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PANDEMIC TESTS THE BANKING INDUSTRY'S METTLE

Introduction

The global banking industry has gone into this crisis in a much better position than the previous one, from a balance sheet standpoint as well as a technological resiliency perspective. Joy Macknight reports.

THE COVID-19 PANDEMIC has shone a spotlight on operational resiliency, as financial institutions scrambled to lift and shift the majority of their workforce from the office to the home with only a few weeks' notice. It has stretched business continuity plans to breaking point and forced banks to quickly iterate and adapt their risk modelling and scenario analysis. Banks have also assessed the resilience of the whole value chain, evaluating, testing and strengthening relationships with both clients and correspondent institutions.

Unquestionably, the investments that banks have poured into digitally transforming their businesses over the past decade has meant this hasty transition has gone smoother than most expected. It appears that not only are banks in a better balance sheet position compared to the previous crisis, but their technology stack is also much more robust to withstand seismic shocks.

For example, the move to cloud technology has meant that an institution can quickly scale to respond to market volatility, spikes in transaction volumes and new customer demands. Using agile methodology has also allowed development teams to work productively across distributed environments. Many banks have commented on the speed of execution that is now possible, citing the ability to do things in weeks that previously would have taken years, or even deemed "impossible" before the crisis.

This agility has proven to be critical during the Covid-19 pandemic. "The speed at which liquidity has been needed by corporates, as well as the speed at which government lending schemes have been mobilised, has required banks to mobilise new, dedicated online portals to capture information and book the loans online, for example," said Ronan O'Kelly, partner corporate and institutional banking practice at consultants Oliver Wyman, in *The Banker's* 'Banking under pressure' podcast series.

GREATER AUTOMATION

In addition to cloud technology, the progressive deployment of artificial intelligence



THIS IS A TIME FOR COLLABORATION, RAPID SHARING OF INFORMATION AND BEST PRACTICE

Paul Ford ●●

(AI), machine learning and robotics has increased automation and straight-through processing, eliminating many manual processes that can now be done remotely and without human interaction. In addition, AI technology is providing greater visibility into and control of intraday liquidity, which is essential in the current environment. "AI will separate winners from losers," say 77% of bankers surveyed during Covid-19 by banking software provider Temenos.

Fraud and cyber security are other areas where advanced AI technologies are being applied to improve the detection of illegal activity. "Criminals are finding ways to exploit the virus and commit fraud. This has been exacerbated by the shift to digital transactions and the accompanying anonymity, making it difficult to identify the perpetrators," says Sundee Tengur, senior business solutions manager at SAS.


As Mr Tengur indicates, the growth in e-commerce and emerging payment types, such as instant payments, is another driver for AI adoption to combat fraud. With real-time payments comes the need for real-time analysis, but the sheer volume and surge in online transactions is putting banks under pressure. Using AI significantly reduces the time it takes to review a transaction, including all the relevant data associated with that transaction.

