A WHITE PAPER PRODUCED BY FINEXTRA AND ACI WORLDWIDE

FEBRUARY 2017

BALANCING SIMPLICITY WITH DIVERSITY:
TRANSFORMING PAYMENTS SYSTEMS FOR THE DIGITAL AGE

ACI UNIVERSAL PAYMENTS | Finextra

CONTENTS

01

FOREWORD

MODERN THINKING

By Paul Thomalla, Senior Vice President Global Corporate Relations & Development, ACI Worldwide

The payments industry has recently seen the entry of diverse fintech players, both technology giants like Facebook and start-ups that are presenting increased competition for banks. While start-ups have generally not been a major threat to the banking industry in the past, the prominence of smartphones as a channel in combination with rapidly evolving customer expectations will have a profound disruptive effect.

The banking industry is currently going through a wave of infrastructure modernisation that is required to compete effectively with fintech innovators and address evolving customer needs as well as regulatory demands. This digital revolution will extend well beyond consumer payments and retail banking, causing significant changes in all areas of finance.

Overall, we expect there will be a rebalancing of revenue sources, and more importantly, new rounds of consolidation, partnerships and innovation, which will reshape the global payments landscape for the better.

Partnerships in particular will bring together the brand, credibility, stability and financial clout of traditional players with the innovative creativity and strong customer focus of the new entrants to the market. As much as the two sides are being pushed together by regulatory forces, there is a natural affinity that is already evident in recent tie-ups such as Transferwise's partnership with Raphaels Bank in the UK.

In addition, we are seeing banks make investments to respond to the implications of infrastructure modernisation. Take the example of real-time payments, clearly a growing phenomenon, with a number of national schemes already in place, and the new pan-European SCT-Inst scheme set to become operable in November this year. Rabobank turned to ACI Worldwide recently by selecting our UP Immediate Payments solution in order to get ahead of the real-time trend and this type of transformation will continue to gather pace throughout 2017.

Another important driver for change in the payments industry is scheme consolidation. In the UK, this is under way, with three major schemes being brought together as part of the agenda of the Payment Services Regulator and the Payment Strategy Forum. This process will streamline and simplify the schemes and ultimately the rails. This will rectify a situation that has arisen due to the historical creation of schemes and rails for every new payment type, and will help to drive innovation and efficiency in UK payments.

Looking at the global picture, in the US there is also significant diversity in payments infrastructure, and initiatives like real-time and same-day ACH are part of efforts to streamline and speed up payments in that market, with calls for more to be done. Meanwhile in Australia, the decision has been taken to build a new platform for real-time from scratch and to migrate during the coming years: in other words, that market is attempting to avoid the need for a consolidation programme further down the line.

In short, the payments landscape is changing, and banks are making critical decisions about the technology they need to respond. In this context, ACI Worldwide has worked with Finextra on the research presented in this white paper in order to further explore the challenges and opportunities for banks, payments systems operators, schemes and other market participants of the transformation of the payments industry that is under way.

In particular, the paper asks what infrastructure modernisation means for banks' own IT strategies, and examines how they can best leverage this change to improve their own competitiveness and efficiency going forward.

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02 INTRODUCTION

Change is coming thick and fast to the UK payments landscape. Bolstering those familiar drivers for change across all industries – the unprecedented pace of technology development and increasingly tech-savvy and demanding customers – is a significant regulatory agenda being spearheaded by the UK Payment Systems Regulator (PSR).

This body has certainly been busy during its not-quite two years of operation, and among recent notable output was the report of the Payment Strategy Forum (PSF) established by the PSR and charged with creating a plan to make the UK payments infrastructure fit for the digital age.

Giving consumers greater control over how they manage their money and tackling fraud are two of the key strands of the PSF strategy. More specifically, the strategy proposes a new 'Confirmation of Payee' safeguard, helping people to avoid sending payments to the wrong account, either by accident, or because they have been tricked into doing so, by ensuring a confirmation of the recipient is sent to the payer before any funds leave their account.

Another headline proposal is the introduction of a 'Request to Pay' feature, allowing customers to authorise a regular payment, such as a utility bill or gym membership, before the company withdraws the money from their account. This, says the PSF, will help people on variable incomes who struggle to settle their accounts at the same time each month – contributors to the so-called 'gig economy'.

In a recommendation which has garnered significant airtime, the new PSF strategy also calls for the consolidation of the governance of three of the UK's payment system operators – Bacs, Cheque and Credit Clearing Company and the Faster Payments Service – into a single entity to begin the process of simplification.

This entity will then be responsible for implementing the centrepiece of the PSF's strategy – a new payments architecture that is simpler, more accessible and more responsive to innovation.

The reason this consolidation process is needed is that the UK's payment systems have been developed incrementally over time to handle different instruments - using different standards and different platforms. Each payment system has its own membership, governance, standards and processes run by its respective Payment Systems Operator. Any changes that need to be made are time-consuming to agree and expensive to implement – and the complexity of the current structure means that the industry lacks agility and the pace of collaborative change is only as speedy as the slowest participant.

There is no question that the UK payments industry is the subject of a thoroughgoing programme of change – in an ambitious timeframe. The PSF says it has set out a roadmap for work to start immediately and to establish the building blocks to meet the goals of the strategy by 2020.

