are seeing substantial improvements with Kx's kdb+. As well as very significant reductions in processing times, where previously a query on a day's data would take a couple of hours - which is far too slow – with kdb+ we can write a query in a couple of minutes and see the results in seconds. This allows us to react to market situations almost immediately. kdb+ provides us with quick support for brainstorming and allows us to do things we were previously unable to do."

Simon Garland, chief strategist at Kx Systems, says: "RSJ is the ideal client for making good use of Kx's combination of language and high-performance database. They collects huge quantities of tick data and needs to access and query it very quickly in order to be able to create and test models, test strategies, identify unusual market situations and react to them."

But more surprisingly, he points to the big benefit as being a dramatic reduction in the number of servers users have to deploy to service their customer bases. "For something as predictable as taking FIX ASCII and turning it into the binary code that the CPU needs you can make great savings and the challenge of having to do more with less means that scalability is important," he says.

Simon Garland, chief strategist at Kx Systems, a specialist in high performance databases and time series analysis, known for its kdb+ database programming language, agrees. "CPUs today are extremely fast, but it takes a lot to get the data in and out, so there is a big premium on having clever programmers to make sure that everything is running efficiently."

One the other hand, he cautions, you can go too far in search of perfection in coding. "You may be the first to spot a trade opportunity, but a trading algo can have a lifespan of a couple of weeks – if you're crafting that in assembler code, you'll probably be out of date by the time you've finished."

Garland says that an understanding of what data needs to be where, and when. The key requirement is to have the most relevant data as close to the CPU as possible. These days that means using Dynamic RAM disks up close to the CPU, and then going down a hierarchy though solid state drives – SSDs – to traditional disks and on down to offline, off site archiving.

Memory

In performance terms, SSDs – solid state disks – make a huge amount of sense compared to their predecessors, the Winchester hard disk drives ("spinning rust", as SSD types call it dismissively) that have been in use since the early 1980s in various physical sizes and data capacities. The one thing that is still holding back their adoption is the relative cost

A recent deployment is at GFI Group, a provider of wholesale brokerage, electronic execution and trading support which it is deploying Flash Memory Arrays from Violin Memory to increase the speed and capacity of its trading platforms across all assets classes.

Replacing disks with solid state storage is part of a larger project GFI is implementing to prepare its electronic trading infrastructure for its planned Futures Exchange and Swap Execution Facility. Jerry Dobner, chief technology officer at GFI Group said: "We looked to increase the speed, capacity, and density of our shared data storage platform. By embracing this new technology, our clients will benefit from faster transaction speeds and a highly scalable electronic trading infrastructure."

Infrastructure

But having all the data in the right place in the right kind of memory on the fast CPUs won't help that much if the whole IT infrastructure is not performing, which is where people like ITRS Group come into the picture. ITRS's Geneos is a performance monitoring and management platform, used by some 90 global financial institutions, including investment banks, exchanges and trading venues, hedge funds, brokers and data vendors around the world. It has been most recently deployed to monitor a new multi-asset trading platform being rolled out by one of South Africa's largest banks.

The rise of African online trading, in preference to phone-based trading, means the bank has extended its FX offering via a new, web-based trading platform. Focussing on FX and precious metals, for corporate clients in particular, the offering provides prices, analysis and trade execution

services. The platform covers a range of instruments, including spot, forwards and swaps.

Kevin Covington, chief executive of ITRS said: "Our client's new strategy required a scalable and robust solution to monitor the whole backbone of the platform, including the complete flow, from pricing through to execution. ITRS Geneos [maintains] high levels of performance availability of key components, including everything from FIX to the pricing engine."

As African traders continue to move towards e-trading, the region's banks are increasingly adopting diverse infrastructures to meet the needs of both developing and developed markets. Consequently, the South African bank was faced with the challenge of implementing technology new to the African market that meets its need for high-performance multi-asset trading.

Covington likens Geneos to industrial systems. "You can't run a decent factory without instrumentation," he said. As institutions increasingly move to offload elements of their infrastructure, these measurements become ever more crucial. "Firms are not going to change their technology stacks overnight, so managing existing assets is important to have availability, performance and scalability."

And if you are going to measure things at this level, you'll need a good stopwatch, for which you might turn to the likes of Perseus Telecom, which recently announced its High Precision Time offering, providing deterministic synchronisation with the international atomic clock-based Coordinated Universal Time (UTC) standard.

There are several time platforms in use, generally using a combination of GPS time data and Network Time Protocol, but both are proving less reliable with high latency time synchronisation reckons Perseus, whose service uses 1 pulse per second electrical signal Perseus to set its customer server clocks with a better 1 nanosecond accuracy guaranteed.

The atomic clock installation at the Equinix LD4 data center was built to serve local and international broker dealers and buy-sides participants. Stewart Orrell, managing director, global capital markets at Equinix said: "We are very pleased to have Perseus provide new critical infrastructure for certifiable time data across the Equinix ecosystem both in the US and now in Europe. Having financial firms able to reference UTC time data across existing trading ecosystems helps meet client requirements as they communicate and trade from market to market." ***BT***

CASE STUDY: FPGAS SPEED UP RISK CONTROLS IN CANADA

In line with changes introduced in other markets around the world following the so called 'Flash-Crash' in 2010 and the collapse of Knight Capital following a near catastrophic trading error in 2012; the Investment Industry Regulatory Organization of Canada provided their regulated dealers with clear supervisory and gatekeeper responsibility to protect against errors related to electronic trading.

The changes were to become effective as of March 1, 2013 however, in recognition of the technology enhancements required to automate the controls, IIROC dealers had until May 31, 2013 to fully test and implement their automated controls and replace existing systems or introduce new functionality.

One Canadian investment bank was predominant in providing direct exchange access market in Canada and wanted to retain this position by continuing to provide a 'white gloves service' to their client base. The conundrum however, was how to effectively introduce the changes without introducing unnecessary latency that would reduce clients trading performance.

The challenge

Fixnetix already had a software solution in place in with investment banks and their clients in Europe and were working on reducing risk control introduced latency further by porting to a FPGA based proprietary hardware solution (iX-eCute), thereby removing the software stack from the in-line controls and minimise the latency. Fixnetix had an iX-eCute test rig already established in the US on an equity exchange but had nothing available at that point in Canada. Fixnetix and the bank embarked on an educational program to make clients aware of what was achievable with such a solution and to make sure that the solution was sufficiently altered in order to be fit for purpose to the vagaries of the Canadian marketplace. Clients were encouraged to connect first to the US market and then to a test environment initially set up at the TMX co-location centre and then at the Equinix TR1 data centre thereafter.

Fixnetix and the Canadian bank worked to deliver a bespoke solution in order to meet client needs in terms of functionality, latency, scale, reliability and implementation. The controls were tested in conjunction with clients over a period of weeks, with new functionality drops becoming available periodically containing over 100items such as maximum and minimum share quantity, price deviation, order value, trading limits, short sale and preborrow rules, GTD, GTC, single cancel, multi-cancel, cancel on disconnect and 'kill-all'.

Multi-user profile monitoring and intra-day amendments were made possible via a Fixnetix proprietary GUI called iXEye. Client configuration and status was viewable and filterable with various warning alerts configured so that client limit breaches could be highlighted and avoided prior to any breach occurring. Additionally, a full audit trail was required as a matter of course.

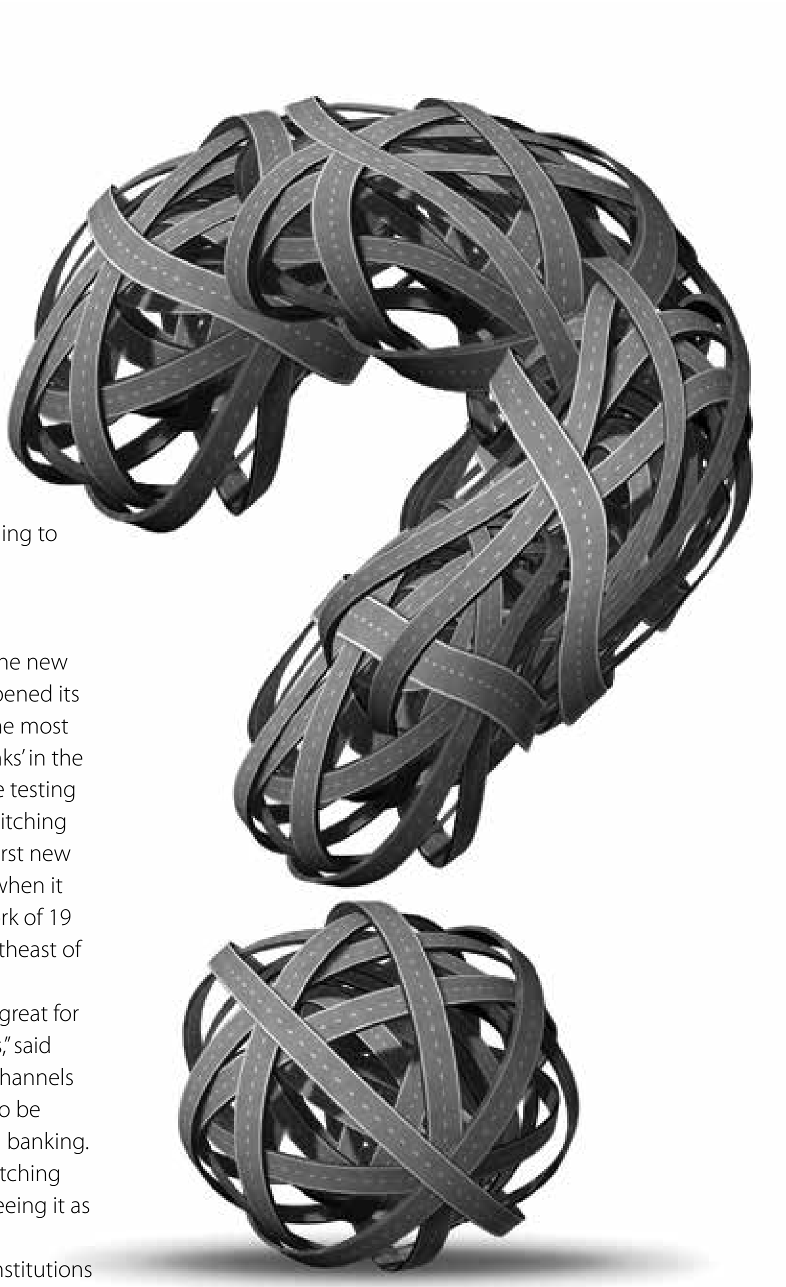
The system needed to be robust enough to take high volume client order flow over multiple sessions, refer to start of day files, client configuration files, real-time market data and provide an order-by-order report of the days' trading.

Message stores needed to cover millions of messages with hour-long burst rates of more than 10,000 orders per second. The latency of the system needed to be imperceptible to the 'static' in the marketplace.

The bank was able to launch within the regulatory timeframe, keep their client base happy, protect their clients and the bank and yet maintain the sophisticated trading regime that they had enjoyed up to that point. The environment has provided a robust platform for future volume growth and a solid platform to allow the bank to target further customers.

A road to nowhere?

The introduction of seven-day account switching in the UK in September is a fundamental pillar of UK government plans to inject more competition into retail banking. But the plan has its critics – some of whom warn it may achieve the opposite of what it intends, reports *Elliott Holley*



Developed under the auspices of the UK Payments Council, the seven-day switching plan is the pride of Adrian Kamellard, chief executive. In June, the Council made public its Current Account Switch Guarantee and Trustmark, which effectively promises consumers that their account will be freely and safely switched within seven days on the date the customer wants. The switch encompasses all payments going out, such as direct debits, and all those coming in, such as salary. For 13 months the new current account provider will arrange for payments accidentally made to the old account to be automatically redirected to the new account. If anything goes wrong with the switch, as soon as it is told the new provider will refund any interest and charges arising from a mistake.

"Our switching guarantee will remove the mystery from moving to a new bank," Kamellard told *Banking Technology*. "It is also massively quicker. Our research showed that customers haven't understood what to expect when choosing to switch, and that was a barrier to moving. Seven-day account switching will help to increase competition and inspire better service for consumers."

The account switching service will be supported by an advertising campaign on national television, in magazines and other media to raise awareness among the general public. In total, £750 million was invested into the project and its associated advertising campaign, according to Payments Council figures.

Turn left here

Some banks are in favour of the new service. Metro Bank, which opened its doors in 2010 and is one of the most widely known 'challenger banks' in the UK, is currently in phase-three testing for the seven-day account switching service. Metro Bank was the first new bank in the UK for a century when it launched. It now has a network of 19 stores in London and the southeast of England.

"We believe this service is great for the customer and great for us," said David Young, head of direct channels at Metro Bank. "There needs to be more competition in UK retail banking. We don't see the account switching deadline as a burden, we're seeing it as an investment for the future."

However, other financial institutions have been much more critical of seven-day account switching, on the grounds that it may make little difference to the end consumer while simply adding cost for existing banks.

"Account switching is an expensive and unnecessary way to not achieve the objective, which is to increase competition," said one senior business development manager at RBS who preferred not to be named. "The real problem is there's virtually no difference between current accounts. It would be better to end this ridiculous free banking model in the UK and have customers pay a fee; at least that would allow for differentiation between retail banking services."

That view is shared by Alex Kwiatkowski, research manager, EMEA banking, IDC Financial Insights, who questions the entire premise of whether faster account switching would make consumers more likely to switch their bank – and whether or not more regulation is a sensible or even sane policy given the existing strong demands of multiple regulators across the globe to meet regulations such as Basel III, Dodd-Frank, EMIR, MiFID II, AFMD and FATCA.

"Bank technology is reeling from being squeezed too much and doing things it was never designed to do," he said. "It's often a hotchpotch of different systems, sometimes going back to 1980s-style green screens. A lot of work will be needed to hit this target, but the truth is there's so little variety between current accounts right now it hardly matters. The industry is spending hundreds of millions, even billions and trillions for regulation, yet it just creates yet another set of problems. Do we need seven-day account switching? No. Have they added up the cost? No. Can we afford it? No. Don't rock the boat."

The Payments Council insists that making the actual switch easier will unlock the competitive potential behind consumer demands, by inspiring banks to offer more. It also stresses that account switching should be considered alongside the Mobile Payments Service, which is due to launch in spring 2014. The two schemes are expected to create "fundamental changes" in consumer behaviour, driving up adoption of new technology and prompting new competitive options for banks and their customers, according to Kamellard.

"There's a lot of evidence that banks are looking at seven-day account switching as an opportunity to differentiate and launch new products – even looking around at the advertising by banks on the London Underground in recent months, the difference is already becoming palpable," he said.

However, according to Kwiatkowski the entire scheme is a politically motivated attempt by politicians to grab votes by wielding bank-bashing rhetoric, without any serious consideration of the implications.

"We are supposed to be building a retail banking ring fence in the UK, but nobody knows how it works," he said. "Where will it all stop? Banks are being expected to lend more to businesses, invest more in their IT and provide a better service, *and* to cut back on risk and save more. You can't have it both ways at once. The truth is that seven-day account switching is an unhelpful distraction that is being implemented without consideration of the time and cost it will take to get there."