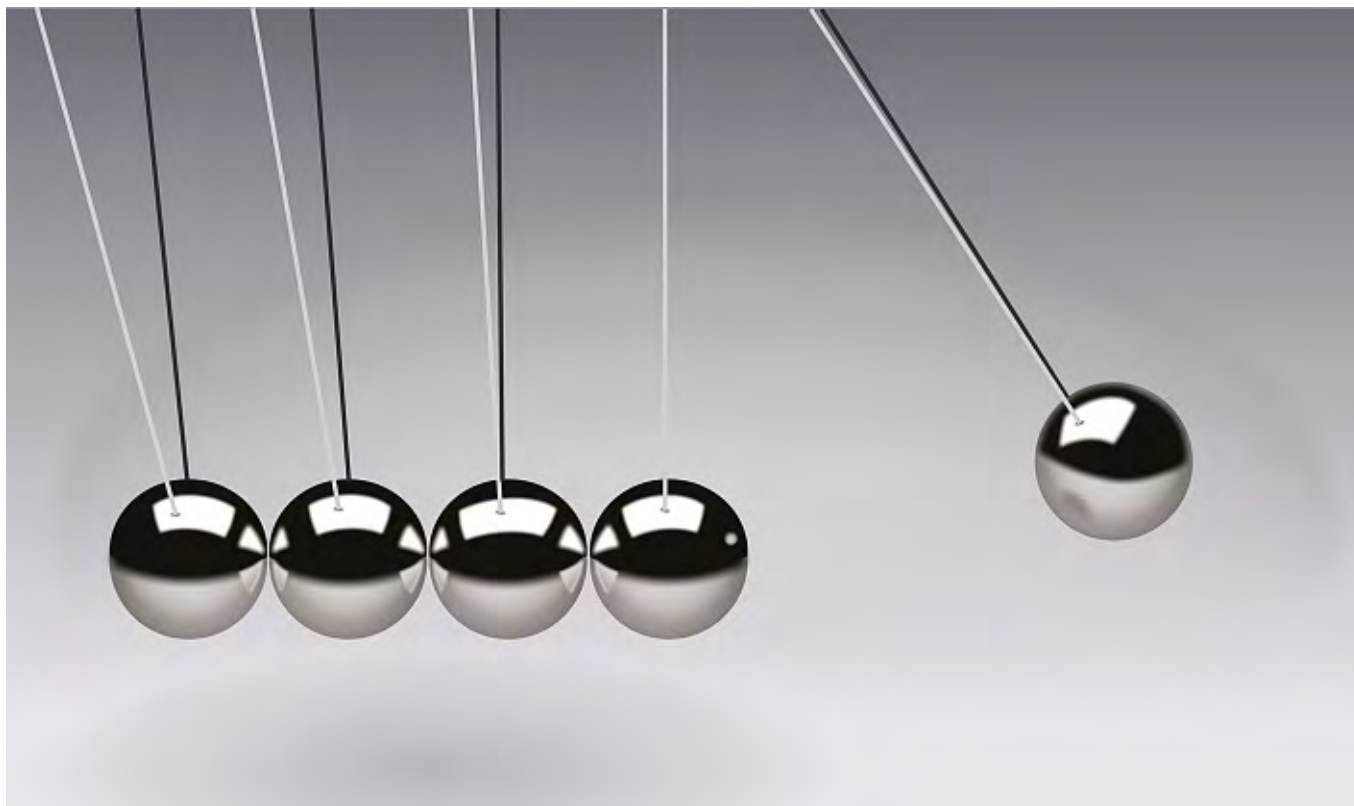
STAYING CLOSE

The cyber threat also requires sharing insights with clients and correspondent partners. In response to this need, Financial Services Information Sharing and Analysis Centre (FS-ISAC) launched the FS-ISAC Intelligence Exchange platform in May, to facilitate the sharing of actionable cyber intelligence to reduce cyber risk across the global financial system.

As mentioned, the importance of relationships has come to the fore in this crisis. At a time when important face-to-face industry conferences, such as Sibos and BAFT, are postponed or turned into virtual events, it is even more important to keep the lines of communication open and keep the community together. Many banks are seeing a strong appetite for online advisory sessions and increased frequency in contact from clients and counterparties.

Strengthened connectivity will also help keep up the momentum of the important industry initiatives, such as the move to ISO 20022 messaging standards, which is a further catalyst for digitisation and harmonisation in cross-border payments. While some of the technical work may need to be deprioritised by banks responding to real emergencies, other practical elements could continue such as education and training.

According to Paul Ford, CEO and founder of risk management and data analytics platform, Acin: "This is a time for collaboration, rapid sharing of information and best practice. [The industry needs to] network together to make the whole system more resilient and effective." 



MAINTAINING OPERATIONAL RESILIENCE

Business continuity

*As the impact of the Covid-19 pandemic places additional pressures on even the most resilient businesses, Deutsche Bank's **Linda McLaughlin-Moore** and **Bill Mott** share insights into the preparedness of international banks and how they can best adjust to the new operational environment.*

THE RESPONSE TO THE COVID-19 PANDEMIC has had a profound effect on businesses across the globe – putting the most resilient of business continuity plans through their paces. For the complex, closely regulated structures of financial institutions, external shocks the size of the current pandemic can impede and dislocate entire value chains.

As with previous shocks, such as the 9/11 attacks of 2001, the movement of money is heavily impacted by changeable organisational needs – with many businesses moving funds from illiquid assets, such as stocks and bonds, to liquid assets, such as cash, at their banks.

It is for these reasons that organisations constantly evaluate business continuity

management (BCM) scenarios to influence their operations strategy, should external factors come into play. But what are the key steps that banks have taken, and are currently taking, to continue serving their clients? And what is the outlook for a post-Covid world?

SCENARIO MODELLING

The first element of a robust response is preparation. More often than not, especially for large financial institutions, there is an element of being proactive, as well as reactive, here. First, as Linda McLaughlin-Moore, Deutsche Bank's global corporate bank and branches operations executive, explains: "You have to step back and take a

look at your end-to-end ecosystem, your influencers, dependencies, and disruptors, as well as what actions you can take that allow you to move forward in a positive way.”

For a large international bank, such as Deutsche Bank, this included building out scenarios when the pandemic first began and modelling the potential impact of the virus more broadly than in China and Asia. While no one expected the virus to displace so much of the work force, banks have had to think through the what, where, when and who of how disruptions can occur, and practise their impact in multiple combinations in the scenario planning. Whether the impetus comes from a client, a government, a supplier or another agent, it is important to understand how each of these could affect operations.

Ms McLaughlin-Moore concludes that, if predictability has been properly built into the scenario planning, then banks should have a “plan B” ready, though she adds that it is important to “fail fast, adjust and test again”.