As Hannah Nixon, Managing Director of the PSR, said when the PSF report was launched: "When you put it all together, the bigger picture is a UK payments industry that is vastly different to the one we saw when the PSR went live in April 2015. The work we are undertaking today will better serve consumers, businesses and the wider UK economy to ensure that the UK payments industry continues to be recognised as one of the most advanced and resilient in the world."

Nixon also grounded the PSF strategy in the context of other change the PSR is driving – as "just one part of a wider shake-up of the payments industry… alongside work we are also doing to increase access to payments systems and restructuring the payments infrastructure".

Indeed, hard on the heels of the launch of the report came the news that that the PSR will mandate the opening of the door to third-party technology providers to compete in the provision of national payments infrastructure supply for the Bacs, Faster Payments Service and the Link interchange network. The PSR said there would be a competitive procurement process to enable new infrastructure providers with different technology to enter the market – and that it will also push forward a common international messaging standard for Bacs and FPS based on the ISO 20022 specification, in order to lower barriers to entry to the market.

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This focus on improving competition in the UK payments landscape is clearly a defining element of the PSR and PSF approaches. It is also a feature of the payments landscape beyond the UK – driven by PSD2 in Europe and by regulators in other markets including China, Singapore and Australia, as well as by market forces globally.

Looking beyond the UK, this competition imperative is part of a complex matrix of change drivers that is transforming the payments landscape globally. Banks, payment systems providers and payment scheme operators are being pushed to offer customers both more choice in payments and more safety, to encourage a diversification of payment types alongside a simplification of infrastructure, and to embrace and open up to new competition while investing in a payments industry fit for the digital world.

And for the banks, there is the added pressure of achieving this while also complying with new regulation, reducing costs and delivering more shareholder value, all based on an underpinning of legacy systems which are difficult, time-consuming and costly to change – and which are in many cases wholly unfit to cope with the open, instant and simple nature of payments in the future.

This paper, based on interviews with a broad range of payments industry participants, sets out to examine the implications of payment scheme consolidation, what it means for banks and for payment scheme operators, what the demands of simplification on the one hand and diversification on the other mean for providers and consumers of payments services going forward, how the global landscape of payment schemes might develop over time, and what this plethora of payments industry change means for banks, their technology, and their future roles in the payments business.

03

SCHEME CONSOLIDATION: KEEPING UP WITH THE TIMES

The plan to consolidate Bacs, FPS and Cheque & Credit Clearing is being viewed positively it appears. There is no question that the UK payments landscape is overly complex, with schemes created per payments type, each with their own governance, onboarding procedures and rules. This complexity has certainly created barriers to entry for new players, as well as representing a drain on resources for existing members.

"This consolidation is positive, and it should have happened a long time ago," says Kevin Brown, Senior Advisor, Global Payments. "It will facilitate much more strategic management of the schemes for the UK and also help the schemes achieve cross-scheme standardisation in key areas which will aid access and simplify ease of use. We will end up with a much more cohesive strategy for payments both in terms of the standards they use and their approach to a whole range of operational issues like refunds and fraud. All of this can only benefit all stakeholders and participants."

As a spokesperson for UK bank RBS says: "The creation of a single governance structure, bringing together the Bacs, FPS and Cheque & Credit Clearing bodies, is positive, as it will lead to more coordinated management and development of the UK interbank payment system, which we expect to benefit users and participants." The spokesperson also highlights the encouraging nature of change that has already been implemented: "Operators have shown that they are open to change and have embraced some quick wins to bring consistency and efficiency to their support for new entrants in terminology and simpler onboarding procedures."

An example of this progress was the publication of a new guide, An Introduction to the UK's Interbank Payment Schemes, created by Bacs, CHAPS,

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Cheque and Credit Clearing Company, Faster Payments and LINK. The guide is designed to help payment service providers (PSPs) that are considering joining, or thinking of extending more payments services to their customers. It provides an overview of the UK's payment schemes, what each one offers, and how they can be accessed by PSPs. It has been developed collaboratively by the schemes, capturing input from the PSF as well as a number of challenger banks and fintechs.

In a similar vein, Faster Payments recently released a mapping tool to enable developers to convert its existing ISO 8583 message protocol to the internationally recognised ISO 20022 standard – with a view to easing the problems faced by start-ups and challenger banks in interfacing to Faster Payments. The functionality of the tool is scheduled to be extended later in 2017 to allow XML messages to be tested for conformance with the syntax of both the FPS ISO 8583 and ISO 20022 standards specifications.

The value of the simplification that scheme consolidation could bring is significant, says John Box, Head of Strategic Partnerships, Raphaels Bank – which recently joined FPS as a new direct member. "We know that it was complex and time-consuming to join just one scheme. To join another, we would face the same again. PSPs don't get much of a 'head start' from having already joined one," he says. "We, as a bank, support all initiatives that will simplify access to payment systems and systems operators, whilst maintaining the integrity of the UK's payment infrastructure. This can only be a good thing," he adds.