From a customer perspective, a YouGov poll conducted by BT at the end of February revealed some of the factors that would most compel customers to switch their current account to a rival provider. The survey discovered that strong online banking services, the presence of a local branch and 24/7 availability of banking services were the strongest motivating factors that would persuade a customer to change banks. Peer review sections, web chat and compare my bank services were the most wanted tools that customers lack.

Roadworks ahead…

Regardless of whether or not account switching as it stands is a good idea, industry commentators seem to agree that more will need to be done if the Payments Council's objective to increase competition is to be met. Metro Bank has set out its own recommendations for encouraging competition in UK retail banking, which include a call for the creation of a new independent payments regulator, and for payment systems to be removed from a bank's internal mechanisms and replaced with an independently run payments platform for banks.

"The current system of 'agency banking' means that not only are existing banks able to charge discretionary fees to new banks to process their transactions, but that new banks are dependent on the service levels and IT systems of existing banks for their transactions," said Metro Bank in an official statement. "Transactional services should be made independent, and run by an independent payments regulator."

Such a step is also currently advocated by elements within the UK government. Andrea Leadsom, MP and member of the UK government's Treasury Select Committee called in June for the creation of a shared payments infrastructure into which many core bank functions would be placed – a suggestion that is also currently being discussed at the EU. It is also advocated by the Payments Council, which included this among six possible scenarios in its future of payments roadmap, published in June.

However, opponents of a shared infrastructure suggest that it may cost more than it is worth – and end up harming the very firms that it is intended to help. In particular, the proposal to create an agency utility for agency banks has been criticised for undermining the choices available to small businesses, including challenger banks.

"Smaller players may have obtained a good deal below cost from a larger bank," said Gareth Lodge, senior analyst, corporate payments at research firm Celent. "Why force them to use a utility, potentially at higher cost? New entrants are held back because UK retail banking is a mature market with low profit margins, not because it is difficult to access payments. It's ridiculous."

Existing regulations have also come in for attack for their potential to undermine competition – including some in unexpected areas. In its recommendations to the regulator, Metro Bank pointed out that planning restrictions may be holding back new entrants in the UK. The bank claims that the Use Classes Order 1987 obliges new banks to spend "significant" time and money applying for planning consent from local authorities if they wish to open in a prime retail location. A recently-announced two-year window provided by the Department of Communities and Local Government is nowhere near enough to resolve the problem, added the bank.

In addition, Metro called for the creation of an industry standard for capital and liquidity levels, with regular reviews of new bank levels to ensure that capital and liquidity burdens on new banks are "not excessive but proportionate to the risk" being run. Both requests are essentially directed at making sure there is a common legal and regulatory framework for all banks.

"A competitive market will only be achieved when new and existing banks face a level playing field; where it is the offering and proposition of the bank that leads to differentiation," said Craig Donaldson, chief executive at Metro Bank. "Currently, new banks face obstacles not just to launch, but to access the same opportunities, capital requirements and deposit sources as existing banks. We look forward to the Government's action to create a better banking system."

Despite the fact that over 80% of UK current accounts are held by just four big providers, some competition undoubtedly does exist in UK retail banking. Several new banks are hoping to capitalise on dissatisfaction with existing offerings to enter the market in coming months. Finnish bank Holvi is an online-only bank that aims to rollout across Europe by the end of the year, offering a combination of personal financial management features, social and business networking and reworked core products. Meanwhile, Moven (formerly Movenbank), another online service, is based around the mobile wallet concept, in which the customer downloads a mobile app and then uses their mobile phone to make payments, transfer funds and withdraw cash.

The new banks also do things differently from other large competitors in some immediately tangible ways. Metro Bank for example differs in the opening hours it keeps. Metro branches are open from 0800 to 2000 on weekdays; the bank is also open on Saturdays and Sundays until 1800 and 1700 respectively. By comparison, a typical HSBC branch in London's Zone 2 is open from 0930 to 1630 on weekdays, and is not open at all on Sundays. Metro says that it operates retail hours, not banking hours.

However, plans are afoot to take things a stage further by promoting competition through more radical means.

You take the map

Last month, the UK Payments Council published its payments roadmap. The document was a landmark publication for the council, setting out six options designed to cover both the coming three years, and the next decade. The roadmap suggests the creation of a central clearing hub, consisting of two or three payment clearing engines, one for high-value payments, one for instant payments and one for batch processing of direct debits or payroll transfers; it also proposes to create a centralised banking utility, which would cover current accounts, collaborative clearing and data and service management.

These proposals have also attracted mixed responses, including strong criticism from some quarters on the grounds that they too could undermine competition.

"Banks are already struggling to compete, and bringing even more of their systems onto the same platform is likely to further reduce competition and provide even less differentiation and therefore even less reason for customers to switch their current accounts – a situation which is contrary to the basic objectives of the Payments Council," said Lodge.

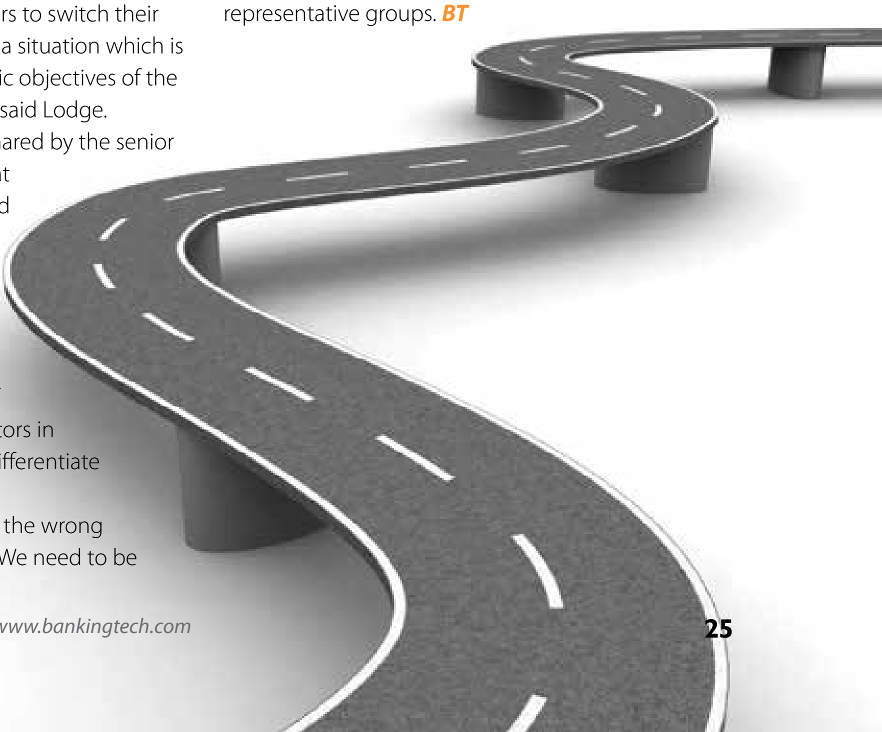
That is a view shared by the senior account manager at RBS, who suggested that moving so many bank systems onto a common platform erodes the ability of any of the major competitors in the UK market to differentiate themselves.

"This is a step in the wrong direction," he said. "We need to be competing with separate systems, not herding everyone onto a central platform which will then shackle the entire banking industry and force everyone to run at the speed of the slowest horse."

Kwiatkowski at Ovum IDC Financial Insights commends the Payments Council for its efforts to lay out a possible future course for UK payments, but warns that the problems facing the industry are too deep to be solved by any single initiative – including account switching.

"The payments council roadmap is a good start at opening up some of the issues," he said. "But you have to remember, faster account switching won't stop the rot at the heart of banking. We had a few changes over the last five years but that's not enough – if you put a saddle on a cow, it doesn't make it a horse. The rot is culture, and you can only change that slowly over decades. No other country has a plan like this [seven day account switching], and I think that says a lot."

Seven-day account switching will come into effect in the UK in September; a final date had not yet been set at time of going to press. The first full version of the UK Payments Council roadmap will be published in Q1 next year, following a period of consultation with government, business, charity and consumer representative groups. ***BT***



Whichever way you look at it, the diversity of the Middle East's financial markets provides a range of challenges and opportunities, reports *Elliott Holley*

The Middle East is a nebulous concept that is defined differently by different organisations. In mainstream usage, the region typically comprises the area from Egypt in the south west to Iran in the north east, encompassing the whole of the Arabian Peninsula, Syria, Palestine, Jordan and Iraq as well as Turkey to the north. However, many other countries are also considered to be part of the 'Greater Middle East', including the North African states of Morocco, Algeria, Tunisia and Libya as well as Afghanistan and Pakistan in central Asia.

Regardless of the definition, the region encompasses countries with dynamic capital markets – especially Turkey and the UAE – as well as a significant Islamic finance sector and a thriving retail banking industry. With a population of approximately 720 million according to figures provided by the World Bank, the Greater Middle East is best viewed as a collection of different markets, each with different challenges and potential.

Egypt

Egypt's banking industry has been overshadowed in recent weeks by political uncertainty. On 3 July 2013 the country's first democratically elected president, Mohamed Morsi, was ousted by the military following popular demonstrations against his rule. The political instability has persisted ever since the January 2011 Arab Spring revolutions across the region, and has left Egyptian banks struggling to raise funding through the capital markets. The Egyptian EGX 30 Price Return Index, for example, has lost 29% of its value over the period. As a result, Egyptian banks have largely limited themselves to necessary local investments rather than global expansion and have been relatively downbeat about their prospects.

"It is noticeable that Egyptian banks were less optimistic than the other emerging market banks we surveyed," says Steven Lewis, director and lead analyst, global banking and capital markets, at Ernst & Young. "Politics continues to weigh on the banks in Egypt and uncertainty holds back investment."

Nevertheless, a number of banks are expanding their branch networks and investing in mobile banking, as well as upgrading their ATMs and internet banking platforms. Many of the improvements are targeted at increasing financial inclusion. An estimated 90% of the population is currently unbanked according to Ernst & Young figures – a figure that equates to approximately 76.5 million people, according to the World Bank. Of those that do have a bank account, many are located in the major urban centres, and of these the most common transaction type is the use of a debit card to withdraw cash.

In June, Egypt's Alexandria Bank partnered with Western Union to roll out a money transfer service across 50 selected branches, with the scheme due to be expanded to 120 branches by the end of Q1 2014. Meanwhile earlier this year, National Bank of Egypt launched an ATM money transfer service that allows customers to transfer funds without necessarily having a payment card or banking account. The sender instead deposits the cash together with the recipient's mobile number. The recipient can then use the code to withdraw the cash from 1,400 ATMs across Egypt. The fee to use the service is £0.95.

While some banks, such as Société Générale, have taken the decision to sell off their Egyptian businesses since 2011, Ernst & Young suggests that such moves may be premature. Taking a longer-term view, the firm predicts that Egypt's prospects are more promising than the short-term political

events might suggest. In particular, the country's largely Muslim population, and its potential as a market for Islamic products, were highlighted in the firm's report *Banking in emerging markets: seizing opportunities, overcoming challenges*.

"Despite political and economic uncertainty, Egypt remains a key financial market for the region, and foreign institutions should be wary of missing out on its longer-term potential," it says. "New entrants from Middle Eastern countries with established Islamic banking are particularly likely to benefit due to the limited range of Sharia products currently available. A number of banks from Bahrain, Qatar and the UAE already have Egyptian assets. We anticipate Egypt eventually becoming a core market for Islamic banking."

Islamic banking is generally seen as an ethical alternative to mainstream services. Islamic finance is based on ethical principles, which means that products cannot be linked to vices such as gambling, sale of weapons, alcohol or tobacco. Charging interest is seen as negative, and is not allowed in Islamic finance, as is speculation. All trading must be based on a real underlying asset. In addition, Islamic banking is based on principles that attempt to encourage fair play and initiatives such as profit sharing.

Egyptian public sector Banque Misr runs an Islamic finance business alongside its conventional operation, with strictly separated funds. The bank has 33 dedicated branches for Islamic transactions, which offer Banque Misr certificates of deposit in Egyptian currency and US dollars, issue new Visa and Mastercards, and support project financing according to partnership or profit-gaining schemes. The profits on investing clients are distributed "according to the will of God", the bank says.

Turkey

Turkey is often cited by financial services executives as one of the most promising countries in the Middle East in recent years, with powerful GDP growth (9.5% in 2011) underpinning an influx of foreign investment and the rapid adoption of modern technology in finance, communications and the wider economy. While recent protests against the government of Prime Minister Recep Tayyip Erdoğan have gained widespread media attention, the country's longer-term trajectory has garnered widespread praise and attention from international investors. Over the last few years collaboration between retail banks, telecoms firms and technology vendors have already borne considerable fruit in the form of new banking tools and services for the Turkish population.

In April, Turkish operator Turkcell and SIM card and mobile security solutions provider Gemalto partnered to integrate the country's public transport card Urfakart into Turkcell's mobile wallet. As a result, customers using Turkcell Wallet are able to make contactless payments for transport services using their mobile phones, and to check and top up their Urfakart balances without having to go to a payment point. The service was available initially in Turkey's Sanliurfa province in the southeast near Syria. Turkcell hopes to expand the service to the rest of the country in the coming months.

Meanwhile, three Turkish banks including Pai Kredi Bank, Garanti Bank and Akbank have deals with Turkcell to introduce an NFC-based mobile wallet service incorporating location-based elements, called Cep-T Cuzdan. The service was launched in May 2011, and essentially allows Turkcell customers that have a credit card from one of the three banks to make payments using a mobile device. Turkcell has also struck deals with the Turkish Football Federation to sell match tickets to fans via their mobiles across the country.

Turkey had 63.9 million mobile phone subscriptions in June 2013, according to the World Cellular Information Service. That compares against a population of 73.64 million, according to figures provided by the World Bank – suggesting the potential market represented by mobile banking services in the country is still considerable.

Some observers also note the potential of Islamic finance in the country, which is predominantly Muslim. According to Lewis, at Ernst & Young, the market for Islamic products and services is likely to grow in Turkey in the near future.

"A number of banks from the Gulf region are currently expanding overseas, and many of them are investing in Turkey," said Lewis. "The growth of Islamic finance is a trend we are seeing in Muslim countries both in the Middle East, and beyond in areas such as Malaysia. There is a lot more investment in Islamic banking and Sharia products ahead."

On the stock markets, a strong IPO pipeline, including the listing of companies such as major Turkish airline Pegasus in May, are prompting strong inflows from both Turkish institutional investors and foreign investors, driving up the €215 billion market capitalisation of the Istanbul stock market.

In December 2012, the Istanbul Stock Exchange became Borsa Istanbul when it merged with derivatives exchange TurkDex and the Istanbul Gold Exchange. Following registration in April, all Turkey's exchanges now operate under one roof – a move that is in keeping with government plans to turn Istanbul into an international financial centre. That project has substantial support from The City UK, a development project that brings together leading business figures from the UK and especially London to assist in building up Turkey's financial infrastructure and regulatory framework.