AN EFFICIENT ENGINE ROOM

In response to the Covid-19 pandemic, governments and central banks were quick to introduce several critical monetary and fiscal support measures to help stabilise economies. In isolation, however, these measures would not have been enough. It has fallen to the commercial banking industry to facilitate the state support and to help maintain liquidity in the corporate sector.

For example, Deutsche Bank has been able to support more than 5200 clients applying for loans from German development bank KfW worth around €4bn, and has earmarked a further €20bn for overall new credit extensions to corporate clients.

This response is being achieved through guaranteeing that the funds reach their intended destinations regardless of value, volume and timescale; ensuring credit is available with the relevant risk checks; and continuing to provide post-trade services – with all the checks and balances in place – during a time of record volumes, high levels of volatility and increased client demand.

Crucially, as described in a recent report by US consultancy Oliver Wyman, banks must continue to provide their customers with the necessary financial products and services at this critical moment – a time when strong bank-client relationships are more important than ever. As the report says: “Banks must react to rapid changes in channel usage in the short term and antici-

pate changes in customer demand that these shifts will drive in the medium term.” Put simply, it is not just about bolstering stability; it is also about going the extra mile for clients.

As such, in the midst of the crisis, with banks no longer able to absorb negative interest rates and trade finance seeing severe price compression, the medium-term competitive landscape is being redrawn – with those meeting the crisis head on likely to come out on top. The new order will come down to one question: how efficient is your engine room?

BUSINESS AS USUAL

In order to minimise the Covid-19 pandemic’s effect on day-to-day operations, most banks have triggered their business continuity plans (BCPs). For example, both during the crisis and long before, Deutsche Bank has been continually testing and optimising its BCPs, which includes plans for split work sites, working from home arrangements and amended travel policies, as well as an array of health and safety measures.

But even with the best laid plans of banks and clients, how exactly are business lines continuing to operate with little to no reduction in workload? Bill Mott, Deutsche Bank’s chief operating officer, corporate bank and branch operations, says that as global lockdowns began to drive market volatility, the corporate bank saw significant spikes in transaction volumes – some by as much as 300% in a single day – across multiple products.

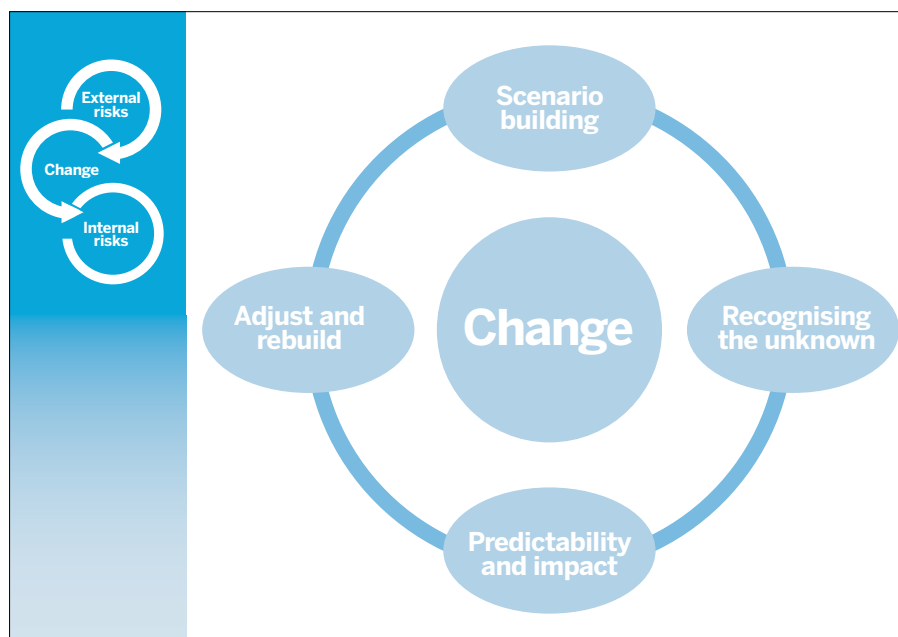
He says: “These challenges were managed via increased time worked by employees, by shifting employees from non-line roles into essential support, by cross-product sharing of resources, as well as support from the business as they helped manage client expectations.”

In addition, as physical offices close, virtual channels have become more important than ever. Technology is meeting the needs of the new work environment and, as Mr Mott explains, the crisis has pushed the industry “to move two to five years faster than it would have done if this had not happened”. What was considered normal six months ago, will no longer be the norm in six months’ time.

Against this backdrop, operations and technology have never been more important in managing the day-to-day. As the technology used to execute tasks evolves – be it through data analytics, application programming interface connectivity or distributed ledger technology, among others – so >>

KEY TAKEAWAYS

- Strategic resilience is being able to anticipate and adjust to any sudden and deep trend;
- Commercial banks maintain corporate sector liquidity and facilitate government support; this is taxpayers’ money and needs all the usual checks and balances;
- Enhanced digital technologies and workflows enable more employees to work from home;
- The whole operational ecosystem should be under constant review;
- Check influencers, dependencies and disruptors;
- When running scenarios, fail fast, adjust and test again – do not take too long to ponder each outcome;
- Be prepared for significant spikes in transactional volumes, increased demand for sudden turnaround and more granularity in reporting and updating;
- Front, medium and back office are misnomers in a crisis, as everyone pulls together;
- Each crisis improves readiness for the next crisis.



too will the underlying operating and business models.