Becky Clements, Head of Industry Engagement and Payment Change at Metro Bank, says: "The creation of a single retail scheme with standardised governance is a really positive development for those payment service providers (PSP) looking to join the scheme. Rather than having to join multiple schemes and undergo a host of accreditation processes, a PSP will now be able to join one and immediately be able to choose which products to offer."

"New entrants and challenger banks, such as Metro Bank, will now be able to offer retail products directly to customers, helping them to complete on a more level playing field with the big four banks. Not only will this improve customers' banking experience, but will drive up choice, helping to create real competition in the market." As another new direct member of FPS, Metro anticipates being able to more easily offer additional payments products going forward, Clements adds.

She also highlights the benefits of a streamlined governance model. "At the moment there is both a board and a separate technical group for each stream. The consolidation of schemes will help to level this structure, reducing the strain on resources for all participants, and considerably simplify the process of being able to offer new products."

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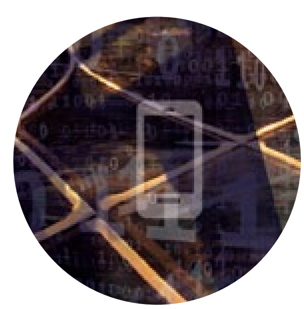
> IRETI OGBU, HEAD OF PAYMENTS AND RECEIVABLES, EMEA, CITI

Ireti Ogbu, Head of Payments and Receivables, EMEA at Citi, concurs. "From a governance perspective today we have three people on the various boards of these various schemes. If we only need to have one person, the governance becomes simpler."

This is of course only the first step to simplification, as Clements points out – with the next being the new payments architecture. RBS also emphasises that while the new entity already has much to do, there is significantly more change on the horizon. "Looking ahead, the regulatory mandate for the new entity is large, in particular for the delivery of the new Image Clearing System and the competitive tenders by Bacs and FPS for ISO 20022 compliant infrastructures," the RBS spokesperson says. "We expect this to be overlaid by the delivery of the industry's strategy for a new simpler payments architecture. The next few years will see much technology change – both from this and the wider PSD2/open banking developments."

For a payments director at one UK financial institution, it's the simpler payments architecture that will be the real game-changer. "Scheme consolidation is a helpful move, but in and of itself it won't necessarily make a massive difference," he says. "Having a single governance will make it easier to join and manage, and there could be one set of rules et cetera, but this is ultimately not the thing that will make a massive difference to cost, for example. That will be the technical platform consolidation."

"There is a mass of technology connections at the moment. This is expensive, and is a barrier to entry for smaller players. Any bank that sets up is immediately burdened by the legacy of payments industry providers: the infrastructure to connect to the UK payment systems is complex and burdensome. A technical consolidation which led to a reduction in gateways to manage would bring great benefits."



Citi's Ogbu also highlights the operational efficiency benefits. "Ease of access from a bank perspective streamlines our operations, reduces our technical costs and means hopefully we will be holding less collateral," she says. There are also benefits for banks' clients, she adds. "From our clients' perspective, if they are dealing with one infrastructure, it lends itself to more standardisation and simplification."

How positive an impact the consolidation has will of course depend upon how well the project is executed, as the director of global cash management at one UK-based global bank points out. "Consolidation is a good thing to do, but a lot will depend on how it happens," he says. "There is also a contradiction here. The PSR's stated aim is to increase access and competition. But consolidation will kill a key tenet of competition. How can you innovate when you are the only game in town, and when you have been told your main job is to keep the system safe?"

John Chaplin, Chairman, Global Payments Innovation Jury and Chairman, Ixaris, also identifies a contradiction. "Network economies are about volume," he says, "so why would you ever have multiple networks?" One reason is to accommodate diversity, he suggests. "You can have a single processing utility, but people will keep thinking of functionality which doesn't fit in that processing utility, which will typically have been built to the level of the lowest common denominator. This means that whenever anybody comes up with anything new, they will say they have to use different rails." This thinking argues against a single infrastructure and scheme, Chaplin says, because such a set-up would take away the ability to innovate. "These days, if you wanted to innovate something, it would likely be around more data, and the utility might not cater for that," he adds.

Nevertheless, the imperative to achieve the simplification set out in the PSF strategy is strong, the payments director at one UK financial institution insists, and will be critical for the future of the UK's payments business. "Because of SEPA, and especially given that is moving to real-time, to set up a small international bank in Europe is relatively straightforward: you certainly don't have to negotiate all these different and massively complex gateways," he says. "In the UK, we need to make our payments systems simpler in order to effectively compete."

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> THE PAYMENTS DIRECTOR AT ONE UK FINANCIAL INSTITUTION

The competition angle for the UK becomes clear in comparison to the approach of other markets, Citi's Ogbu reckons. "Consolidation should mean – we hope – that we can build a more modern, agile infrastructure in the UK. In developing countries, we have seen an ability to leapfrog, to go from zero to hero, to come up with a single infrastructure for payments. So in countries like Nigeria you see payments systems which have the ACH and faster payments all on the same platform." For the UK to compare favourably, consolidation is critical.

Simplicity is a requirement for payment systems in all markets, suggests Javier Santamaría, Chair of the European Payments Council (EPC). "What is happening in the UK is happening everywhere. We are all immersed in a similar process. The payment systems were created in the past, time has made them evolve, and conditions have changed."