Meanwhile, an estimated 60-70 amendments to the country's capital markets laws currently being worked through by the Turkish Capital Markets Board are also helping to make the country's capital markets more efficient and more attractive to international investors. However, there is plenty of room for improvement, according to Huseyin Erkan, chief executive at the World Federation of Exchanges and former chief executive of the Istanbul Stock Exchange.

"The capital markets of modern Turkey is very new and still in its development stage," he said in the Istanbul Financial Centre project's most recent update. "Although the current market structure offers a highly liquid, secure and well regulated environment, it is hard to say that the capital markets of Turkey really represent the size of its economy, nor its potential for the region."

UAE

Banks in the United Arab Emirates have been actively embracing modern retail banking, mobile and tablet technology in recent years. In June, Mashreq Bank opened its E Cube Retail Concept in Dubai Internet City branch. On entering, customers are greeted by a 75-inch screen that interacts with them, providing access to products and lifestyle choices. There are also eight interactive tablets placed on tables inside the branch, and a Microsoft Surface table that allows customers to make financial calculations and customise products. The branch is also equipped with video conferencing and a private kiosk space.

In May, the bank launched its Mashreq Max tablet app, which is designed to help customers access pre-loaded banking services – including the ability to open a salary transfer account without having to visit a branch. The products available cover loans and cards, lifestyle products such as rewards and shopping discounts and a Sanpp Mobile app, a personal advisory and home budgeting tools.

"Customers are intelligent and increasingly discerning, and they respect a bank that respects their time," said Farhad Irani, head of retail banking at Mashreq Bank. "In this day and age of convergence and freedom of choice we believe Max is a true embodiment of bringing the Bank to the valued customer while he / she enjoys the hygiene benefits of a 24/ 7 relationship manager and branch banking support."

Meanwhile in the capital markets, Nasdaq Dubai is planning to open an Islamic finance exchange for trading Islamic sukuk bonds as well as conventional bonds. Islamic finance has been growing in popularity in recent years – at a rate of 15-20% according to some estimates – and is currently worth approximately $1.3 trillion according to figures provided by Bloomberg.

The new Nasdaq Dubai platform will be available to institutional investors as well as high-net worth individuals and will be opened in the coming weeks. The tradable securities

TUNISIA AND MOROCCO

In June, French bank Societe Generale Securities Services launched a new custody platform in Tunisia, located in the capital Tunis. The new business in Tunisia is an expansion from Societe Generale's established base in Morocco, which has just celebrated 100 years of operations. The company's stated aim is to become a major securities services player on the African continent via the Maghreb, drawing on its historical involvement with the region and existing cultural ties.

According to Philippe Huerre, head of international department at Société Généralé Securities Services, major global custodians and banks are the primary clients for the service, which primary consists of clearing, custody and fund services. They are interested in establishing business in Tunisia based on the long-term potential of the region. While the financial markets are not booming, banks are keen to partner with local subsidiaries, and that is where the greatest opportunity lies, he says.

"I don't expect big volumes at first," said Huerre. "But there are lots of opportunities here – there are many offshore corporate and retail clients active in the region and the market infrastructure and regulation are improving. One of the key challenges for Tunisia now is to stabilise the political situation."

The company's base in Morocco is important to SocGen because of its historical ties to France – ties which are also shared by Tunisia. Many French corporates are active in Morocco; Renault recently built a plant in Tangier.

"Morocco has a highly educated workforce, a French-speaking population and a dynamic economy," said Huerre. "It is a very important market to our French customers and to Societe Generale. The Group's knowledge of the local market has allowed SGSS to accompany its clients in their growth in the country where we continue to be one of the leaders."


STEVEN BOSTOCK / SHUTTERSTOCK.COM

will comprise 12 sukuk and bonds with a nominal value of $10.9 billion. For the first time, prices of Nasdaq Dubai-listed sukuk and bonds will be visible on the same screen-based system via the exchange. Trades will be automatically routed for settlement at Euroclear Bank.

> *"Iraq was somewhat dysfunctional between 1990 and 2003 and that caused Iraqis to lose out on years of opportunities"*
>
> **Michèle Carlsson,** Nasdaq OMX

Kuwait

The small nation of Kuwait, on the Persian Gulf to the south east of Iraq, has become one of the more advanced markets in the Gulf in terms of its financial infrastructure in recent years. The country has eleven local banks and a host of foreign financial institutions. It also has a government with an estimated $56 billion surplus – a significant potential source of stimulus to the financial services sector.

"Kuwait's high liquidity sets it apart from other Gulf markets alongside its ability to deploy capital at a major level," said Frank Baker, the British Ambassador to Kuwait and member of the Kuwait Investment Bureau. "Kuwait is the most democratic state in the Gulf, having had an elected parliament since 1961 and enjoys a freedom in the media unlike any other country in the region. From a trading perspective, Kuwait's trade links with the UK are more established than any of its neighbours, going back to the 1770s when the East India Company first set up a trading post in what is now Kuwait City."

More recently, the Kuwait Capital Markets Authority is working towards advancing the capital markets in the country by creating a trusted environment for investors, enabling Kuwait to match international best practices of regulation as well as providing protection to those transacting in securities, he added.

Iraq

Across the border from Kuwait lies Iraq, a country known for its turbulent recent history, most obviously the US-led invasion of 2003 and subsequent instability. However, Iraq GDP growth reached 9% last year, and an increasing number of international companies are now partnering with Iraqi firms to establish new business opportunities, especially in financial services.

In July, the Iraq Stock Exchange announced plans to upgrade its trading technology using Nasdaq OMX, in a project that highlights the progress made by the country's stock market since 2003. The latest system, Nasdaq OMX 3, is currently being installed and is due to be operational by Q1 – Q2 in 2014. It will support multiple asset classes even though the exchange currently concentrates mainly on cash equities.

"This new system will increase investor involvement in Iraq," said Michèle Carlsson, head of business development, Middle East and Africa, Nasdaq OMX. "It also brings knowledge. Our team is working with ISX and they will gain enormously in understanding how to run a modern, technologically advanced exchange."

Since its creation in 2004, the ISE has increased its market capitalisation from $1.4 billion at launch to approximately $10 billion today, while the average volume of shares traded daily has increased from $14 billion to $600 billion, according to Nasdaq figures. In February, the IPO of Iraqi mobile phone company Asiacell raised more than $1 billion, according to Carlsson.

"Iraq was somewhat dysfunctional between 1990 and 2003 and that caused Iraqis to lose out on years of opportunities," she added. "But if you work with Iraqi people, you soon learn to appreciate how hard they are working to get forward with the reconstruction of their country and move their lives on. It is inspirational and I am sure the exchange has a great future." ***BT***

A watching brief

The US Securities & Exchange Commission is often accused of using skateboards to chase Ferraris in its attempts to keep up with trading houses. *David Bannister* reports on how it plans to change the balance of power

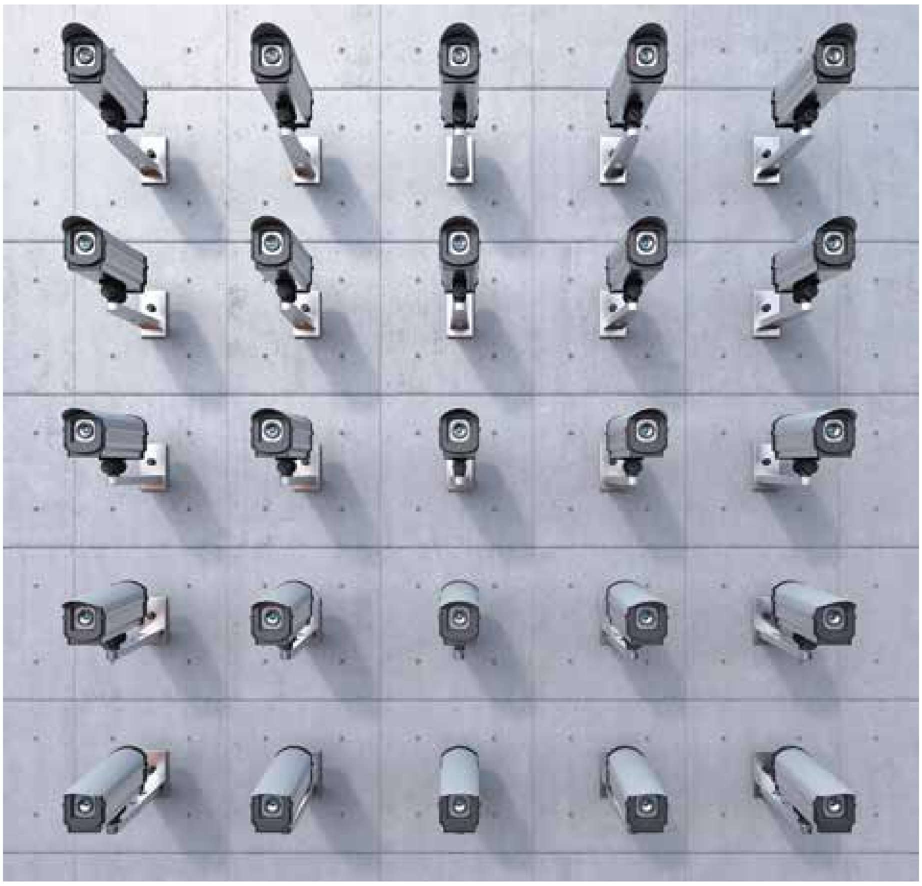
Less than a year after announcing that it intended to create a new market surveillance system – and six months after going live with it – the US Securities and Exchange Commission said that its cloud-based approach is paying dividends and allowing it to examine the structures of the markets it supervises at a greater level of granularity than ever before.

Midas – the Market Information Data Analytics System – is based on High Frequency Trading software from Tradeworx and allows the US regulator to perform what Gregg Berman, associate director of the SEC's Office of Analytics and Research, calls "full depth of book analysis".

"We have learnt how important it is to analyse all order book information," Berman told a session at the Sifma Tech Expo event in New York. This means collecting information from a billion data points, he added, but the fact that the system is cloud based means that the analysis of the data is not as onerous as might be thought. "Because it's in the cloud, access to processing power is just not an issue for us right now. There is no hardware to support, no software upgrades to maintain, no data feeds to handle, and hence no SEC resources are required for these tasks. Users at the SEC simply log into Midas from their own desktops whenever they want to access the system. If we need to perform a very large analysis, we employ multiple servers and invoke parallel jobs," said Berman.

The Tradeworx HFT system quickly brought the SEC up to some sort of parity with the powerful systems used by Wall Street Investment firms, but it will always be analysing the market to understand its structures rather than continually monitoring it, Berman said.

This has led to some criticism of its technical capabilities, which he said are unfounded in the wake of Midas. The idea that market surveillance – as opposed to monitoring of individual firms could ever move to real-time, or even intraday is based on a misunderstanding of the complexity of the problem. Looking across the market at those billion data points lets the SEC investigate the interplays of activities that lead to things like the Flash Crash of May 2010 – and to say that HFT was not the underlying issue.



"Given the interconnected nature of our markets, the first step in our analysis was to determine whether the Flash Crash was initially triggered by events in the cash equity markets or in the derivative futures markets. To perform such an analysis we unfortunately needed to fully reconstruct the order books for thousands of individual stocks -a process that involved building analytics to process billions of individual records and took us nearly 4 months," said Berman. "Recall that at that time all bets were on the problem originating in the equity markets – the press, the pundits, and even the markets themselves believed the crash must have been directly caused by something in the cash equity markets. Speculation ranged from delays in market data; to problems arising from market fragmentation; to claims that one or more equity-based high-frequency traders suddenly went wild."

The results of the SEC analysis (still disputed by some) was that a completely different set of events had caused the crash.

"But what we were able to show by careful and painstaking analysis, was that contrary to initial perceptions, the problem actually originated in the futures market for S&P 500 "E-Mini" contracts and then quickly cascaded to the markets for individual equities," said Berman. "Our findings were initially unexpected, and even to this day there are those who remain sceptical of some of our conclusions. If you find yourself in that category I'd encourage you to download a recent and completely independent analysis of the Flash Crash performed by two researchers at the Duisenberg School of Finance in Amsterdam."

Berman's presentation would not have pleased anyone in the audience opposed to HFT. "What's illegal is illegal at any speed," he said. While there are many questions about the role of HFT in the market, it is the SEC's responsibility to better understand what is happening in order to inform the debate, which is what Midas will be assisting with. "If we don't diagnose the problem properly we won't get the right prognosis," he said, adding that many problems in the industry are caused by "sloppiness combined with a lack of checks and balances".

For this reason, he is dismissive of calls to regulate against HFT "Some have called for regulators to "slow down" the market, and some foreign jurisdictions have gone as far as proposing or adopting rules they believe will do just that, but I personally find it difficult to approach the question of whether we should, and if so how we might, slow down the markets, or even determine that the markets are indeed too fast, until we meaningfully measure its actual speed," he said.

"Here are the issues: First, we need to be more deliberate and careful in the way we describe market speed, especially in the media. There is a humongous difference between a millisecond and a microsecond: the latter is a thousand times smaller than the former. So it behoves us all to stop throwing out terms that have precise meaning without any consideration of what we are really saying. Second, I don't think market participants really care how long it takes the average person to blink, so I'm not sure why everyone keeps comparing the speed of the market to this benchmark. I'm also not sure why, absenting any other facts, people should be assuming it is problematic for trading to occur faster than the blink of an eye."

More importantly, he thinks it is not central to the task of the agency: "Aside from my concerns about general market misperceptions and hyperbole, I think we can and must do a much better job at assessing the speed of the market in ways that would more directly inform policy."

He gives a simple example: assume that 10 market participants are each bidding 100 shares to buy the same stock on the same exchange at a price of $25. If $25 was the best bid on that exchange, the consolidated tape would show this as 1,000 shares bid at $25.

Now consider what happens if an 11th participant decides to join the bid with an additional 100 shares, but shortly thereafter an existing bidder decides to cancel his prior order for 100 shares. In this case the tape would show 1,000 shares of interest at $25 jumping to 1,100 shares, only to quickly fall back to 1,000 shares.

"For all intents and purposes, it would seem that someone posted, and then quickly cancelled, 100 shares – producing what is often called a flickering quote," he said. "But who, in this instance, is the party that produced this flickering quote? The answer is, surprisingly, that no individual party produced the flickering quote. It is simply a ramification of distinct parties each acting, and then reacting, at similar times. I think if we are to better understand the speed of the market, address concerns, and even consider actions, we must start by analysing data that informs us on how market participants actually behave, and not limit ourselves to simply observing the results of their behaviour in aggregate. Fortunately, we can do just that using tools like Midas.

Processing the data is a huge task. "What makes this process tricky is not necessarily the availability of data, or even the underlying technologies (though building a reliable and meaningful real-time monitoring system is a huge task). Rather, the tricky part is figuring out what is abnormal or outlier activity, and what is just an uncommon activity.

Many people would say that an outlier activity is something that occurs only 1% of the time, or maybe even 0.1% of the time. But remember we have a billion records a day. If outliers are defined at the 0.1% level, that would imply one million potential outlier events.