CLIENT DEMAND

Going the extra mile for clients means remaining flexible enough to meet their current demands, whatever they might be. At Deutsche Bank, this led to some cash management clients asking for “out of the ordinary” types of payments, such as dividend payments, at very short notice.

One example of an “out of the ordinary” request was when a client’s new legal entity in India needed a capital injection from its parent company in Singapore while both economies were completely locked down. The request had a demanding regulatory timeline and required a complex foreign exchange conversion to be performed seamlessly. To complicate matters further, the parent company had restrictions that prevented the capital injection going through in one lump sum – something stipulated by the Indian regulators. Deutsche Bank developed a solution in which the parent company’s authorisation measures were updated, so they could meet the tight deadline despite the restrictions imposed by the lockdown.

The bank’s IT team has also been able to react rapidly to client demands by setting up flexible processes around digital signatures that enable corporate bank customers to continue operations from home. The team also ensured that Skype streams remain able to cope with the tenfold increase in phone minutes going through the system.

ACHIEVING EXCELLENCE

The extraordinary circumstances brought about by the Covid-19 pandemic have stretched the operational stability of banks to new limits. As hundreds of millions of employees around the world packed up their offices and moved to work from home, robust BCM has been necessary to maintain day-to-day operations. But maintaining stability has proved to be just one part of the puzzle.

As it becomes clear that lockdown measures, whether still in place or having been just lifted, will impact work flows for the foreseeable future – perhaps even creating a new normal – the banks that have continued to support their clients through these trying times will likely see the greatest benefits. ^{TB}

This article is an extract from the flow article, From the engine room, first published on May 6, 2020.



**YOU HAVE TO LOOK AT YOUR
END-TO-END ECOSYSTEM, YOUR
INFLUENCERS, DEPENDENCIES,
AND DISRUPTORS, AS WELL AS
WHAT ACTIONS YOU CAN TAKE**

Linda McLaughlin-Moore ●●



SOLVING THE GLOBAL PAYMENTS PUZZLE

Cross-border transactions

The internationalisation of business activities, whether commerce or sourcing staff, is crying out for a cheaper, faster cross-currency payment solution. Could interoperability between domestic infrastructures, such as automated clearing houses, be a solution? Heather McKenzie reports.

IN APRIL 2020, THE FINANCIAL STABILITY BOARD (FSB) presented its report on the development of improved cross-border payments to the G20, which has identified addressing frictions in these transactions as a priority for the year. The report provides an assessment of existing arrangements and challenges for international payments.

The G20 believes that faster, cheaper, more transparent and more inclusive cross-border payment services, including remittances, would have widespread benefits for citizens and economies worldwide, “supporting economic growth, international trade, global development and financial inclusion”.

Despite these benefits, currently there is no global infrastructure for low-value cross-border payments. While the Single Euro Payments Area (SEPA) is physically a cross-border infrastructure, it is essentially a single currency system.

A STARTING POINT

The FSB report lays the groundwork for further investigation. It points out that financial innovation is creating opportunities to

make payments more efficient and could build on existing cross-border and domestic payment arrangements or take the form of new structures.

One question the report raises is whether key payment infrastructures, such as automated clearing houses (ACHs), could be made more interoperable. At present, most cross-border payment services rely on domestic payment systems such as ACHs to process transactions.

The FSB suggests the “interlinking between the national payment infrastructures of different countries can be established by the private or public sector payment systems of those countries”. It cites as examples of such interlinking the FedGlobal Mexico service, which enables US financial institutions to send ACH credit transactions to some financial institutions in Mexico, and the ACH co-operation in the EU.

INTEGRATION EFFORTS

In a February 2018 report on cross-border retail payments, the Committee on Payments and Market Infrastructures (CPMI), detailed

the two projects. It pointed out that many regional integration efforts in the payments space did not necessarily involve the establishment of a dedicated, centralised infrastructure. “These initiatives are, in effect, enabling the integration of different national payment systems under a set of defined rules and business practices to enable faster and more efficient cross-border payments,” it said.

For example, the European Automated Clearing House Association (EACHA) has developed interoperability frameworks for credit transfers and instant payments, based on the scheme rulebooks applicable under SEPA. While the interoperability framework can form the basis for establishing links between ACHs, it is up to the individual ACHs to choose whether to establish interoperability links and, if so, with which ACHs. If ACHs choose to establish interoperability, the EACHA framework enables parties to use the same technical standards and procedures and to exchange data fully automatically.