Chaplin agrees that the "pressure is on" in all markets to increase competition. "Payment systems operators in all markets are under pressure to concede access beyond the banks and to enable easier access," he says.

In Europe, broader integration is a particular driver, Santamaría adds. "From the EPC perspective, we are driven by the pursuit of integration. It's a political project to integrate the markets in Europe and the payments market is part of the overall single market. The aim is to increase competition and produce better services – and also to become more efficient in the production of these services. That's the rationale of this integration process. There is a need to overcome obstacles and change situations that were relevant years ago, and we need the common will of many actors in this process, which is why the EPC was created."

In the European context, the separation of scheme and infrastructure is becoming the norm, says Chaplin, and the question is whether this "utility thinking" will catch on more broadly. "The big question is whether running a scheme and running an infrastructure layer are two separate businesses," he says.

"In Europe, it is going that way. The scheme is the rule book and a set of guarantees, and the infrastructure is separate. This is utility thinking: the difference between running a consumer-facing business that supplies electricity to houses, and running the national grid."

The challenge in answering the question of whether there are multiple schemes, or a single set of rails on which multiple schemes run, is that "we can't ignore the card world", Chaplin adds. "The two largest card companies are dead-set against this, because they see their model as running an integrated infrastructure and scheme. I would argue that we won't ever see the card schemes giving up their infrastructures – and this is the complexity going forward: how do you reconcile the bank centric mechanism with the ACH, and the card model? That will be hard to shift."

04

THE DYNAMICS OF CHOICE: A RISING TIDE OF COMPLEXITY

While consolidation of payment schemes is clearly one dynamic shaping the industry, there is also a contrary trend towards significant diversification. Customer demand for choice, regulatory pressure to meet that demand and the spur of innovation from payments-focused fintechs are all encouraging this.

In some ways, this will put pressure on banks' existing infrastructures. As Gareth Lodge, Senior Analyst, Celent, told listeners to a recent Finextra webinar on real-time payments and open banking, when it comes to a key development such as the global rise of real-time payments, "there are various different starting points both at a bank and a country level". Clearly some countries like the UK already have instant payments and the banks that interact with these schemes have real-time enabled their systems, he said. "Then you have SCT-Inst which will be live in 2017 but which looks very different from other schemes live in Europe already. So it's likely that even banks which have already invested in real-time will have to support multiple real-time schemes – which all authenticate in different ways, have different SLAs, different settlement times, different liquidity requirements, et cetera, et cetera. They are complex."

The sheer number of real-time schemes emerging is an undeniable feature of the market, agrees Santamaría. "Around the world and in Europe there are many initiatives around instant, immediate and real-time payments," he says. "The fact that there are many initiatives is one that needs to be acknowledged. There is a requirement coming from the market to provide for more immediate payments, and solutions are being delivered to fulfil that need. We need to see how well they satisfy the requirement."

The space into which the EPC has entered is the pan-European one, where there has hitherto been a gap, he continues. "We are establishing a basis so there is a common understanding about how to conduct this activity. We hope to become the foundation for many initiatives that are taking place, including in the P2P and the business to business world, in the mobile environment. We are providing something common and structural to underpin the processing of these payments, which is well-engrained in the infrastructure and well accepted."

The rise of real-time will bring change, but its exact impact will take time to become clear, Santamaría acknowledges. “Real-time may change many things. It will take time but it will affect many aspects that we are used to today. We hope it will reduce the use of cash and it may also transform credit transfers by increasingly making them instant, as well as providing a substitute for some other instruments like cheques. It will change a lot. It will mean a significant alteration of our understanding of the payment market around Europe. But it will depend on how it develops.”

Similarly, how successful the SCT Inst scheme is in bringing harmony will become clear over time. “The few euro initiatives already under way in Europe can easily adapt to the new rulebook and implementation guidelines, and it shouldn’t be costly to modify their current environments,” Santamaría says. “New initiatives can also use this scheme, bringing efficiency to the European payments market and enabling the new initiatives to enjoy the potential of greater scale and greater scope for use of the schemes. We still have to see how these providers will use the scheme – and that will come in time.”

So though the prospect of harmonisation is there for the medium-term, in the meantime there is a complexity to work through and, as Lodge cautioned, PSD2 “is likely to create numerous quasi-schemes that sit on top, using APIs to do internal transfers at the bank – so there’s a complexity again”.

In itself, a burgeoning number of ‘quasi schemes’ is no bad thing. As John Box at Raphaels says of developments in the UK market, “we think there is every reason to have a variety of overlay services running on a single set of rails. Indeed, this is a critical element of a more competitive landscape and the ability to enable more consumers to get the benefit of real-time payments”, he says. “We have a very good payments infrastructure in the UK, but not everyone gets to take advantage of it, so there needs to be a wider sharing of the benefits.”

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> JAVIER SANTAMARÍA, CHAIR, EUROPEAN PAYMENTS COUNCIL

James McMorrow, Senior Manager, Payment Strategy and Business Development for Lloyds Bank Global Transactional Banking, agrees that PSD2 will likely provoke the development of new payments products. “Our expectation is that the industry will likely see the creation of new online payment models and user experiences,” he says. “The ability to provide a secure online shopping experience using payments direct from bank accounts potentially will provide alternative solutions to cards, improved working capital for retailers and potentially an enhanced user experience for customers. We expect that the market will develop over time as new and existing providers adopt new technology and payment journeys to meet changing customer demands. As a relationship bank we will work closely with our customers to understand their needs and to ensure that our digital solutions meet the changing customer demands of the future.”