The fact is that simple broad-brush strokes won't teach us much. The vast majority of outlier events are nothing more than just that – outlier events. As humans, it is in our DNA to try to interpret all such events, look for meaning, and take action. It's why we see faces in clouds."

By the end of this year, however, the regulators of the US markets will have another powerful tool, the Comprehensive Audit Trail, created by a joint plan of the seventeen national securities exchanges and FINRA (collectively the SROs), at the direction of the SEC Rule 613, which requires them to submit a plan by 6 December 2013.

By design, this system will provide a much more complete view of the equity and equity options markets, and will include such data elements as customer ID.

Randy Snook, executive vice president of business policy and practices at Sifma, said: "CAT will be a massive undertaking that will require significant resources from the industry and technology professionals in particular. The sheer size of the CAT database makes it unlike any other system: it is estimated that it will process over 50 billion records resulting in approximately 10 terabytes of data per day. And the number of records is expected to grow 25% annually. That means the system will have to support over 12 petabytes of data in order to retain data over a period of five years."

The SEC's Berman said that in some respects, "Midas is a bit of a precursor to CAT, at least for those of us performing the analyses and buried deep in the data. As such, it's really just the beginning of an exciting trend in market regulation that combines advanced technologies and data, with, most importantly, talented and dedicated staff with a passion for understanding the markets. And for technologists and quants, the SEC has become an incredibly interesting place to work. I find it incredible that in a period of only six months we went from being significantly behind most market participants in this area of technology to leap-frogging most buy-side firms and landing on par with regard to the data collection and analysis capabilities of many high-frequency trading firms." ***BT***

MIDAS'S GOLDEN TOUCH IS BUILT ON DATA

"Midas is of course all about market data. As many of you may know, there are very specific rules and regulations regarding the collection and public dissemination of listed equity and options market data," said Gregg Berman, associate director of the SEC's Office of Analytics and Research.

On the equity side, every trade of 100 shares or more, whether executed on or off a public exchange, is reported to one of three public feeds. Collectively, we call these feeds the consolidated tape.

In addition to data on trade executions, a parallel set of feeds also provides select data on quotes for stocks offered on each equity exchange.

A similar set of trade and quote data is also collected and disseminated for options data in what is known as the OPRA feed.

Today, nearly all market participants in one form or another use these feeds. Asset managers, hedge funds, mutual funds, retail traders, and investors typically access this data either directly, or through another system such as an on-line trading portal. This is also the data that is used to create the scroll you see at the bottom of financial news networks.

"Unfortunately this data does NOT provide a complete picture of what occurs on our national exchanges," said Berman. "This is because the public feeds only provide data on the price and size of the best bid and best offer for each stock on each exchange. These data sources do not provide information on orders placed below the best bid or above the best offer. Nor do these sources provide data on trades of less than 100 shares. Without any this data, you cannot perform full depth-of-book analyses, and you really can't understand market structure."

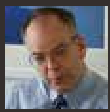
To get to this data you need to additionally collect and process separate proprietary feeds made available by each of the exchanges. These feeds are typically used by only the most sophisticated of market participants such as market makers and high-frequency traders.

"In fact, we have spoken with many buy-side market participants and have learned that even the largest and most sophisticated of these firms generally do not attempt to consume this data – it is extremely voluminous, challenging to process correctly, and requires specialised data expertise. But it's what we needed, and it's what Midas gives us."

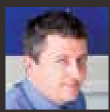
ROUNDTABLE

PARTICIPANTS

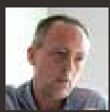
Yves Bontemps, head of standards R&D, SWIFT



Kevin Houstoun, chairman, Rapid Addition; co-chair FIX Protocol Ltd Global Technical Committee

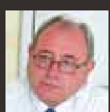


Stephen Lindsay, head of standards, SWIFT



Steve Miller, product director, C24

HOST



David Bannister, editor, *Banking Technology* (moderator)

THE FUTURE OF STANDARDS

Standards in financial services have hitherto focussed on messaging. As the industry moves towards greater collaboration and more central utilities, new standards and news ways of thinking about standards will be needed. In collaboration with SWIFT, *Banking Technology* brought together a panel of standards experts to discuss the issues this raises.

Predicting the future is never easy, but trying to anticipate likely developments in a particular area is essential in order to take timely action.

With that caveat, Stephen Lindsay, head of standards at SWIFT, sets a boundary on a discussion on the Future of Standards

"What we are trying to do is extrapolate a little bit from where we are now to where we might be in a few years' time," he says.

With the ISO 20022 standard, the idea is to capture and describe the static and dynamic parts of business models separately from the messaging parts.

"What we see is that content might be useful as a way of describing the business world, but not necessarily in the messaging context – so what we *might* see is that in the future we are standardising other types of things – APIs for instance," says Lindsay. "We still need to be clear about what kind of data we are exchanging and what it all means. This is something that we are already working on and will continue to be interested in in the future."

For the present, however, the messaging part of the equation is not yet sufficiently defined across the industry to be ignored, and any thinking about the future has to take into account the short- to medium-term issues that need to be addressed, says Kevin Houstoun, chairman, Rapid Addition and co-chair of FIX Protocol Ltd's Global Technical Committee.

"Notwithstanding the importance of the business model, what is at the moment important is the messaging, because that is effectively the gateway, the way of getting data in and out of systems," he says. "You don't have to dictate in absolute terms the content of those systems, but we have suitability issues with all of the different syntaxes we have in different parts of the business model. FIX, which is associated with front office trading, is having to come up with a new model, the Simple Binary Encoding model which can allow for better performance while maintaining compatibility between our existing business model and the ISO 20022 business model."

Steve Miller: product director at C24, a software house specialising in standards-based messaging and integration solutions, agrees: "I'm wearing two hats as a software provider and as a consultant, but what I see day-to-day in my customer bases is that at the coalface, while the output of these high minded discussions about the business model is important, it's the messages that people have to deal with at the end of the day."

For Yves Bontemps, head of standards R&D, SWIFT, the balance between the messaging element and the business model is central, and the two must be considered together. "What we are primarily interested in is in seeing how we can lower the cost of implementation of standards, and one of the costs, if you just look at the messaging and interface part, is the upfront analysis of what impact adapting your own interfaces to a standard interface will have on your business model and business processes," he says. "With ISO 20022 in particular not only do we deliver the interfaces, we deliver all the mental processes that led to the creation of those interfaces."

Houstoun suggests that the current situation has led to a number of blind alleys, so it may be necessary to take a few steps backwards in order to continue moving forward. In particular, he says, existing formats have been rolled into ISO 20022, from where they can only be rendered in the XML syntax – which is not suitable in all situations.

"We are being asked, by exchanges and the like, to add a new iteration of FIX to make it work better with customers who want to submit lots of quotes at the same time, for instance. That means that the business model will change," he says. "If we do it in ISO 20022, the only way we can render it is in XML, and the fact that XML is useless for trading means that we will always do that effort secondarily. That is the sort of mess that we have got into at the moment."

Lindsay recognises this. "Certainly one of the next frontiers for ISO 20022 is to make good on the promise that it is genuinely multi-syntax," he says. "It has some interesting ramifications. The promise has always been that ISO 20022 would bring all these disparate standards that require different syntaxes together in a way that will make them interoperable and reusable within an organisation. We haven't really realised that because we haven't really got over some of this mechanics …"

The Standards Roadmap introduced in 2008 has evolved in slightly unpredictable ways as the different organisations involved have developed along their own lines: what was intended to show demarcations between SWIFT/ISO, FIX, XBRL, FPML and others is now starting to show where they are overlapping or duplicating.

Inevitably, this started to happen because people within organisations tend to follow what they are already doing, says Miller: "we are a FIX shop" they say.

Lindsay: *"How do we provide the necessary flexibility for people to on one hand interoperate and on the other hand, build value on top?"*

Different drivers

There are other factors at work, and many reasons for the standardisation process to fail, or to reach a certain point and not move on. Houstoun cites academic work on this such as that carried out at Manchester Business School in the UK. "Much of the research is in the real economy and clearly identifies factors about standards adoption – they are either too early to the market and there is not enough knowledge to make an effective use case, or they have become dominant and the network effect means you will never move on," he says. "Often I think the tag-equals-value aspects of FIX have reached this point, which is where we are with the introduction of Simple Binary Encoding. We have an enormous number of people who use tag-equals-value: if they all moved at the same time to SBE, it would be a no-brainer. The trick is managing a co-ordinated move that complements the existing network benefits"

Photo: Kosh Naran

Miller: *"I haven't previously thought of standards getting in the way of innovation. I see standards as enablers."*

Lindsay agrees: "That's the bind that we are always in – with a many-to-many standard everyone can see the benefit, and if everyone adopts it, great. But if only one or two people adopt it …"

For Bontemps, the network effect is a concern, to which one response is to have more carrot and less stick.

"One key factor for standards is making sure people can adopt them. We can have great ideas about standards where all we have to do is change the world to make them happen," he says. "As a standards body, what we need to do is make sure that it can be picked up by those who need to implement it and make sure that the cost of implementation is as low as it can be so that the critical mass is reached sooner."

And sometimes things are not hard to do from a technical perspective but they are hard to justify from a business perspective – organisations are by their nature different, so standardised business logic is something of an oxymoron.

Even so, bridging the gap is essential, and to do that "you have to make the business case," says Miller.

"My customers fall roughly into two camps: those who understand why standards are good for all sorts of reasons – they concentrate on *how* because they already understand *why*," he says. "The other half look at it and say, 'That's interesting. We didn't invent it. This has nothing to do with us'. No matter how much you work on those guys, there are still some questions that are not easily answered about why you should do things in a certain way. I tend to end up talking about wiring your home: are you going to use the standard method or are you going to sit down and invent electrical wiring from scratch?"

Houstoun says that this is because standards may yield societal benefits but a market mechanism for their adoption is not always appropriate: "There are a lot of instances where standardisation will have large benefits to society but not necessarily give massive benefits to individual practitioners – so left to itself, the market will not do anything about standardisation."

That may be the case, but other factors may compensate. "It's a sort of Darwinism in the sense that, if you just let them run, the most effective strategies are going to bubble to the top," suggests Miller. Inevitably, the winning argument will the one that has demonstrable value, and that is not necessarily monetary.

"People don't do this if they don't see the value: that's the battle that's being fought, says Miller. "Some people have an intrinsic view that there is a value to the way they do things now and you have to show that what you are proposing is better value for the organisation. Usually it is a question of saving time and saving money – you do it one way because you're not reinventing the wheel and time to market is quicker."

But if standards mean you are not reinventing the wheel, do they also stop you from inventing anything else?

"I haven't previously thought of standards getting in the way of innovation," says Miller. "Having a standard makes it easier. Quite often we have specialised things we need to do: how much easier is it to do that if you are building the 5 to 15% that differentiates you on top of the 85 to 95% that doesn't? I see standards as an enabler."

For a standards developer, however, getting the balance right is crucial. "It is important to understand how you make it possible for people to behave dynamically and ensure they are not restricted by standards," says Lindsay. "You want a standard that gives you all the benefits of low switching costs and reuse and so on, but is not so restrictive that you can't do anything with it. The great example, of course, is TCP/IP and what has been built on top of that – the internet would not have existed."

Houstoun agrees, adding that a factor in the success of TCP/IP is that it is "a strict standard – only a few features are optional". It highlights a problem some people have with standards, which is that they are not necessarily the best solution – there is always a compromise. He cites the example of metric screw threads: "Metric threads – which are now ISO standards – are very prescriptive: you can't have a metric thread without having a 60°angle between the faces of the thread. It is necessary, but it may not always be technically the best way. Other threads with different angles between the faces of the threads may be better in some situations."

It is an argument that SWIFT constantly faces, says Lindsay. "What we are trying to do is formalise the standards first, accept that they're not going to be used by everybody and bring some compatibility," he says.

"That is a battle we have which is to steer a path between creating something that is genuinely standardised, and therefore gives you benefits, and simultaneously gives enough latitude to people to do what they need to do, says Bontemps. "The standard is a skeleton on which you can build whatever you want."

So is the future of standards tied up with a definition of where the boundaries of standardisation lies? It is "at least part of it", says Lindsay. "How do we provide the necessary flexibility for people to on one hand interoperate and on the other hand, build value on top."

In other ways, however, standards bodies can have a more active role in their industries or in relation to society as a whole, and as the financial services industry becomes increasingly regulated, and some processes become more commoditised, a future with a range of collaborative industry utilities is starting to emerge.

Houstoun: *"The future of standards is tied to the future of financial markets and we can see a bigger role for more formality in financial markets".*

Outside the box

This will put a new focus on standards and their wider role in the industry. Standards in financial services are only catching up with standards in other industries, says Miller. "I keep coming back to engineering: Nuclear power and aviation are both engineering-based industries that we could learn from," he says. "In aerospace everyone accepts that in order to operate they need very clever people and there are ways in which their output is made consumable by people who haven't been to university. I don't think the same thing exists to the same degree in our industry – there are clever people working in financial services but they tend to be regarded as irritating geeks who don't have much connection with the actual markets. It is a disconnect."

Houstoun says that this is a question of development: "To be fair electronic trading is only 15-20 years old and aerospace is more than 100 years old: this a very young industry and a lot of these things will come as it matures."

But Bontemps points out that some

Photo: Kosh Naran

young industries don't have the same problem. "if you look at the Open Source software industry, like the Eclipse Foundation or the Apache Software Foundation – which you think of as the geeks – they have a very strong governance process and the people working in these communities have to go through a kind of promotion and be accepted by their peers."

Within the financial services industry, Miller says this discipline is only present in patches. Lindsay agrees: "I'm sure we could all become more disciplined. The telcos are standards-based and interoperability is key to their business models: taking into account other actors and the whole notion of multiple platforms is something that we haven't had to do and we need to start to consider it – it is happening and we need to keep an eye on it."

Houstoun says that the way standards develop in other industries shows a bigger issue in terms of the structures that have evolved for managing them.

"If you look at other industries, such as the ICT industry in Europe, they have an entire standards framework that they implement at the policy and strategy level and at the tactical all of the actual work involved in creating standards is done – and then there's the actual implementation work," he says. "The policy and strategy level provide the co-ordination that means that despite all carrying different smartphones, we can all charge them from the same micro-USB port. We are all working in the tactical and implementation level and are not at the policy and strategy level. Currently these levels are either limited or missing."

Bontemps: *"As a standards body, what we need to do is make sure that it can be picked up by those who need to implement it and make sure that the cost of implementation is as low as it can be so that the critical mass is reached sooner."*

The classic example here is the shipping container, which is widely acknowledged to have had far-reaching effects, way beyond its original purpose. "There are benefits for society as a whole," says Houstoun, citing research that shows standardisation in the form of containerisation "has added more to GDP growth than all the bilateral trade agreements on the planet".

Politicians and regulators operating at the policy and strategy level are pushing hard for more transparency and imposing more regulation on the industry, which in turn is responding by developing a more collaborative model.