Directo a México, established in 2003, links the Federal Reserve-operated ACH service, FedACH, to the Mexican RTGS >>

(SPEI) operated by the Bank of Mexico. The Bank of Mexico translates the ACH files into domestic Mexican formats and uses SPEI to distribute payments to Mexican depository institutions. The processing timeframe for posting the funds to the payee's account after the payer initiates a payment is typically one banking day.

INEFFICIENT AND EXPENSIVE

The FSB says existing cross-border payments arrangements present a range of challenges: high cost, low speed, limited access, and limited transparency. Even when questions of interoperability have been addressed, cross-border connections between public sector infrastructures may also raise additional foreign exchange (FX) and financial stability challenges.

"We now have a truly global economy, but the inefficiency of payments across borders has slowed things down," says Andy Schmidt, vice-president and global industry lead for banking at IT consulting firm CGI. "There is no such thing as a cross-border payment at the moment. If I am in the US and want to pay someone in the UK, I have to find a bank that has accounts in both countries. A lot of work goes on behind the scenes in an international payment – it can take days and is expensive."

Gareth Lodge, senior analyst, global payments at research and advisory firm Celent, says there is "no such thing" as a global ACH. "Possibly Earthport, which was acquired by Visa, came closest to it. But there is a gap in the market for lower value transactions across borders," he adds.

However, as the workforce becomes more global and the payments factories created by large corporates are consolidating their operations in particular countries, there is a need for a global ACH. "There has been pent-up demand for cross-border ACH for many years. We are now getting to the point where the technology and standards are in place, so some – but not all – of the barriers are being lowered," Mr Lodge adds.

As more countries complete the implementation of domestic immediate payment infrastructures, says David Bannister, senior analyst in research firm Aite Group's wholesale banking and payments team, attention is turning to the development of mechanisms to link them to enable cross-border, multi-currency payments. "While this will be hugely beneficial to corporate treasurers, the financial institutions that service them, and the wider economy, the reality is that despite the efforts of standards bodies, central banks and financial market infrastructures, banks



A LOT OF WORK GOES ON BEHIND THE SCENES IN AN INTERNATIONAL PAYMENT – IT CAN TAKE DAYS AND IS EXPENSIVE

Andy Schmidt ●●

have substantial issues – individually and collectively – to overcome."

DIFFERENT APPROACHES

In looking to develop a cross-border ACH, two specific issues that are inherent in international payments cannot be ignored, Mr Bannister adds. The challenges of FX and time zones can be overcome only by agreement between counterparties.

"On the currency front, initiatives in different regions are taking different approaches to the FX element of the process, particularly in standardising where the currency cross takes place, with important implications for banks' ability to monetise new products and services. It's harder to deal with the time zone issue – how do you make a same-day payment to a country where it's still yesterday or already tomorrow?" he says.

Another development that has implications for financial institutions' cash management is the advent of open banking. This will allow "anyone" who becomes a payment initiator to initiate a payment, says Mr Bannister. "From a bank treasurer's point of view that means unpredictable payments flows – and it doesn't really matter if they are cross-border or cross-currency. Being able to move liquidity around like that creates a problem for bank treasuries and their liquidity. On the one hand, banks want to help their clients move money around, but on the other, it may create problems for them."

According to CGI's Mr Schmidt, an important step forward in the creation of a cross-border ACH is the industry's adoption of the ISO 20022 standard for payments messaging. "As we move on to ISO 20022, a significant language barrier is falling away. While there are some differences in how each country interprets the fields, these are mappable," he says. "The fact is that the industry is getting everyone speaking the same language. There is still some way to go in integrating some aspects such as payables and receivables, however."

Given the challenges of cross-border clearing, it is unsurprising some industry observers are keeping an eye out for any move by Brussels-based financial messaging co-operative Swift. In March, Swift announced that it would become a global connector for account-to-account payments. Its solution will combine international and domestic capabilities.

"For the first time, they have declared their intention not only to strengthen their relationship with institutions and large corporations, but also to move into the small and medium-sized enterprise and consumer payments space," says Mr Schmidt.

CENTRAL PUSH

He believes Swift could act as a "central connector" in providing cross-border ACH services. "Having a central infrastructure, you can route a payment to wherever you need it to go. That creates efficiency at a low cost," he says.

Celent's Mr Lodge points out that to create a cross-border ACH, a centralising body is probably necessary. "There needs to be at least a scheme in place that sets the rules and standards. The secret of success, however, has as much to do with the organisational body as with the technology that is being used to solve the problem." A global ACH would have to work "across the value chain", which is a complex endeavour, he adds.

This is not an inconsiderable problem. In its 2018 report, the CPPI assessed the scale of the challenge: "While linking multi-lateral systems may, in theory, streamline certain processes, this is difficult in practice and may create other operational and financial risks that would need to be managed. It requires the harmonisation of legal, technical and operational aspects, a complex undertaking that requires political will, commitment from participants in both payment systems, and a convincing business case to be made for each jurisdiction."