This regulatory driven change will create opportunities for established banks, McMorrow says. “Where banking has largely been behind the curve compared to other industries is the digital space. Banks now have a chance to start designing more intuitive solutions that put the user experience first. Competition will encourage banks to turn traditional product design processes on their head, starting first with the user experience and channel and working backwards to the underlying solution.”

Though it creates opportunities for banks, diversification in payments types and channels does also cause complexity, as Dean Henry, Director and Head of Global High Volume Payments, Bank of America Merrill Lynch, told Finextra. “Many clients of ours – small, medium and large – are global businesses now, and that’s a function of the fact that you can stand up a website, have a buyer and seller live in two different countries and have to transact between them. That has created a whole new set of solutions,” he says. “A lot of what we hear in terms of challenges from our clients is about data and reconciliations. Our big clients have the same problem they have had for years – how to get the information they need to reconcile the payment they have received in order to account for the money properly. What’s new is that they now have to send money to a whole new set of clients in areas of the world that are growing and often don’t have a robust banking infrastructure. This means there is a lot of focus on digital and mobile wallets as new payment types that sit alongside wires, ACH and cheques.”

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> DEAN HENRY, DIRECTOR AND HEAD OF GLOBAL HIGH VOLUME PAYMENTS, BANK OF AMERICA MERRILL LYNCH

The wallet space itself is diverse, points out Tom Poole, Managing VP, Mobile Commerce, Capital One. "Digital wallets is a funny term. It spans a few different categories of apps depending on where it stems from," he explains. "From a bank perspective, the way we think about digital wallets is in terms of information: the bank has all your transactional data, we can see all of the insights across all the different channels, so we are in a unique position to help you understand that data and make sense of it." By contrast, "retailers' digital wallets tend to be great integrations of loyalty programmes", while "the tech wallets tend to emphasise the hardware platform they sit on, or technical attributes or features, or cool new ways of accessing data", he adds.

"Digital wallets is an umbrella term, and we will see it split out as the different categories and their respective values are realised. But overall, it's clear that the number of channels is growing pretty quickly, so staying on your toes and being able to deliver the best service to where the customer is will be the name of the game," Poole says.

Going forward, increasing diversity of payments channels will drive a focus on integration, Henry predicts. "If you think about how many different payment types are coming online, with the wallets, with SCT-Inst and faster payments networks in many countries, with the US growing its same day ACH network et cetera, integration is a major problem for banks – and our clients, as they figure out how do they send money and move money between all the options are available. So 2017 will be the year of integration is my prediction."

This imperative will demand more collaboration between banks and fintechs, he suggests, citing the example of Bank of America Merrill Lynch partnering with ModoPayments to integrate multiple mobile wallets into a new payment type for the bank's clients. This leverages its existing Digital Disbursements solution, which enables corporate customers to send payments to beneficiaries' email addresses or mobile phone numbers.

By virtue of the partnership, Bank of America Merrill Lynch will have access to Modo's Coin Operated Digital Payments Hub, meaning its customers can connect with multiple emerging payment networks, and extending the reach of Digital Disbursements to enable clients to follow commerce across borders and to support the growing "gig economy".

While integration is essential and will be helpful, the fact remains that there will be an increase in payment types before there is a reduction, says Marcia Clay, Head of Market Development, Mastercard. "Digital payments probably didn't move as quickly as people thought they would in the UK. Certain crucial developments took place in the past 12 months – such as the ubiquity of contactless, which was really fired up by the transport network and the huge amount of work done to expand that nationally." Mastercard is working to bridge 'plastic world' and 'online world', she says, but as that convergence progresses "you have to make sure you are satisfying both demands". It is true that new payment types typically have not eradicated their predecessors. As Clay says: "Although in decline, we still have people preferring to use cheques. So it is likely cards will co-exist with digital payments for quite some time."

05

LIFTING THE LEGACY BURDEN: AWAY FROM SILOS, TOWARDS FLEXIBILITY

The familiar challenge for banks as they grapple with the parallel consolidation and diversification of payments is of course their legacy systems. As Celent's Lodge pointed out during the recent webinar, even for banks that have already invested in a certain amount of real-time capability "there's a step change – maybe not for tomorrow, but for the near future – where volumes are going to hockey stick upwards". The ECB is predicting that 60% of SEPA credit volumes will move to the instant channel, he said – "and the majority of systems out there today won't handle real-time in the kinds of volumes we are talking about".

On the plus side, the need to accommodate real-time is an additional justification for legacy renewal, as Vincent Brennan, Head of Group Operations & Payments, Bank of Ireland, and Deputy Chairman, Euro Banking Association, points out. "There's a number of reasons why immediate payment becomes another push of the business case toward moving from legacy systems towards more modern platforms. Whereas one can achieve a certain amount in the digital or services layer, to an extent the quality of the services that you can provide is limited," he says.