"If you look at the industry more generally, we have banks coming to a realisation that things are never, ever going to be the same again and they are trying to operate on margins that are much smaller than before," says Houstoun. "There are areas like KYC, which everyone has to do but does anybody really care how it's done? If we could standardise those processes and pull them into a central place at a price that is low, it could help us reduce the huge costs that are inherent in the current model."

This will require identifying "those non-differentiating parts of the process where standards can be stronger anchor", says Lindsay.

"We are going to start seeing more utilities as opposed to point-to-point solutions – trade reporting we are already seeing – and our point of view is to say we are still going to need to standardise the information that goes into that and it is perhaps a slightly different kind of standardisation than the messaging standardisation."

The industry has grown up around messaging standards and perhaps some part of the future of standards should be considering what information is needed in these areas: what will investigators regulators require in the future, for instance, says Houstoun. "It should come out of the governance process, but if regulators want to see what is going on in our market then it means we need to standardise timestamps: if we don't do that sufficiently accurately they will continue to be blind."

Lindsay says this has implications for the standards developers. Should part of the role of standards makers be advising regulators politicians on what they need to be looking at for what information they should be gathering?

Almost certainly that will mean look looking at a much bigger picture than the tactical and implementation levels that has hitherto been the focus of the financial standards world.

"How do we exchange the information we need - what have I got and what do you need? What we don't talk about is that increasingly in the future there will be third parties, like regulators, who want to make sense out of all of this; we have to think about how we bring that into our methodology," says Lindsay.

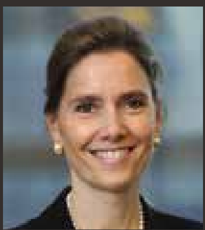
Ultimately, says Houston, "the future of standards is tied to the future of financial markets and we can see a bigger role for more formality in financial markets".

But those financial markets may be very different from today's as the structure of the world economy shifts in response to macroeconomic, geopolitical and technological changes.

"If you look at what the trends in the industry are going to be over the next 20 to 30 years, the number one is peer-to-peer finance – nothing to do with the incumbent players," says Houstoun. "Secondly, approximately, two thirds of the economy is in SMEs, not in listed companies, and those sorts of company have chronic lack of access to finance. Peer-to-peer aims to address that and that is going to mean a lot of change." ***BT***

APPOINTMENTS

All change in global transaction leadership roles



RBS has hired **Carole Berndt** (*top left*) as global head of transaction services. Berndt has been EMEA Head of Transaction Banking at Bank of America Merrill Lynch for the past three years.

She will be based in London and report to John Owen, chief executive, International Banking, at RBS, who said: "I am delighted to welcome Carole to RBS to take up this important position. The transaction services franchise is an important business and Carole's appointment shows our determination to invest and grow the division. This appointment also demonstrates our ability to attract industry leading talent that will help us achieve our ambitious goals."

The appointment is part of a reorganisation initiated by Owen earlier this year that, among other things, combined some existing roles, including that of **Kevin Brown**, formerly global head of products in the transaction services unit, who has been acting as interim head. He will be moving to a new role once Berndt takes up her position.

Prior to BAML Berndt spent nearly 10 years working in transaction banking with Citi, holding a variety of roles in both Hong Kong and New York.

"RBS is recognised as having a leading global transaction services business, with a strong footprint, capability and service, valued by clients," said Berndt. "This along with the Banks commitment to investing, innovating through developing its systems and products, makes this an exciting and important time to join the team."

Back at BAML **Jennifer Boussuge** (*bottom left*) has moved up to take over Global Transaction Services for EMEA. Boussuge has been with the company for more than 19 years, during which time she has held a number of leadership roles, most recently as head of global sales for GTS.

Her previous experience includes positions including head of International Subsidiary Banking Sales, GTS, EMEA; leading the delivery of global treasury and liquidity management services to large corporate healthcare and consumer and retail clients throughout the US; senior treasury sales officer for international government clients and client manager for international corporates.

Commenting on the appointment, **Paul Simpson**, head of GTS said: "Jennifer has been based in London since 2010, during which time she's developed a keen understanding of the EMEA region which she successfully combines with an ability to leverage the global platform to advance client relationships and win mandates."

As head of GTS EMEA, Boussuge will continue to report directly to Simpson and remains a member of the GTS global leadership team. With immediate effect, she also joins the Europe and Emerging Markets (except Asia) regional executive committee led by Alex Wilmot-Sitwell, president, Europe and Emerging Markets (except Asia). She will continue in her current position as head of Global Sales for GTS until a successor is named.

Meanwhile, Susan Skerritt has left Bank of New York Mellon to join Deutsche Bank as regional head Americas for its Global Transaction Banking division.

Skerritt will report to Werner Steinmueller, head of Deutsche GTB and a member of Deutsche Bank's group executive committee. Based in New York, Skerritt will also report to Jacques Brand, chief executive, North America.

Steinmueller said: "We are delighted about Susan's appointment as we continue to invest in transaction banking, globally and in the Americas region. Her experience and in-depth knowledge of the transaction banking industry make her ideally suited to lead and drive the growth of our franchise in the Americas."

Skerritt joins Deutsche with more than 30 years of transaction banking experience covering cash management, global custody, corporate trust, treasury services and trade finance. At BNY Mellon Treasury Services she was most recently executive vice president and global head of business strategy and market solutions.

Information Mosaic has appointed **Philip Hogan** to the newly created role of chief revenue officer, combining the global functions of sales, account management, product management and marketing under him. Based in Dublin, Hogan was most recently regional managing director of DST Global Solutions' Asia Pacific business.

FIS has appointed **Guy Hains** as head of a marketing team that "focuses solely on the transformational needs of global financial institutions". Hains will be responsible for the operational and growth strategies for this market segment, targetting institutions with an average asset size of $300 billion. Prior to joining FIS, Hains spent nearly 10 years at CSC, , most recently as president of CSC International with responsibilities for the development of CSC business in EMEA, Asia and Australia.

Security and intelligence specialist Wynyard Group has appointed international financial crime expert, **Jim Oakes**, in the newly created role of director, financial crime. A former UK Police Fraud Squad detective, Oakes has held senior regional and global positions in the field of financial crime with financial institutions including Citigroup, GE Money, Abbey/Santander, Barclays and Standard Chartered Bank

Troels Philip Jensen has been appointed chief operating officer at **Orc**, succeeding Matteo Carcano who is leaving the company in August. Jensen has been a senior-level executive at several business units with SimCorp since 1995, most recently serving as managing director (Benelux) and president (France).

Open system payment specialist BPC Banking Technologies has hired **Brian**

Hadaway as director of sales focusing on new sales opportunities in the retail banking space in the US. Before joining BPC, Hadaway served as senior account manager at Mosaic Software, S1 and ACI Worldwide. He has held management and executive sales positions within the banking and financial services industry, and has experience in enterprise payment systems and processing environments.

Misys has appointed **David Hennah**, formerly of Swift, as head of product management practice for Misys's trade and supply chain finance service, Misys TI Plus and Trade Portal.

Hennah returns to Misys, having worked there before his time at Swift. Prior to that he worked in a variety of roles at Barclays and as a managing consultant in financial services at ICL/Fujitsu Services.

During the past eight years David is best known for his work to bring the ICC Bank Payment Obligation to market as an established business practice.

Payment services provider CreditCall has installed **Richard Roscher** as EMV business development director. Roscher has been involved in the payments space for 15 years and has worked for WorldPay and Chase Paymentech.

"With liability shifts and mandates looming, I feel CreditCall is in a unique position because of its 10+ years history in the EMV space and existing track record as a PSP gateway in the US," said Roscher.

Rule Financial has hired **Catherine Houston** as a principal consultant in the Domain Group. Based in the London office, Houston joins from the RBS, where she worked as vice president and business analyst in operations technology for repo trading and settlement. She also worked at ABN Amro, Dresdner Kleinwort Wasserstein and at Goldman Sachs over 21 years.

Hong Kong regulator the Securities and Futures Commission has appointed **James Shipton**, formerly of Goldman Sachs, as executive director of its new intermediaries supervision and licencing division. Shipton was previously Goldman Sachs' Asia Pacific head of government and regulatory affairs. ***BT***

EVENTS

SEPTEMBER 16-19 2013
Sibos 2013, Dubai

As Swift celebrates 40 years of existence, the mother of all financial services conferences and exhibitions makes its first visit to the Middle East. A comprehensive conference session sees new additions to the streams, including the Market Infrastructures Forum. Lining up to celebrate its 10th anniversary will be the Standards Forum, while in the ever-lively Innotribe streams another set of hopefuls will be competing to win the Innotribe Challenge after taking part in heats in London, New York and Singapore over the past year.

www.sibos.com

OCTOBER 6-9 2013
Money2020, Las Vegas

Money2020 explores the macro trends in payments and financial services innovation, such as the mobile Internet, open platforms and consumer empowerment. Money2020 brings together the broader worldwide community of innovators including retail, mobile, advertising and technology that are profoundly changing how consumers and businesses manage, spend and borrow money.

https://secure.events-registration.com/money2020

OCTOBER16-18 2013
EuroFinance, Barcelona

EuroFinance's flagship International Cash & Treasury Management conference is the largest global gathering of senior corporate treasury professionals. More than 75 sessions crammed into 2.5 days.

www.eurofinance.com

OCTOBER 22-23 2013
Merchants & Payments, London

From the organisers of the international Payments Summit, addresses the issues raised by the current period of enormous change in retail payments and will explore the latest developments as the high street changes. Features input from and for retailers, banks, card schemes, new entrants, processors and solution providers.

www,icbi-events.com

October 23-24 2013
NeMa Americas New York, USA

Challenges, evolution & future of the network management, clearing & settlement & post-trade industry: NeMa brings together CSDs, custodians, brokers and exchanges from across both North and South America to address critical issues in these tumultuous times. Regulation, cost cutting, risk management and innovative strategies are all at the forefront of the post-trade specialist's focus.

www.icbi-events.com

NOVEMBER 5-7 2013
BAI Retail Delivery, Denver

Reports from 2012 suggest that the BAI event is on the road to recovering its crown as the main event in the global retail banking calendar.

www.bai.org/retaildelivery

NOVEMBER 19-21 2013
Cartes, Paris

Cartes had more than 19,000 visitors last year, and 435 exhibitors, reaffirming its position as a leading event for following trends in payments, mobile, security and innovation.

www.cartes.com

NOVEMBER 27-28 2013
Big Data in Retail Financial Services Europe

A dedicated two-day event looking at the competencies a firm requires in order to successfully implement a Big Data strategy. With an international focus, the event will feature speakers from across Europe, covering topics including management approaches to data analytics to reveal insight hidden in Big Data.

www.smi-online.co.uk

DECEMBER 2-6 2013
RiskMinds, Amsterdam

Billed as the largest risk management conference in the world, RiskMinds brings together 600+ risk professionals from around the world, ranging from global investment banks through regionals to corporates.

www.icbi-riskminds.com

Reducing threats to availability in the banking sector

Darren Anstee, solutions architect global team manager, Arbor Networks

A spate of high-profile cyber-attacks against US financial institutions between September 2012 and May 2013, the recent attacks on a well-known bank in the Netherlands and the ever present risk that similar attacks will target UK banks have focused concern within the financial sector on the cyber-threat known as a distributed denial of service attack.

The financial services sector's growing interdependence between internet-accessible clearing and transaction processing infrastructure means that a successful DDoS attack can have far reaching consequences, such as customer dissatisfaction and loss of trust, brand damage, increased operating costs and lost revenue to name just a few.

All networks and services have a finite amount of resource assigned to them. A DDoS attack simply utilises all, or a vast majority, of the resources that are available with attack traffic – so that genuine users cannot be serviced. The 'distributed' attacks that are seen today normally come from botnets – networks of compromised computers on the Internet – which allow attackers to generate significant amounts of traffic. Attacks can be executed on multiple levels, targeting everything from provisioned Internet connectivity through to the content on their web-sites.

The recent attacks on the US financial sector from the Izz ad-Din al-Qassam Cyber Fighters illustrated the above. This ideologically-motivated, well-resourced, multi-vector attack campaign lasted eight months, targeting a wide variety of organisations from major financial institutions through to smaller credit unions within the USA. Yet the USA is not the only country facing this type of threat.

Earlier this month, reporting on meetings with the UK's top five banks, the director of financial stability at the Bank of England admitted that cyber-attacks are a top risk for UK banks and told parliament's Treasury Select Committee that the UK's banks must do more to protect themselves.

This call to action should not go unheeded. There is a broad range of motivations behind the attacks going on today, from ideological hacktivism and vandalism through to fraud and data theft. This makes it difficult to assess risk, especially as ideologically motivated attacks can have almost any justification. Launching attacks is surprisingly easy, with paid DDoS attack 'services' available, but mitigating the effects of an attack – if not prepared – can be difficult.

From the perspective of regulators around the world, banks must maintain adequate confidentiality, integrity and availability of their services. This means deploying effective defences against cyber-threats, such as DDoS, is now essential. In fact governments around the world are beginning to acknowledge DDoS as a real availability threat to online banking, transaction processing and government services. They are starting to put in place regulations to codify best practices and minimum standards. One good example comes from the Monetary Authority of Singapore, which has a "4×4" rule: a bank must rectify an outage of online services in less than four hours, no matter what the reason. Additionally, the bank can have no more than four outages in one year. Failure results in very heavy fines.

Regulatory bodies and governments are not the only ones applying pressure in this regard. From the end customers' perspective service outages are a serious issue whether they are caused by a DDoS attack or some other factor. Customers depend on banks' services being available at any time, and failures can rapidly erode the confidence a customer has in their banking provider. Financial services and banking organisations dedicate significant resources to their disaster recovery and service resiliency planning to counter this, but if cyber threats such as DDoS are not included in this process then appropriate defences may not be in place.

Security is best described by using the InfoSec triangle, which illustrates the Three Pillars of Security: confidentiality, integrity and availability. All three are equally important.

Defending service availability is not all about deploying services and solutions to deal with attacks though. Organisations can reduce the risk that an attack will be successful by minimising their threat surface. Network infrastructure can be used to control the traffic reaching firewalls and application servers – so that only traffic that needs to be there gets through. Web properties should be designed so that large files and images are only accessible post authentication or registration, to prevent them from being easy to download repeatedly. Visibility solutions should also be in place so that organisations can monitor the traffic into and out of their data-centres. These solutions, and infrastructure, should gather data and be accessible out-of-band so that even during an attack security teams can manage the situation.

Organisations must also define and exercise incident handling processes, and should ensure that they have easy access to Internet and security service providers support teams, so that help can be sort when needed. Relationships with CERT organisations and industry research teams can also be advantageous – forewarned is forearmed.

Planning and preparation are key to ensuring continued service availability, and cyber-threats such as DDoS should be considered as a part of business continuity risk planning. If appropriate services, solutions and processes are deployed then the significant impact associated with a successful cyber-attack can be avoided.