Working through these challenges can lead to compromises in the arrangements, which might mean reduced efficiency in the final implementation, the CPPI warned in its report. Additionally, interlinked systems usually offer a narrower range of currencies and countries than a network of correspondent banks.

Consequently, individuals, small enterprises and their banks will almost certainly need to supplement their use of interlinked structures in order to reach more countries using a wider range of currencies in a growing global marketplace.

With such challenges still to be resolved, the existence of a truly global ACH may still be some years away. **TR**



NOW IS NO TIME TO PUT ISO 20022 ON ICE

Global standardisation

*The pandemic has upset the move to ISO 20022 by worldwide payment systems. But the rationale and the will are still in place. **Christian Westerhaus** of Deutsche Bank gives his perspective on where the industry goes from here.*

IN LATE 2019, THE PAYMENTS INDUSTRY WAS MOVING ALONG with plans for a smooth transition towards the new ISO 20022 financial messaging standard, which was set to standardise the payment messages used in different systems around the world. The scale and complexity of the migration was daunting, but the path was clear. The opening months of 2020, however, have added major obstacles to progress.

The rise of Covid-19, and the global response to it, has pulled resources away from implementation and into business continuity exercises. Consequently, in March Swift issued new plans for the transition, including a delay in the implementation date for its cross-border payments services in ISO 20022. With all these changes, it is important to take stock and assess how they will affect participants and their plans for the transition.

MAJOR UNDERTAKING

One thing that has not changed is the magnitude of the undertaking and the work nec-

essary to see it through. An enormous amount of coordination is required, with key payment market infrastructures all migrating over the next few years – including the Eurosystem, EBA Clearing, the US Federal Reserve, the Clearing House and the Bank of England – together with Swift, in its capacity as sender and receiver of financial transaction information.

This entails not only the work carried out by various groups such as the Cross-border Payments and Reporting Plus (CBPR+), the Payments Market Practice Group (PMPG) and High Value Payments Systems Plus (HVPS+), but also a great deal of internal work within individual financial institutions as each business area, from operations to compliance, client service and others, fulfils its role in the wider company's transition.

Even at this scale, most challenges are predictable to some extent. Yet the impact of the Covid-19 pandemic has added a dimension of uncertainty. Understandably, banks are keen to assess the potential impact; Deutsche Bank,

for example, has fielded numerous enquiries from clients looking to gauge its views.

There is no question here about the value of the initiative and the need for ISO 20022 migration in the high value payments space. The benefits have been outlined numerous times – from greater interoperability between various settlement networks, simplified global business communication and richer information flows, through to higher levels of straight-through processing and more efficient compliance processes. However, there are justifiable concerns around the current timelines.

DEADLINE SQUEEZE

In this respect, the most pressing deadline applies to the migration of the euro clearing system to ISO 20022, including Target services and EBA Clearing. This, at the time of writing, is still set for November 2021.

That date might seem to be still some way off, but the Covid-19 pandemic is placing new demands on banks' resources, diverting »



ISSUES AROUND DATA ARE CURRENTLY BEING TACKLED BY THE NEWLY CREATED EUROZONE WORKING GROUP, OF WHICH DEUTSCHE BANK IS A MEMBER ●●

capacity to ensure business continuity and support for immediate client needs.

The European banking community has raised these concerns with the European Central Bank (ECB), urging it to reconsider the November 2021 migration date. For its part, the ECB has responded, taking immediate action by issuing a market consultation in the form of a questionnaire to gauge the readiness and potential need to reconsider the timelines.

This consultation took place throughout May and June, with a final decision to be taken thereafter.

AN EXTRA YEAR

These latest developments have also coincided with the recent decision by Swift to postpone its migration to ISO 20022 by a year to November 2022, which, in turn, has significant implications for banks preparing for the Target2/EBA Clearing migration.

The delay came following major concerns expressed by many Swift community members about their ability to meet the 2021 migration deadline – and the fact migration projects are consuming significant budgets and resources without addressing many of the issues in cross-border payments.

To address these, Swift's board and executive committee revised the approach and announced a new strategy in March 2020. Key to this is the introduction of a central transaction management platform. This aims to reduce the cost and complexity of ISO 20022 adoption and accelerate the rate at which participants can realise the benefits of the standard by holding a central copy of the complete payment data, while addressing key operational issues centrally.

To allow time for the new platform to be built, the start of the migration to ISO 20022 in the correspondent banking space was postponed to November 2022.

A BANKING PREDICAMENT

The main issue now, however, is that prior to Swift's decision to delay for a year, European banks had been working on the assumption that, as of November 2021, Swift would facilitate broader ISO 20022 reachability through the migration of its correspondent banking services, enabling banks to receive any message in the original format by facilitating central translation for receivers in their preferred format (the old MT or the new MX).