As Australia's New Payment Platform (NPP) comes closer to reality, its banks are certainly grappling with the implications of real-time for legacy, says Leigh Mahoney, Head of Wholesale Digital Transformation, ANZ. "We are less than 12 months away from NPP which is effectively a real-time bank to bank payment mechanism. The SLA is that 95% of the time payments will be made within 16 seconds – and 99% within a minute," he says. "This does present significant opportunities on the payments side, with some promising use cases in retail and especially corporate payments, and on the other side as well, around receivables. We have the opportunity to use ISO 20022 which contains more data. How much data can flow with the payment is really important, especially from the receivables perspective."

The challenge is how to integrate to the new rails, Mahoney adds. “The implementations within banks to connect real-time payments with legacy will probably be one of the bigger challenges,” he says.

The combination of real-time and API-driven open banking will put an even greater strain on legacy, suggests Claus Richter, Head of Cash Management Customer Solutions, Nordea. Speaking during the recent Finextra webinar, Richter said: “It’s clearly a challenge when we look at both real-time and open banking in terms of the legacy that the banks are carrying. We will see which banks are able to make the transition here. There are significant investments needed to be able to play in the both an instant and an open banking world. But when you start to think about the revenue models and opportunities that come along with that, it’s clearly an opportunity that banks must step into.”

One option for banks grappling with legacy is to outsource the problem to a trusted partner, says Clay at Mastercard. “The challenge for banks is their legacy systems, and the time it takes them to get through the change process in order to upgrade their legacy systems. Because of the connections we have – into the financial institutions, into the fintechs – it is easier for us to make those changes than for them to do it,” she suggests.

According to Lodge, “the market leading banks are the ones that are stepping back and thinking about this strategically”. “They are asking what exactly they want to do, who they want their customers to be, and what they are going to require to support this strategy,” he says. “As a result they are taking not a big bang approach but a two-speed approach. They are enabling the key outward facing processes using APIs, and using the same kind of approach deep within the bank to insulate old technology that will have to change at some point but is being insulated as best as possible in the short term.”

“It’s clearly a challenge when we look at both real-time and open banking in terms of the legacy that the banks are carrying. We will see which banks are able to make the transition here. There are significant investments needed to be able to play in the both an instant and an open banking world. But when you start to think about the revenue models and opportunities that come along with that, it’s clearly an opportunity that banks must step into.”

CLAUS RICHTER, HEAD OF CASH MANAGEMENT CUSTOMER SOLUTIONS, NORDEA

> **"Historically architectures have been built around cheques, ACH payments and domestic high value payments et cetera and we have been adding payment types and processes without redesigning or re-architecting the infrastructure. We need to deliberately architect in a layer of flexibility to cope with developments like crypto currencies, which are challenging all the models."**
>
> ROBERT LANGLEY, ENTERPRISE ARCHITECT, PAYMENTS, NATIONAL AUSTRALIA BANK

The critical element for banks to build in to enable their systems to cope with the changing payments environment is flexibility, contends Robert Langley, Enterprise Architect, Payments at National Australia Bank. As he says, the "bulk of banks' payment systems are between 10 and 57,000 years old, and they have all been purpose built per type of payment – cheque, ACH, domestic high value, international payment et cetera. They are individual threads through their environments". In reality the process flow behind all these payment types is very similar if not the same – but a typical bank architecture "follows the historical stratification of the payments process by payments type", he says. However, he adds: "This is rapidly transforming into one – or a squillion types – whichever way you look at it."

There is a growing multitude of payments options, as Langley points out. "No longer does Swift have a monopoly on international payments, for example – there are a whole series of other competing options including Ripple, Western Union, PayPal and Visa."

However, at the same time, the future of payments requires banks to look at payments as being far more than just simple value transfer, he contends. "I don't go into a supermarket to make a payment. No one gets excited about making a value transfer. But if banks begin to look at payments beyond just value transfer, and consider all the information about the transaction as being a part of the payment, we can use the information to take out a lot of cost for the customer, to provide value-added services for the customer and to generate new revenue for the bank from the same transaction. We can shift the payment from being simply a cost for value transfer services for the bank customer and transform this into something that the customer does wants to 'buy' and get excited about, because it then adds value to their business."

Achieving this requires a significant change to business processes and operational processes for both customer and bank, and the creation of a payments infrastructure in the bank that is flexible and granular enough to be able to "manage down to the specific customer level or at least a group of customers or an industry vertical or a local scenario", Langley says. "That's really hard to do when you continue to consider payments only as value transfer instructions."

Banks need to improve internal flexibility, he suggests. "Historically architectures have been built around cheques, ACH payments and domestic high value payments et cetera and we have been adding payment types and processes without redesigning or re-architecting the infrastructure. We need to deliberately architect in a layer of flexibility to cope with developments like crypto currencies, which are challenging all the models."

There should also be a goal internally to achieve minimum diversity in process types, Langley says. To illustrate the point, he makes an analogy with the paint industry. "Paint manufacturers could manufacture red, silver and blue paint, put it in various different tins, distribute it on pallets and then in the shops the retailers they could take it off the pallets and put it on their shelves. This is a very standard distribution model used globally for many products.