Banking on a mobile relationship

Ian Byrne, banking director UK & Ireland, Wincor Nixdorf

The last five years have been tough for the UK banking sector, but optimism is slowly returning. Capital reserve ratios are largely being met, bank stocks prices are becoming more stable, and there is talk of the Government divesting its stake in the banks which it bailed out. The sector has deserved this boost, but it has a lot of work to do before it can rekindle the relationship with today's more technology-adept consumer.

According to the Edelman's Trust Barometer Index, UK banks have the lowest consumer trust rating (29%) compared to any other developed nation in the world.

If banks are to succeed in regaining consumer trust and growing their retail business too, they must exploit this window of opportunity and invest further into an omni-channel strategy. Doing so will enable a more convenient way of banking and make sure that the demands of today's and tomorrow's customers are met.

One trend in particular that is changing the way customers interact with banks is the increased adoption of smartphone devices. Most customers of banks already use smartphones and tablet computers to manage various aspects of their daily lives and now demand a similar level of access to their finances via the same means.

According to Juniper Research, the number of mobile banking customers is set to grow to one billion by 2017, representing 15% of global mobile subscribers. Such acceleration of users is staggering considering that smartphone banking has only been available for three years; it is a definitive indicator of just how prevalent mobile is set to become within the banking industry.

Mobile banking should be seen as a logical extension of banks' existing sales and service channels, with the main driver being convenience for the customer. The Federal Reserve estimates that 21% of mobile users began using mobile banking tools in the past 12 months, though the most popular uses remain basic i.e. checking account balances or performing transaction inquiries. As customers adopt a more mobile-centric lifestyle, they are likely to demand a greater range and quality of features that are available at branches and ATMs on their smartphones, such as cash withdrawal and money transfers.

Current offerings are distinctly fragmented into physical, mobile and online functions and offer little in way of cross-channel solutions. Amalgamating these banking channels seamlessly is complex but possible.

The banking industry has been slower than others with adapting to the mobile generation. This is largely due to the challenges in overlapping new back-room technology over legacy solutions.

In order to be able to provide customers with innovative solutions and, at the same time, be able to integrate new and legacy hardware together seamlessly, banks should invest in modular web-based software components.

Ernst & Young's 2012 Global Consumer Banking Survey states that customers would be more satisfied if banks offered a greater mix of services across a range of outlets. Having software that operates on an open, network-centric architecture can act as a firm backbone to ensure that a bank is capable of providing this mix of services across multiple platforms, regardless of the technology.

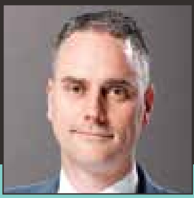
The integration of digital banking innovations with traditional banking facilities can allow customers to enjoy the best of both mobile and physical banking. The increased adoption of mobile does not mean that we will see the end of physical banking. In fact, mobile could be used as a means to encourage people to visit branches more often through informing them about useful services or facilities that are available in branches on a particular day. This information could even be tailored to a customer-specific level based on the types of facilities they require or use regularly to drive additional service value.

Some UK banks have enabled their customers with solutions that allow them to withdraw cash at ATMs using just a smartphone. Customers simply request the amount of cash needed into a smartphone app and they are then presented with a secure numerical code which they type into an ATM in order to withdraw the cash requested. This tool eliminates the need to carry a card, can reduce queue times at busy ATMs, and is also a helpful solution for those who have lost their bank card and are in need of cash.

We should also expect to see more NFC-enabled banking solutions making headway too, as soon as payments businesses, mobile operators and banks establish a more effective way to work together for customers. Today it is mostly being used as a payment delivery tool. But perhaps in future, banks might use it to identify and authenticate customers, and our personal preferences, when in store or at a computer.

It may not be long before we see wearable payment solutions like wristbands or watches on the arms of customers. Soon, banks might even be able to provide completely customised banking solutions, tailored to each individual's needs.

What is almost certain is that the future of banking lies literally in the palm of customers hands.



Twitter shakes up market: the impact of social media on algos

Simon Jones, director of product marketing, IPC

On 23 April 2013, the markets suffered a brief, sharp drop as algorithms reacted to "news" from the Associated Press's Twitter handle that President Obama had been injured in a bombing attack at the White House. In a few minutes, the Dow Jones dropped 145 points, Standard & Poor's 500 Index lost $136 billion in value, and blue chip names like Exxon Mobil, Apple, Johnson & Johnson and Microsoft lost about 1% of their value. By all appearances, the market looked as if it were headed for a crash at least as steep as the flash crash in 2010.

On May 6 2010, US stock markets opened down and trended down most of the day on worries about the debt crisis in Greece. With the Dow Jones down more than 300 points for the day, the equity market began to fall rapidly, dropping an additional 600 points in five minutes for an almost 1000 point loss on the day. Twenty minutes later, however, the market had regained most of the 600 point drop.

Just like the flash crash of 2010, the April 2013 drop was ephemeral. This time, the damage quickly vanished when it was revealed minutes later to be a hacker hoax, and the markets even ended the day higher than they had opened. However, the incident was a dramatic reminder of a very uncomfortable fact: "dumb" algorithms can only handle things as they are programmed and can do incredible damage in a short period of time due to their lack of human common sense.

What some call the Hash Crash, this second flash crash demonstrates that there are still many dangers in the automation of the market that humans cannot predict. Firms mine every potential data source for information to try to get a miniscule advantage and social media is increasingly used as one of the tools in a traders' information arsenal.

As the use of social media networks becomes more and more ubiquitous, it's clear that people are increasingly going to use social networks in their business, finance and trading activities. Social media has had a huge impact on our day to day lives and has changed the way information is disseminated. These changes are now flowing through into the trading environment with traders and algorithms alike using social media to gauge market.

This presents a real challenge for trading firms and for the regulators too. By its very nature social media is a two-way conversation and so firms are cautious about their staff using social media in the workplace, whether they are using it to influence trading decisions or to communicate information about the company. In April of this year the Securities and Exchange Commission gave permission for companies to use social media platforms such as Twitter and Facebook to make company announcements.

But despite this the rules around the use of social media in a trading environment are not entirely clear, although it's obvious enough algorithms were tuned into the Associated Press Twitter feed for it to have a significant and almost instant effect on global markets.

Algorithms react to the news they detect far quicker than humans, which causes other algorithms to react to the first algorithm's movements, and the entire market is caught in a feedback loop of predetermined routines which are unable to react to the market reality. In fact, one could say it's inevitable that something like this will happen again. So what can firms do to ride it out next time?

As information moves through the markets at the speed of light 24/7, 365 days a year, more efficient and direct communication, particularly instant, trustworthy communication by voice, across the trading floor and between financial firms and their clients is imperative. Trading is a complex activity with a life cycle that moves from front office to back office. While algorithms blindly and near-instantaneously brought the market down, human traders used their voices and talked to each other. Through simple communication, they quickly examined the situation and discerned the likelihood of the news being a hoax due to the source of the news.

The markets recovered so quickly because the parties involved had the infrastructure in place to facilitate communication. An extensive array of tools, ranging from voice communication to integration with the PC applications traders use, such as CRM, OMS, and market data applications, enabled quick analysis and quicker communication. Systems that provide the middle- and back-office staff with access to the private lines used by traders, and line sharing, enabled traders to instantly access the appropriate team members. Secure lines to clients coupled with the role voice communication plays in creating, building, and enriching client relationships delivered critical information and enabled rapid decision making.

The 2013 flash crash was caused by rumours that humans would have approached with scepticism, but algorithms took at face value. Whilst you could argue that leaking rumours in an attempt to skew market trends is nothing new, the advent of social media means that the impact of one individual is dramatically amplified when compared to just a few years ago. The potential for criminals to exploit this in the future is huge, and trusting algorithms to discern what is real and what is fake is a risky strategy.

NFC mobile payments: overcoming the barriers for banks

Ben Leighton, manager, Baringa Partners

The past few years have seen major changes to the way consumers make low value payments, from pre-paid wallets such as the Oyster Card through to Contactless Cards in retail transactions – thanks to Near Field Communication devices.

Contactless cards in particular are gaining a good deal of momentum in the UK; the majority of major banks now issue them, and large retailers are increasingly accepting them. Only recently, Starbucks pledged to roll out contactless terminals at over 550 of its company-owned stores across the UK.

Now the increasing prevalence of smartphones (not to mention mobile banking) has in turn resulted in a greater push for mobile payments; there have been several well-documented attempts to converge NFC and Smartphone technology to this end (albeit with limited penetration to date). Examples include Orange Quick Tap (in conjunction with Barclaycard) and NatWest's trial of PayTouch.

Yet there are a number of significant issues that face firms looking to innovate in this burgeoning arena:

1. Complexity of the Market

The variety of players involved in delivering an NFC mobile payments solution is large, which results in a highly complex ecosystem. Between the banks, Trusted Service Managers (who produce and support SIM cards and banks' debit & credit cards), Mobile Network Operators (MNOs), and the proliferation of handset manufacturers, there are multiple routes to market, and multiple delivery solutions.

Deciding on which route to back will be the main challenge for banks; in making this decision they should focus on two core aspects to ensure the greatest chance of success:

a) Customer coverage – there is little point in a bank supporting a NFC Mobile Payments solution that only works on a single handset, through a single MNO. Taking this approach will limit uptake and not result in anything more than a costly toy for a select group of customers (the Orange & BarclayCard solution being an example). In order to make the solution viable in terms of customer uptake and transaction volumes, banks must choose a route to market that provides a significant level of customer coverage – preferably through an arrangement with multiple MNOs, available on multiple handsets.

b) Customer need – the capacity for NFC mobile payments is not in and of itself a solution to a customer problem. Customers currently enjoy a variety of ways to pay for goods, the majority of which are well-known and trusted by consumers. Customers are unlikely to switch to NFC mobile payments unless additional services add value, and give them a reason to do so. Promotion of discounts and offers through customers' mobile phones for payments using NFC could provide one means of delivering this added value, boosting customer uptake and revenue.

2. The Power of the Mobile Network Operators

The position of MNOs within the value chain also presents a challenge to banks looking to innovate in this area. As owner of the phone's SIM card (the most likely mechanism for supporting NFC technology) they have a strong hand to play. Banks, in order to get their proposition off the ground, must engage with the MNOs to agree commercial terms as well as terms of engagement around who 'owns' the customer relationship and data. This is particularly critical when it comes to defining the customer servicing model, ownership of customer data, and what marketing and advertising customers will receive. This puts banks at a significant disadvantage going into negotiations as they have no means of providing such a service on their own.

So how can banks ensure they get the best deal?

a) Gang together – use joint industry bodies to promote co-operation amongst themselves and encourage the setting up of industry standards for data sharing and usage. Such agreements can then be used a collective bargaining chip with other parties including MNOs.

b) Become an early adopter – Given the number of players jockeying for position, there can be advantage in being a first mover when creating a compelling mobile wallet/NFC mobile payments provider. This approach carries risks, however; backing the wrong horse will incur additional costs when it comes time to reverse or change direction.

c) Leverage payments schemes – by engaging closely with payment schemes (Visa, MasterCard etc.) during their discussions with MNOs, banks will be able to leverage their position within a larger body to secure a better deal.

None of this should discourage banks from moving into this area; the success of mobile banking applications so far has demonstrated the customer appetite for using mobiles as a means to interact with their bank. So long as banks get the approach to mobile payments right, they will be able to extend this success and widen the channel; turning customers' mobiles from a service and information-only channel to one that directly generates revenue via customer transactions and purchases.

Preparing your FATCA game plan

With the FATCA regulations and timeline now in place, financial institutions are fighting an uphill battle to stay ahead of impending deadlines. They must take immediate steps toward meeting FATCA deadlines or risk the penalties of non-compliance, say *Erick Christensen* and *Aaron Kahler*

Historically the United Kingdom and other European financial institutions haven't had the need to review and identify whether or not their customers' are US citizens or not. However, a new regulation, the Foreign Account Tax Compliance Act, set to take effect on 1 January 2014, will require financial institutions to identify customers who have accounts in the UK and Europe who are US citizens or US residents and report information about those individuals to the appropriate tax authority on an annual basis.

The first FATCA deadline is scheduled for January 1, 2014. As it stands financial institutions are struggling to quickly comply with FATCA, Intergovernmental Agreements (IGAs) and local law requirements, and meet timelines, without threatening their overall business operations. Additionally, with levels of customisation needed for every country, as FATCA needs to be applied to various lines of business and locations, an additional layer of complexity is added to the mix. How can financial institutions work to meet this deadline without putting their business in jeopardy?

There is no easy or simple answer but financial institutions need to prepare an aggressive plan of attack to meet compliance deadlines and have a clear strategy in place before the first deadline arrives. A financial institution's strategy should take a business as usual approach, ensuring the plan is coordinated in the least disruptive way possible with a special focus on minimising unnecessary costs. Furthermore, a FATCA game plan needs to be streamlined to mitigate pain points unique to each organisation.

Six areas banks need to keep in mind to meet THE FATCA deadline include:

1. Think Globally: Many organisations are tackling FATCA using a siloed approach, where each line of business is on point to develop its own solution. However, FATCA has global implications and, in most situations, is most efficiently implemented as a global solution with country-specific processes. By building a centralised FATCA process that looks across the global enterprise, financial organisations will avoid having data in different silos. The ultimate goal should be to have a unified, cost-efficient, global FATCA compliance process that has the scalability and sustainability to manage evolving guidance under US law, local law, IGAs and fluctuations in business requirements.

2. Focus on technology: Changing front-end processes, core banking and onboarding systems to accommodate varied transactions is a significant effort that can be high risk and take a significant amount of time to complete. That said, a plug and play solution that can leverage existing systems and platforms and is able to communicate with current technology has the potential to be a faster and more flexible offering for the long haul. By taking advantage of technology to automate and accelerate processes financial institutions are able to benefit from the added reduction of costs while still ensure they remain FATCA compliant.

3. Leverage the legal team: Building the capability to sort through country-specific transactions and capture the exact ones that need to be reported, as well as those that may need withholding, will be a difficult and tedious task. By tapping into the necessary legal knowledge up front, financial institutions can implement a rules-based technology solution, that will be able to automate the vast majority of processing around client data, performing due diligence, reporting, withholding record-keeping, validation and audit. For financial institutions operating in multiple countries, the solution will need country-specific legal advice.

4. Take a top down approach: There are many financial institutions that are starting the FATCA compliance process by trying to identify the

"By taking the time to align a FATCA regulatory technology solution with broader enterprise needs financial institutions have the opportunity to solve the short-term need while building a technology platform that can deliver much greater return"

quantity of US clients in their account base. What they may not realise while taking this approach is that there are business lines that may be exempt from FATCA, making large parts of the total account base virtually eliminated from consideration. Instead, financial institutions should work to understand legal entity exceptions, to minimise the scope of compliance. By financial institutions starting with legal entity exceptions they are able to benefit from a focused approach that is more efficient, reduces cost, and offers a better chance of making the deadline.

5. Coordination is key: FATCA involves a number of moving parts both inside and outside of the organisation and as such requires the coordination of key professionals from the start. It will take the management of local European legal, tax, risk and compliance professionals with the support of technology, operations and software experts, to design, implement and sustain a workable FATCA compliance program. A closely coordinated effort from the outset will significantly increase efficiency and speed time to completion.