But if the Target2/EBA migration goes live prior to Swift's cross-border payments transition, banks will face additional com-

plexity with one-leg-out payments that are originated in ISO 20022 format, cleared via the payments market infrastructure in ISO 20022 format, but then forwarded via Swift as an MT message.

This will result in data truncation, as rich ISO 20022 messages will, based on their nature, not fit into an MT format. Consequently, the liability to deal with this has been transferred from the receiver to the sender. To address the issue, eurozone banks will have to implement a translator and find a way to deal with surplus data arising due to the format mismatch.

Issues around data are currently being tackled by the newly created Eurozone Working Group, of which Deutsche Bank is a member. We are working in close conjunction with Swift to put forward mitigating measures. As a group, this entails formalising market practice rules and working on ensuring data used to populate ISO 20022 one-leg-out payments can be transported across borders using the MT standard without truncation.

GOING FORWARD

Although banks outside of the eurozone can use an extra year to prepare for the move to ISO 20022 in the correspondent banking space, the European community will most likely, depending on the ECB's final decision, face additional complexity due to the new timelines. As a result, banks will need to continue working on their ISO 20022 migration projects with the same urgency, considering newly created 'restricted usage guidelines' in their adoption plans.

Whatever decision the ECB takes, it will probably expect the eurozone industry to prepare for fully fledged user detailed functional specifications and/or have a back-up plan, in case another unexpected situation influences the global ISO 20022 migration timeline.

This is a huge and complex undertaking and it is critical for the banking community to ensure any issues that arise during the ISO 20022 migration journey are looked into and dealt with in a way that works for all participants and all circumstances.

Deutsche Bank will continue to play its part in this and will endeavour to keep clients informed of the latest developments. In this respect, we will be shortly publishing the latest in our series of 'Guides to the ISO 20022 migration' with a detailed frequently asked questions appendix.

As mentioned, the migration journey will be a long one. Only by working closely together as a community will we be successful. **TB**



ACCELERATING THE AUTOMATION TREND

Machine learning

The pandemic has fast-tracked the digitisation trend, shining a spotlight on the inefficiencies inherent in manual processes and illustrating what can be done with artificial intelligence and machine learning. Heather McKenzie reports.

THE DIGITISATION TREND – OFTEN REFERRED TO AS THE FOURTH INDUSTRIAL REVOLUTION – is likely to accelerate in the aftermath of the coronavirus pandemic. As millions of workers have adapted to home working, the shortcomings of manual processes were thrown into stark relief.

Technologies such as artificial intelligence (AI) and machine learning, which are at the vanguard of digitisation, eliminate the need for many processes to be conducted by humans. As a result, such processes could be conducted remotely.

For example, an immediate focus for financial institutions in the early days of the pandemic was liquidity management. Many corporates were drawing down on their investments to shore up their liquidity positions, and their banking partners had to ensure they had as much instant access to liquidity as possible in order to meet their own – and clients’ – demands. Never has the regulatory push towards more active management and control of intraday liquidity

seemed so relevant.

Andrew Bateman, head of the buy-side division at financial IT company FIS, says during the start of the pandemic that falling interest rates, loan impairments and stressed credit lending showed how important it was that a financial institution understood its liquidity position on a continual basis. “This is no longer an end-of-day process,” he says.

According to Andreas Burner, chief innovation officer at financial software and services firm SmartStream, AI technology is particularly suitable for liquidity management. He says: “AI can give cash and liquidity managers much more control over their daily cash and liquidity management workflow and thereby reduce risk, which is the ultimate goal.”

TIPPING POINT

In its 2019 report, ‘Intraday Liquidity Management: From a cost discussion to a revenue opportunity’, SmartStream says the technology is at a “tipping point” where

financial institutions can scale and innovate “without significant redesign of their legacy IT systems and processes”. The availability of cloud-based infrastructures and solutions, advances in data analytics, and AI and machine learning are enabling financial institutions to apply sophisticated risk algorithms to large data sets to help them intelligently manage their liquidity.

AI and machine learning techniques, such as profiling, enable banks to digest large volumes of data to help them understand the likely behaviour of liquidity, says the report. This will enable cash managers to pre-empt costly liquidity events and take management decisions, as well as detect abnormal liquidity behaviour that may indicate a liquidity stress event.

The technology could also be used by financial regulators to automatically detect anomalies or institutions that are more likely to suffer liquidity shortfalls in the vast quantities of reporting data they are required to gather, the report adds. »

Nadeem Shamim, head of cash and liquidity management solutions at SmartStream, says AI cannot mitigate all the liquidity risks a financial institution faces, but it can help manage the challenges.

“AI can help treasurers to determine when they will hit peak liquidity use, which receipts might not come in to meet payment obligations and which counterparties are yet to settle or cannot settle in time. These are important questions a bank treasurer needs answers to.” He adds that there is much more interest in AI projects among the company’s clients since the pandemic.

Mr Burner believes the financial industry can learn from the pandemic. He says: “We are entering into a less rules-based world and towards one where intelligent systems will dominate. A clever, intelligent system can adapt to unprecedented situations such as the pandemic, and give cash and liquidity managers much more control.”