"But that's not what the paint industry does. The paint industry ships bulk white paint. At the end of the process – not at the start – it is put into various tins, and at the extreme end of the process it is transformed into what the customer wants, different colours, through instore tinting processes. Before that point every part of the process runs at optimal lowest cost."

Translating this analogy back into the payments context, the goal would be to move away from payment type-specific systems, to a flexible environment, Langley says. "When you interact with the customer, you acquire a generic instruction to pay. You then do the process for as long as possible one way, same way, and only at the end of the process determine whether it will go via Visa or Ripple or Swift."

This would ensure payments processing was run at lowest possible cost, while also accommodating the drive for simplification on the one hand alongside the increasing diversity of payment options on the other.

> **"Leading banks are taking not a big bang approach but a two-speed approach. They are enabling the key outward facing processes using APIs, and using the same kind of approach deep within the bank to insulate old technology that will have to change at some point but is being insulated as best as possible in the short term."**
>
> GARETH LODGE, SENIOR ANALYST, CELENT

Flexibility is indeed critical, agrees Paul Thomalla, Senior Vice President Global Corporate Relations & Development, ACI Worldwide. "Given the degree of change and innovation we are seeing in the payments business today, banks need to be able to rely on proven and reliable solutions which also have the flexibility to adjust to market evolution, cater for rising volumes, and handle new payments types as they emerge in the future," he says. "A payment is a payment is a payment, and as the distinctions between payments types blur, banks need systems architected to connect 'anything to anything' in the future payments landscape."

06

MOBILE P2P: ADDING ANOTHER DIMENSION TO THE INTEROPERABILITY CHALLENGE

One of the most hyped innovations in payments is the mobile P2P phenomenon. Here some non-bank players have gained significant ground – notably Venmo, now part of PayPal – but in recent moves incumbents have begun to fight back, with offerings such as Zelle, which runs on the clearXchange network operated by Early Warning for its bank owners (Bank of America, JPMorgan, Wells Fargo, Capital One and US Bank).

Talie Baker, an analyst with Aite Group's Retail Banking & Payments practice specialising in P2P, sees the advent of Zelle as positive. "Clearxchange will be launching Zelle in 2017 in an effort to compete more fully with non-bank providers like Venmo and Square," she says. "Zelle will be a standalone application and it's my understanding that over time, all of the banks on the clearxchange network will be migrating to naming their bank-owned apps Zelle. Zelle has the ability to reach the majority of bank account holders in the US. For those who bank somewhere other than a clearxchange bank, they will still be able to download the Zelle app and establish an account."

Zelle is the first step in making P2P payments interoperable, Baker continues. "Today, if I use Chase Quickpay and you use Venmo, one or both of us need to sign up to another P2P service in order to pay each other. Chase Quickpay can't pay Venmo and vice versa. With Zelle and the potential reach of the network, if I have a US bank account, I have Zelle without having to sign up for it and so does the person I want to send money to. Zelle has the added benefit of being a bank-owned product so it already has consumer trust. The brand also offers security that consumers have come to expect from the bank-owned P2P apps (which are typically part of their mobile banking apps)."

The question is whether Zelle will prove to have the appeal of Venmo, she cautions. "Zelle will not initially have the type of social networking features that Venmo has, so it's going to be about the marketing and the ease of use for consumers. The key will be making it a no-brainer for people to use Zelle over other products because it is so much more convenient. I think the interoperability of the network has the potential to do that," Baker says.

As mobile P2P matures, it will need to address a number of important requirements, she adds. "Most of the P2P apps in the marketplace today offer the same basic functionality. There are a few trends that I see happening which will help the different brands differentiate themselves. One is real-time payments. Consumers will not want to wait two or three days to receive funds. It will be key for all P2P providers to get on board with offering real time P2P to stay in the game."

Another is cross-border functionality, Baker says. "Only a couple of the P2P providers offer cross-border P2P and I think this is going to become an important differentiator as P2P becomes more mainstream because of our global economy. While there are a variety of mobile cross-border remittance services in the market today, I think that consumers will be looking to the convenience of the P2P apps they use domestically to make cross-border payments."

A third is social payments. "There is a lot of media hype around social payments and attracting millennials. While I'm not sure that sharing all of your payments with your social network is a deal breaker for those services not offering it, I think some aspect of social needs to be included – the ability to send personal messages, emojis et cetera along with payments. After all, what is more social than exchanging money with another person? Being able to make payments within a messaging app will be important: reaching users where they are every day is essential."

Ultimately, mobile P2P does have the potential to expand beyond pure 'P2P', Baker believes. "Mobile P2P is part of all payments going mobile. As people get used to paying each other via mobile, they will want to be able to make purchases via mobile. I could see a trend towards using P2P apps for making purchases from merchants as people become more familiar," she says.

However, she adds: "We will still need the interbank payment schemes because there still has to be a way for money to move around. The mobile app doesn't really move the money. The key question is how will mobile P2P become interoperable the way our mobile phones are. If I have Verizon and you have AT&T, we can still call each other. The Visa issued by my bank is accepted everywhere that accepts Visa – I don't have to know who my merchant's bank is in order to use my Visa. I'm not exactly sure how the industry will accomplish this: time will tell."