6. Keep an eye on the larger picture: While meeting the 1 January deadline is important, ensuring financial institutions look at the bigger picture is vital. Clearly the immediate need for a FATCA technology investment is to support a regulatory mandate. But putting in place a solution for a single regulation, FATCA or otherwise, can be expensive. By expanding the technology use across a broader spectrum of regulations a bank has the capability to be more efficient in meeting additional identification-based regulatory needs as well as building customer knowledge to leverage for competitive advantage.

As the result of FATCA, new laws are emerging around the globe that require companies to identify their customer's citizenship as governments recognize the opportunity to generate revenue from their extended citizenry. In April of this year the United Kingdom, Germany, France, Italy and Spain's governments announced they would develop and pilot a multilateral tax information exchange. The exchange will host a wide range of financial information and will be automatically be available for use amongst the five countries. The intent of the program is to deter tax evasion and enable the countries to take a step toward implementing a wider, multilateral automatic tax information exchange.

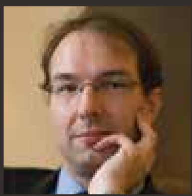
FATCA compliance is a highly complex and a complicated undertaking for global companies to address. As January 2014 approaches, regulators will be looking for companies to put forth a major effort around compliance to the new regulation. No matter what or how your financial institution is planning for FATCA, taking the above noted areas in mind will likely increase the likelihood of meeting the deadlines, as well as building a solution that has both the robustness and the flexibility to stand the test of time.

By taking the time to align a FATCA regulatory technology solution with broader enterprise needs financial institutions have the opportunity to solve the short-term need while building a technology platform that can deliver much greater return on investment for the business.

Leading financial institutions are not just solving the FATCA "problem"; they are creating a FATCA solution that has the capability to expand to meet broader customer identification needs. In so doing they are investing once and utilising that investment in multiple ways – as a way of tackling other areas of compliance as well as boosting their technology backbone for onboarding, sales, CRM and more.

Erick Christensen, Vice President and Head of North America Compliance Practice, Capgemini Financial Services

Aaron Kahler, Director of Anti-Money Laundering Compliance, Capgemini Financial Services



A hero of **our times**

ISO 20022 has been hailed as the *lingua franca* in payments and securities for some years now. It offers great potential for reengineering the financial services industry, and for process improvement. *Gareth Lodge* and *Neil Burton* look at its adoption

For a standard which promises so much ISO 20022 is still relatively unknown. Europe has required regulatory involvement, in the form of SEPA, to drive adoption. In the USA, a 2012 survey by the Remittances Coalition showed that fewer than 10% of the 468 respondents (mostly corporates) had heard of it, and only 1% were "somewhat familiar" with it.

But perhaps the SEPA end date is the global tipping point? The SEPA end date mandates the adoption of ISO 20022 for all intrabank euro-to-euro transfers. Furthermore, under the European Commission SEPA end date regulation, the majority of corporates sending most types of payments must now adopt it. This will force smaller firms to adopt the standard alongside multinational corporations.

The effect of the end-date is therefore to move billions of transactions to SEPA credit transfer – which of course is based on ISO 20022. Add this to other payment infrastructure projects in other countries including India, China, Brazil, Canada and Australia, all of which are embodying the standard, and it begins to look like more than half of all electronic payments globally will be using ISO 20022 within a few years.

Round the world in 20022 days

There is sometimes a perception that ISO 20022 means SEPA and vice versa. Certainly SEPA is playing a large part in driving the uptake, with both the SEPA direct debit and SEPA credit transfer being based upon it. But it is certainly not just payments – for example, the proposed standards for e-invoicing and eBAM are both based on ISO 20022 schemas. This will create a ground swell of usage over a much broader value chain as the SEPA regulation stipulates end-to-end usage. This means many, if not most, corporates will need to be able to generate payments in ISO 20022 format. It is not just low value transactions either – TARGET2 has published a strategy envisaging the beginning of adoption in 2014 or 2015 and allowing for co-existence with MT until ISO 20022 becomes the norm.

"It begins to look like more than half of all electronic payments globally will be using ISO 20022 within a few years"

But what about outside of Europe? In Japan both high and low value payments are ISO 20022 based. Similarly Russia's new domestic debit card scheme is being built on ISO 20022, while India has mandated the standard as a prerequisite for inclusion in the new RTGS system, NG RTGS. China and Brazil have also announced the adoption of certain ISO 20022 messages. And still they come – the Canadian Payments Association is proposing an adoption timetable for ISO 20022 to begin in 2016 and be completed by 2020. Similarly most submissions to the Reserve Bank of Australia's February 2012 payment system review support the adoption of ISO 20022.

In percentage terms, ISO 20022 is undoubtedly the most used format of all, signalling that the day when most payments will be ISO 20022 based is quickly approaching.

All that glitters – the downsides

Of course, ISO 20022 has its detractors. Some have argued that ISO 20022 has been designed around the four or six corner store-and-forward correspondent banking model, and hence tends to preserve that model, which even Swift acknowledges is outdated.

Another issue is the question of interoperability and encouraging mass adoption. However, when it comes to interoperability, the problem is not lack of connectivity, it is the lack of common means of sharing data over that connectivity. Furthermore, one of the consequences of welcoming a broad range of legacy and new

capabilities, and with new participants joining at different stages of their own investment cycles, is that there are many flavours of the ISO 20022 standard. This creates a first mover disadvantage; the first firm to invest won't see payback until many other firms have migrated. Without regulator-enforced migration, early investment is not rational.

However, many infrastructures in many countries have either already adopted it or are irrevocably committed. Deciding not to join it until later may be a good decision for some. Avoiding making any decision no longer is.

The case for adoption

Absent a regulatory driver, there needs to be a business case. How does making this investment make processes more efficient or enable more business in a measurable way, with tangible payback?

Vendors for the banks following the market have incorporated ISO 20022 but for corporates it is less easy. They are not getting, in many cases, guidance from their banks as to how to proceed. Nor are they all convinced that they will see much, if any, benefit over and above the current state.

A few options are emerging. Some of the vendors are providing versions of software that was originally designed for banks directly to corporates. Equally, some large vendors are preparing cloud based options for the market. As the payments are now in the same format across far more countries, there is greater opportunity to extract value from both analysing the data in the payment, but also utilising that data more smartly.

That last point is perhaps the most significant.

Standards make things simpler. Simplicity in this case seems to be leading to a belief that payments are becoming commoditised. This is particularly the case in SEPA land where one of the original "selling" points was that it would open up the market to greater competition as now any bank should be able to reach any other bank (and therefore corporate or consumer).

That may be true, but it is as much as a misunderstanding as to what commoditisation actually means. A commodity, according to the dictionary, is an "article of trade" or "anything useful".

If payments are being commoditised, we're saying they're becoming more useful and therefore more valuable. Standards should therefore be about how to *harness* that value.

ISO 20022 is on a triumphant march, but we must not lose sight of the fact that it is supposed to be an enabler for something more, rather than the end-goal itself. To do so is to lose that value.

Neil Burton is director of product service strategy at Earthport and Gareth Lodge is senior analyst, corporate payments, at Celent

Community Chance

So farewell then, the Swift Community webpage, which will be pulled at the end of the year. Launched in 2007, the swiftcommunity.net is a social network was intended to "facilitate year-round debate and information-sharing" through blogs, forums and document libraries. Swift says that the growth of social media alternatives in recent years, "has led to a steady decline in swiftcommunity.net usage. As a matter of practicality, we have therefore decided to discontinue the service at the end of 2013".

Not everyone is happy: several users took to the site to protest: "It's a bit of a shame, honestly," said one, clearly choking back the tears.

Others were more angry. "Proposals to go to some other forums and other websites and continue activities that community members have had here are not serious recommendation and not professional at all!" wrote Dr Zoran V Markovic of the TS-TriStar Imperial International Credit Institute in Serbia. "Other websites and forums are not as professionally orientated as was Swift community. And, I am sorry to say this but redirecting Swift community members and financial professionals somewhere else and leaving them without opportunity to communicate direct (as it was here on this forum) is not serious at all."

There's an opportunity here for someone. ***BT***

Tap, tap, who's there?

News that the Kremlin plans to invest in some typewriters in order to avoid the cyber-espionage brought nostalgic burbling from the corner of the office where some of our older colleagues gather to reminisce about the days when summers were hot and the war was cold.

"Eyes only" was a common thing to see on documents across the British military and civil service, and since so many of the post-war generation grew up with this, it wasn't too uncommon to see it used in other professions.

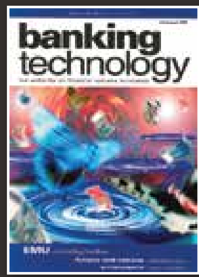
We've been here before, you see. When the lads from the Kremlin told President Putin that that they had a cunning plan, he should have said something along the lines of "is it a plan as cunning as the one that the cunning Americans devised back in the 1970s to intercept communications by monitoring the tiny electromagnetic pulses given off by the solenoids that activate the mechanisms in an electric typewriter?"

How effective this was, we can't tell you, but we are assured that it worked better than a contemporaneous method which bounced an optical beam off the window of the targeted room, using the glass as a microphone to pick up vibrations caused by speech in the room.

So, manual typewriters and eyes only … and thousands of people back in employment. It can be achieved in the first five years of our new plan …

… sorry; bit of a flashback. ***BT***

FROM THE ARCHIVE

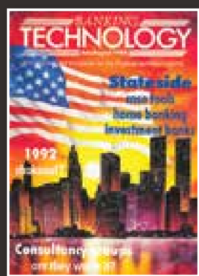


15 YEARS AGO

Barclays pilots smartcard-based certificate authority with UK Government … Swift allows fund managers and broker dealers onto Securities Steering Council … Algorithmics promises active enterprise risk management … European Monetary Union creates liquidity management problems … Growth of electronic trading poses market surveillance challenges …

20 YEARS AGO

Study finds UK banks overcharging in 40% of cases … Bank of England outlines Taurus replacement plans … EC urged to promote use of EDI … French banks baulk at lower cross-border payment plans … San Paolo pilots self-service terminals in Italy … Windows NT and Intel Pentium launches open new opportunities for systems makers …



25 YEARS AGO

Swift faces more delays with Swift II network … Bond dealers feud over Trax … Paris Bourse embroiled in £47 million scandal … US banks gear up for global integration … Single Market preparations lead to radical changes in banking regulations …Automation at UAE banks growing rapidly … ***BT***

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July/August 2013

Know your regulations: The good, the bad and the ugly

Knowing the difference will help you make decisions as the clock ticks down ...

RISK DATA: EFFICIENT *AND* COMPLIANT?
Risk regulation is a cluster bomb – multiple devices with multiple impacts – but applying uniform risk data principles can prepare the back-office

DATA PROTECTION BARRIERS AHEAD
Is data protection regulation about to become one of the biggest compliance hurdles the back office will have to clear?

MIFID II: HERE ALGO AGAIN
The new legislative package contains some surprises for those engaged in 'risky' trading

THE BATTLE FOR BENCHMARKS
Recent developments give firms some reasons to celebrate but the post-Libor benchmark battlefield is only just emerging


Decision time

While there is a lot of talk, and some action, about collaborative industry initiatives to address the problems and reduce the burden of regulatory compliance, when it comes down to it – you're on your own, Mr Bank.

Regulation is a combination of the good, the bad and the ugly. Part of the problem is figuring out which is which in time to comply with hundreds of new demands by 2014.

After that, as with every business demand, you can decide to tackle it in 1,000 different ways - including doing the bare minimum – but facing the fact that some of it will be ugly (and/or bad) – the more you use the process to make grown-up choices about how to retool your bank, the less ugly it can be down the line. But that means manning up now in the face of uncertainty.

While some vendors have partial solutions to problems they think you have, none of them have any better idea than anyone else of what the answers might be so the chances are they're not going to solve any problems for you.

Actually, that is not quite fair to the vendors – many have quite rightly been saying for some time now that this is a complex area with a lot of moving parts, where point solutions are not really going to work.

And to be even fairer, some have been saying for years that the holistic approach to regulatory data management and reporting is the only real option. It's just that the industry has always found it really, really hard to listen to vendors' and consultants' big picture pitches that don't solve the immediate problems – and cost far more than tactical fixes.

Of *course* they are going to cost money, but they might have a point, and using the word holistic doesn't automatically mean that their business cases are flawed. Not always, anyway.

But that's enough of being fair: slice the issue any way you want to, the question remains – what are you doing to get out there and work through these issues with your colleagues within the bank, regulators and other institutions?

It's the one question that everyone really needs to answer for themselves.

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Making sense of financial services regulation

Risk data: can it be both efficient and compliant?

Risk regulation is a cluster bomb – multiple devices with multiple impacts – but applying uniform risk data principles can save costs in 2013-16

TOP TWITTER ALERTS

- CRD IV published in EU journal; Directive and Regulation will come into force from 1 January 2014
- Interest rate risk: Pre-CRD consultation paper says bank IT systems must measure exposure on a single transaction basis
- The price of bad conduct risk data: FCA fines JP Morgan £3.1 million for failing to keep up-to-date information on client risk profiles

KNOWN UNKNOWNS

- Will firms be ready to calculate CVA from 1st January 2014?
- With renewed focus on consumer protection, how and when will regulators penalise poor conduct?
- What will the total cost of systems improvements be?

THEMES

- There is a great deal of regulation in the risk space: Basel III, CRD IV/CRR, Dodd-Frank, COREP/Finrep, BCBS guidance, Enhanced Disclosure Task Force
- Conduct risk is a hot topic for regulators and the page count is rising fast
- Risk will have to work together with treasury, accounting, corporate and the back-office to achieve implementation

With six months before the 4th Capital Requirements Directive comes into force, many will be asking what technological improvements will be necessary to efficiently manage risk going forward. Before they embark on a costly overhaul of their data systems, firms should look at what regulatory trends are likely to require similar changes in the future and adjust their specification accordingly.

CRD IV, coming into force 1 January 2014, will compel firms to hold capital against their counterparty exposures. This brings with it many data issues relating to risk and counterparty management. For instance, firms will have to calculate CVA risk for all OTCD trades, except those with non-financial counterparties. However, under EMIR, if NFCs trade a certain volume of derivatives, then they are no longer NFC. Therefore firms' reference data systems will have to know how much counterparties are trading or risk holding too much capital or, worse, being non-compliant. And this is just one requirement of many.

When thinking about what it is that a risk data system needs to look like, firms should have regard to the Basel Committee for Banking Supervision's *Principles for Effective Risk Data Aggregation and Risk Reporting*. This document sets out comprehensive, but high-level, principles for what a 'good' risk data framework looks like in terms of governance, policies and procedures and more technical architecture and infrastructure. These principles are not the answer to every question, but they do provide common ground on what is expected of a data system in the risk management arena.