RECIPE FOR SUCCESS

Both Mr Bateman and Mr Burner agree that any AI or machine learning project needs to be focused. In initiating an AI project, Mr Burner advises financial institutions to identify “the smallest possible project” to address a pain point because such an approach will bring the biggest benefit. “The idea is not to automate a whole process. In liquidity management, for example, the whole workflow does not need to be automated – just the payment prediction element, which is the biggest pain point for treasury,” he says.

Starting out on a modest scale is important, given that AI technology is relatively new and not widely applied within financial institutions. “Once an AI process is put in place, it whets the appetite for further AI-based automation,” he adds.

Mr Bateman also advises financial institutions look at discrete use cases, such as taking rules-based engines and applying machine learning to them. Another approach is to apply AI algorithms to suites of similar solutions that form part of an ecosystem, for example reconciliation processes.

Alenka Grealish, senior analyst, corporate banking at research firm Celent, says that, to date, much of the AI energy and success in corporate banking have been concentrated in back-office operations, such as payments and trade finance processing, fraud detection and compliance. In the middle office, AI has been driving change in small business credit underwriting, commercial loan negotiations, booking, and monitoring, while in functional areas, AI is making efficiency inroads, particularly in



WE ARE ENTERING INTO A LESS RULES-BASED WORLD AND TOWARDS ONE WHERE INTELLIGENT SYSTEMS WILL DOMINATE *Andreas Burner*

accounts receivable processing.

Ms Grealish reports that AI is now ascendant in the front office. She pinpoints 2018 as a “watershed” for AI in banking, with 12-14% of banks with assets above \$10bn worldwide implementing AI in the front office and, based on her research, she predicts such implementations will hit 50% by 2026.

She describes a “pyramid of needs” driving AI use cases in the front office in corporate banking, with ‘advise me’ the pinnacle of achievement. These are:

- Tell me – basic queries such as FAQs, basic account enquiries and alerts;
- Do it for me – account onboarding, transaction initiation, accounts receivable/payable digitisation and basic task optimisation, such as payments routing;
- Tell me with data analytics – data visualisation and report generation, descriptive models, predictive models (such as cashflow and forecasting);
- Advise me – product recommendations and rationale, action item alert and options, sophisticated task optimisation such as foreign exchange hedging.

“In the past, there has been a trade-off between hi-tech and high touch, but AI has reduced that trade-off. AI enables very personalised automation; financial institutions are scaling a customisation machine that is learning a lot about individual clients and can support them,” Ms Grealish says.

BEATING THE COMPETITION

The banks that will outperform over the long run will be data analytics-driven and will impart a data science culture into everything they do, according to Ms Grealish.

“Those [banks] leveraging machine learning, whose algorithms become more accurate the more data and outcomes are processed, will steadily grow their competitive lead. These banks are moving from simply delivering data to their sales and

loan officers and other staff to providing knowledge and wisdom. The wisdom is coming from predictive models that assess customers’ creditworthiness, credit needs, preferences, and potential behaviour,” she says. Advanced AI is being used to gauge a customer’s current behaviour and intent, as well as track news on customers.

She highlights the example of PNC, a financial services provider in the US with 32,000 corporate and institutional clients. The bank developed a treasury analytics platform to remove inefficiencies and tackle limited access to useful data. The platform provides basic to advanced analytics, data visualisation and proactive customer insights. It delivers both self-service analytics and actionable alerts.

The platform has saved sales and product teams hours each day, and generated a “virtuous revenue circle”, she says. For example, the time required to create a client schematic for a relationship review dropped from hours to seconds. Time savings, coupled with actionable alerts, have increased PNC’s advisory and new sales-related interactions, boosting client satisfaction and share of wallet.

Ms Grealish’s research found a slight majority of total AI use cases in the front office supported by vendors were employee-facing (54%). The situation was similar in proprietary AI developments at banks. “These findings are not surprising, given the relative complexity of implementing customer-facing AI in corporate banking compared to retail banking. While use cases are primarily basic customer support-related, more advanced use cases are increasingly being launched,” she says.

DATA FIRST

Applying AI technology to any problem requires an initial focus on data. “Some projects fail because institutions fail to get a better handle on data,” says Mr Bateman at FIS, who says “getting a handle on data” involves tackling segmented and fragmented data.

Ms Grealish agrees, saying “data first” should be a mantra for any financial institution implementing an AI project.

SmartStream’s Mr Burner adds that at present, only around 10% of machine learning projects are successful. However, the more data an AI system has, the better it will become at prediction. He also points out the challenges financial institutions face with legacy infrastructure.

“It is easier to apply AI and robotics in organisations such as Uber and Google because they are using relatively new technology,” he says. “The banking infrastructure is different and is based on legacy technology. That is why there is a shift to cloud computing, but it will take a while.”