For instance, conduct risk is currently a hot topic and, though there is no consolidated guidance, a lot has been issued in this area. In the UK, the FSA has made its position clear and the FCA is keen to enforce. Though conduct risk has not traditionally been treated as a true type of risk (like credit risk, for example), when it comes to the back-office, many of the same principles apply. Ultimately, the aim of the game is to ensure that management get accurate and timely information to enable them to make effective decisions about the dangers facing the bank and its customers.

All of these requirements have a subtext for those who manage the collection, transmission and aggregation of data within a firm. One example is that, as stated in the FSA's Retail Product Development and Governance paper, senior management are expected to compare products across the firm for excessive profitability (an indication of exploitative practices). This adds another item to a growing list of risk measures that have to be fed up to senior management through the MI chain.

But where – as is common – products are separated by different business lines, departments and geographies, automating this process becomes a challenge for the firm's data architecture. This is where it will be expedient for firms to have already implemented the BCBS Principles, which require them to align data across the business through infrastructure such as a consolidated data dictionary and robust end-user controls.

At the core of the issue is the daily management of risk within the firm. For example, funds/liquidity transfer pricing remains an area of concern for regulators. Regulators' research showed that some banks' pre-crisis risk tracking suffered from decentralised funding structures, manually adjusted data and a lack of oversight by risk and finance professionals. This was creating a situation in which banks were unable to track their funds transfer, and liquidity was being supplied to business units free of charge.

To solve these problems, the BCBS recognises the importance of a bank's Liquidity Management Information System. In fact, applying the BCBS Principles to a bank's LMIS, the recommendations include single authoritative data sources per risk type, procedures to manage down numbers of manual adjustments and internal review by qualified staff. Thus the principles conveniently map onto the BCBS' FTP concerns and so, as has been said, provide a ready-made set of common denominators that can be used to line up their liquidity profile limits and funding matrix with other risk measures throughout the bank.

Therefore, to answer the question posed in this article's title, the answer is a 'yes', in relative terms at least: Compliance can be achieved more efficiently by looking across multiple regulations that impact the bank's risk data and lining-up requirements. However, rather than just getting the governance right and hoping the rest will follow, this requires a bottom-up engagement with granular data issues.

Early warning signs: data protection barriers ahead

Is data protection soon to become the biggest compliance hurdle facing the back office?

In an effort to improve the protection offered to consumers, and to harmonise data practices, the EU is currently in the process of passing two pieces of legislation: the Cybercrime Directive and the General Data Protection Regulation (GDPR). Few people have given much thought to how these will align with international financial regulation but, if passed, both will have far-reaching consequences for banks and financial services. And with severe penalties for non-compliance – up to 2% of global turnover – firms will want to plan ahead.

To deal with the Cybercrime Directive first, this is a fairly straightforward piece of legislation which will compel large institutions in high-risk industries to make a public disclosure when their data security measures have been breached. As financial services is one of the industries in scope, this will have an impact on banks, but the effects are likely to be felt more in the market in the form of negative feedback loops than in the back office and compliance. However, banks may still need to broaden their stress tests to include a relevant scenario, similar to SIFMA's recent system-wide drill: Quantum Dawn.

The GDPR, on the other hand, gives rise to a number of clear implementation issues, especially when considered alongside other legislation, such as the 4th Anti-Money Laundering Directive. The Regulation is currently subject to debate between the Council and the Parliament and so remains subject to change. However, assuming that all the proposals make it through, there are five issues that stand out for banks:

Firstly, banks will have to think about how data protection is a part of their system design and testing process. Under the Parliament's current proposals, data protection will have to be considered as a part of any new system design. This has significant implications for vendors and banks' own in-house IT functions, especially at a time when systems are undergoing a number of other revisions in order to remain compliant elsewhere.

Secondly, new regulatory reporting requirements are being discussed. Under these proposals, similar to the Cybercrime Directive, institutions will have to report breaches of data confidentiality to regulators, even where this is accidental. This means that firms may have to revisit their end-user controls and internal reporting processes.

Thirdly, the new regulation will see a strengthening of the rule requiring institutions to have a 'legitimate interest' in the data they collect. This means that banks will have to have a justification for all the data items they collect on customers, which comes into direct conflict with requirements to sift through large amounts of customer data (such as for financial crime purposes). It is hoped that a pragmatic and flexible approach will be taken in relation to this exceptional reason for collecting client data, but regulators have yet to acknowledge this as an issue.

Fourth, the Regulation will have an extra-territorial impact. The requirements will attach to the data of EU citizens, not just to companies based in the EU, meaning that the changes have global reach.

Finally, in addition to the extra-territoriality dimension referenced above, there is a potential conflict emerging with non-EU law. Under the regulation, third country authorities will not be allowed access to data except where this is covered by a bilateral treaty. As a result, banks may find themselves caught between a rock and a hard place when being asked to render up transaction and customer data to non-EU regulators. Of course, major jurisdictions are likely to have such a treaty but this may disproportionately affect firms that focus on emerging markets.

Given that banks are currently focused on other regulation coming out of Europe at the moment, these particular initiatives may be sitting in firms' blind spots. This means that, when digging up the road this time around, firms will have to be careful not to embed data protection potholes, or risk going through the whole process again in the near future.

As the title suggests, this is a very early warning: the regulation is still in the early stages and there is the potential for it to be derailed altogether with the summer recess and the elections next year. However, due to the potential for it to interfere with present compliance efforts, the effect of these proposals may be felt long before the implementation date (if one is finalised). And even if this particular piece of legislation does not make it through, data protection is a growing issue. As such, IT and procurement professionals are likely to benefit from flagging issues up to senior management early, before the requirements begin to land in earnest.

TOP TWITTER ALERTS

- Data protection headwinds for KYC? What complications are coming for banks' programmes in 2014?
- Competition for CCPs? Presidency proposal for CCPs to share data; what is the impact on market stability?
- The price of bad conduct risk data: FCA fines JP Morgan £3.1m for failing to keep up-to-date information on client risk profiles

KNOWN UNKNOWNS

- Will the EU Data Protection Regulation make it through legislative process before next year's elections?
- Which of the proposals made by the Parliamentary committee will be part of the final Regulation?
- What will be the impact on market stability of reporting under the Cybercrime Directive?

THEMES

- Data protection regulation is developing on a parallel track from financial services regulation
- Banks have to hold increasing amounts of data on customers for anti-financial crime, client suitability and regulatory reporting purposes
- Vendors beware – you are subject to the changes as well as banks themselves

Here algo again: MiFID II will require your attention in 2014

The new legislative package contains some surprises for those engaged in 'risky' trading

For firms who remember MiFID I, and those that don't, round two is almost upon us. This month, the Council of the EU agreed their general approach, meaning that the draft of MiFID II/MiFIR is free to advance to the European Parliament. If all goes according to the current plan, the new combined legislation will be with us in time for 2015 implementation.

Firms who invested heavily in MiFID I will be pleased to know that the structure and the main drivers remain the same. In summary, what is expected of firms is: better management and controls, safer trades, a better understanding of customers and products and greater market transparency.

To elaborate, under MiFID, firms are already subject to a number of requirements: Firstly, they are required to manage down operational risks within their own firms, such as from conflicts of interest and third party failure. Secondly, firms must ensure they are handling client orders in a timely and effective manner that maximises the benefit to their clients. Thirdly, they must protect their customers by dividing them into retail clients, professional clients and eligible investors and then treating them accordingly. And, finally, most of this must be documented and reported, either to regulators or to clients.

So why the change? Under MiFID II/MiFIR some requirements have been intensified and a few new ones added. For example, client suitability reporting has been built up, with firms having to provide much greater quantities of information to retail clients. This information includes the basis of the firm's judgement of suitability, the independence of the firm's advice and a full breakdown of the pricing of the products the firm is offering. As a result, on-boarding processes may have to be improved and aligned.

What will be the cost of all this? Preliminary JWG research (based on experience of MiFID I) suggests that implementation will cost around £10 million for a large institution. Scaling this figure down for the 8,000 or so medium and small firms in the EU puts the total cost to the European industry at around £1.6 billion. For comparison, the cost of MiFID I to the UK alone was around £750 million, suggesting that MiFID II will be a smaller (but by no means insignificant) project.

However, the new MiFID will have a more acute impact on particular areas that are deemed to be an emerging threat to market stability, such as algorithmic trading. The requirements in their current form set out four clear expectations for algos. Firms will have to fully test their systems (prior to authorisation), and monitor them continually, to ensure that they are: i) resilient, having sufficient capacity; ii) reliable and unlikely to contribute to market volatility; iii) unable to be used for a purpose that is counter to regulation; and iv) subject to appropriate trading thresholds and limits, and prevented from sending erroneous orders. In terms of reporting, regulators may request at any time that a firm disclose any aspect of its systems' compliance.

As currently stated, these rules are only principles and leave much room for clarification. For instance, what is the level of reliability necessary? 100% reliability? And if an algorithm goes wrong, will firms be able to rely on the fact that they fully tested the system? For answers, firms will have to look to any future technical standards. But, ultimately, best practice may be hard to find in this area due to firms' unwillingness to share their secrets in the algo arms race.

Dark pools are another high impact area. Less transparent exchanges, or organised trading facilities (OTFs) will be prevented from carrying out matched principal trading (intermediating between buyer and seller) except in instruments that typically suffer from a lack of liquidity. The list has yet to be finalised but most noticeably currently excludes equities. This will have a clear impact on the shape of the market, but from the perspective of the back office may require significant changes to firms' order books and matching systems.

Similarly, MiFIR, reinforcing EMIR in the derivatives space, will force certain classes of derivatives to be traded on exchange. Again, firms will have to wait on technical standards to see which instruments are in this list but exchanges are already making preparations. For instance, LSE have announced the creation of a platform specifically for interest rate swaps, again having implications for firms' trading systems.

Apart from in these three key areas – derivatives, dark pools and algos – MiFID II is unlikely to be the shock MiFID I was. For those who implemented MiFID I, the exercise is more patching up holes than it is a renaissance. However, ESMA has already begun to draft the technical standards meaning that firms have a short window in which to decide what business they do, where they do it and with whom.

TOP TWITTER ALERTS

- MiFID II: Council publishes general approach; invites Presidency to begin negotiations with Parliament
- MiFID to be finalised? Will compromise over dark pools bring 30 months of negotiations to an end?
- FCA to defy EC over AIFMD: AIFMs will be able to passport MiFID services; will dual authorisation still be necessary?

KNOWN UNKNOWNS

- Will the new legislation be finalised in time to meet its current target of Q1 2015 implementation?
- How will the combined effect of MiFID II and EMIR reshape the derivatives market?
- Will systems upgrades be necessary to meet the new client classification requirements and trading requirements?

THEMES

- Work has already begun on technical standards showing hope for a quick passage through the Parliament
- Requirements for derivatives trading have the potential to be draconian depending on future technical standards
- Firms need to think about how much OTC derivatives, dark pool and algorithmic trading they carry out

The battle for benchmarks: divisions in the ranks?

Recent developments give firms some reasons to celebrate but be prepared for a long engagement

With lots of different regulatory benchmark efforts now underway, the industry could be forgiven for not taking a common stance. With IOSCO set to issue final principles in July, ESMA and the EBA are simultaneously consulting on a European set of principles. Meanwhile the UK is moving ahead with its own reforms.

JWG has previously outlined three central issues that have emerged from the draft principles: the scope of the regulation and the benchmarks included, the continuity of the contracts tied to those benchmarks, and the cost of the new rules to the industry have all emerged as key areas of controversy. As attention begins to shift from setting broad principles to defining detailed rules, firmer indication of how these issues will play out is now being provided.

The most concrete recent developments are the FSB's announcement of an Official Sector Steering Group, chaired by Martin Wheatley, with the aim of reviewing and aligning national reforms, and an EU proposal for a regulation on benchmarks.

Firms will be relieved by certain elements of the European Regulation as it is currently taking shape. As mentioned, a major industry concern so far has been the scope of the rules, with fears that a broadly-defined, one-size-fits-all approach will be adopted, which may be unworkable for some types of indices.

However, the EU regulation is expected to be limited to benchmarks referenced in financial contracts or instruments, meaning minor indices are likely to fall outside its scope. Additionally, separate standards for different types of benchmark through secondary legislation are envisaged, and caveats will be added – not all benchmarks will be expected to be based on transaction data where this is inappropriate.

The regulation should put to rest fears of having to rebase existing contracts. Transitional provisions are likely to be put in place meaning that benchmarks do not have to conform to the new requirements if doing so would breach the terms of the contracts that use them as a reference, until their value becomes 'insignificant'.

However, this is also one example of where the regulation could introduce uncertainty: Firstly, it would lead to a potentially long transition time between the two regimes, as contracts using old non-compliant benchmarks will gradually expire and newly compliant benchmarks are established. It also raises the question of how 'insignificant' the value of contracts based on these old benchmarks will have to become before they are forced to adapt to the new standards.

Of course, there are also several new demands being placed on benchmark administrators. Most notably, monitoring, oversight and controls are expected to be significantly upgraded, leading to new record keeping and reporting requirements.

Administrators will be expected to set up an independent board to monitor input data before and after publication, consult on and give advance notice of any changes to methodology, and detect and report to authorities any input data deemed to be anomalous. It is also likely they will be required to keep records of all input data used to calculate benchmarks for 5 years, and store recordings of any phone conversations and electronic communication between employees of the administrator and submitters for 3 years. These requirements may put significant operational demands on administrators and entail a high cost in terms of staff and additional data storage.

There also seems to be a fundamental tension developing between the aim of monitoring submissions – by placing organisational and reporting requirements on firms – and encouraging more institutions to submit to benchmarks in order to dilute the impact of any one firm's submissions.

The way the EU regulation is expected to get round this is through mandatory contributions for 'critical' benchmarks, and a requirement that no contributor provides more than 25% of the volume or values used in input data. This in turn would make the distinction between critical and non-critical benchmarks vital and it remains unclear which benchmarks will fall under this definition.

The fines being envisaged under the new regulation are severe, and apply to individuals as well as firms. These could be as high as €500,000 for individuals, and €10 million or 20% of turnover for firms. Full implementation is expected within a year of adoption.

Ultimately the future of benchmarks is in a state of flux. Divisions in global and regional views over policy are defining the target operating model. Now is the time for firms to weigh in and shape a future benchmark landscape that makes commercial sense.

TOP TWITTER ALERTS

- SIBOR crime: MAS to regulate benchmark administrators and introduce criminal offences for individuals and corporations
- Trader to be charged with Libor-rigging: Hayes (of UBS and Citi) may be first to face criminal sanctions in UK
- 'Vague and over-ambitious'? Wide scope of IOSCO benchmark principles attacked by respondents; should equity indices be exempt?

KNOWN UNKNOWNS

- Will LiBOR continue to play a role as a global benchmark?
- Will the new EU Regulation be passed and trump Wheatley's plans for Libor?
- What will be the cost to firms of additional authorisation, record-keeping and reporting obligations?

THEMES

- There are many different flavours of benchmarks and finding a one-size-fits-all regime will be difficult
- Firms are gaining greater clarity over the types of regimes that could be put in place but none is certain yet
- A delicate balance is being struck between the commercial and the regulatory needs of benchmarks