Santamaría agrees that interoperability is key for the development of mobile P2P. "Where P2P solutions are being implemented, we are trying to provide a way forward for Pan-European interoperability for them," he says. "We are actively trying to support them, to help find a way for these solutions to be interoperable. This creates more efficiency in the marketplace, and gives value to the mobile P2P players by giving them a way to enlarge their initial scope."

> **"The amount of talk about P2P is way out of proportion to the size of the business opportunity. Yes, in Kenya M-pesa has gone mainstream, but most markets don't look like Kenya. For mates sending small amounts of money, I think P2P is more likely to be driven off social platforms. For higher values, it all comes back to the dispute resolution. Being offered the ability to pay using a method that offers a guarantee rather than just sending the money is persuasive."**
>
> JOHN CHAPLIN, CHAIRMAN, GLOBAL PAYMENTS INNOVATION JURY AND CHAIRMAN, IXARIS

Certainly the jury is out on how disruptive to existing payments infrastructures mobile P2P will be, says Chaplin. "I think P2P is really over-cooked. So many people are talking about it, but how many people do we actually think are doing this? The amount of talk is way out of proportion to the size of the business opportunity. Yes, in Kenya M-pesa has gone mainstream, but most markets don't look like Kenya. For mates sending small amounts of money, I think P2P is more likely to be driven off social platforms. For higher values, it all comes back to the dispute resolution. Being offered the ability to pay using a method that offers a guarantee rather than just sending the money is persuasive. Cyber is a genuine risk. Think how much of a target a mobile-based instant payments utility would become as it built volumes. I've run a lot of payments businesses, and you discover you only get targeted for fraud when you are big enough. If indeed everyone is going to pay by mobile and it will be all instant push transactions, then the card offering, with its payments guarantee, may be the one to displace," Chaplin says.

Fraud is indeed the "number one" issue for the payments industry to tackle even in the midst of innovation and change, says ACI Worldwide's Thomalla. "There is no bigger problem that we need to get fixed. We know that the total amount of fraud is a huge number, but it's also about the individuals that get burned and the steps they take to avoid it happening again," he suggests. "Will this take them away from core banking services though they are in fact the safest way to go? If we as an industry don't start to make an impact on fraud then there is a danger customers move in a different direction, and then we move into a fragmented world. The key for us is to go back, make sure all transactions are safe, and renew the confidence that customers have had in banks' payments systems for years."

07

BLURRED LINES: ERASING THE DISTINCTIONS BETWEEN PAYMENT TYPES

There is clearly a challenge for financial institutions in meeting the potentially contradictory demands of customers for increased choice and increased simplicity. Joakim Wallin, Head of Cards, Resurs Bank, sums up the tension well when talking about the requirements of a digital wallet. “It’s all about giving the customer choice,” he says. “Where do they want to purchase? In store, in app, online? We don’t want to make choices for the customer: we want to allow the customer to choose.” However, he also says: “If you build something that is too complex for a customer to use, they will never adopt it. You have to take away as many clicks as you can and make it as simple to use as possible for the customer.”

Creating the best possible payments experience for the customer is clearly critical, as Capital One’s Poole points out. “Digitalisation is taking friction out of the payments process,” he says. “Sometimes that friction is in the payment itself. Sometimes it’s in the pieces around the payment. So we are seeing things that normally are extra steps consumers have to take around saving money or participating in loyalty schemes or simply getting information get boiled into the payments experience and streamlined, so that it’s much easier for the consumer to take advantage of what’s available to them.”

Meeting consumer demand for speed and integration is essential, adds Bank of Ireland’s Brennan. “Everyday interactions by consumers, retailers and businesses are becoming immediate in what’s become an increasingly connected world,” he says. “So payments are either a facilitator of those interactions or they are a by-product of those interactions. And as those interactions and commerce accelerates, the movement of money has to accelerate to keep pace. Consumers are exposed to an infinite choice through their devices and are increasingly looking for instant gratification, so payments have to support that demand from customers.”

Importantly, customers are unconcerned about the specific characteristics which define the type of payment they use, as Santamaría points out. “From the perspective of users –consumers and businesses – they don’t think about payments by kind, they just want to pay,” he says. “The fact that there are different payment instruments comes from the technology world around how the solutions have been developed. It’s been imposed on the real world. If we want to really serve users and businesses, we need to adapt the technology world to the real world and make payments as simple as possible. We need to erase the differences between instruments from the perspective of the customer. What we will see happening in the real world is simplicity. Customers will just use funds to pay.”

Thomalla at ACI Worldwide agrees. “By 2020, we will not see the silos that we have today. Right now, we have cash, debit, credit, ACH et cetera. Customers are starting to ask, why? All I am doing is moving value from A to B. Why do I need all these silos? Whereas we still think of payments as a ‘thing’ in its own right, I think payments will increasingly be invisible. If you think about payments as being like a loyalty programme, I think that is more the way they will feel. There won’t be a conscious act. It will be transparent. We won’t see it,” he says.

The payments director at one UK financial institution also sees a trend for customers to be shielded from any unnecessary complexity. “In the short term the distinction between retail payment mechanisms will start to disappear: after all, what is the discernible difference between a Bacs credit and a Faster Payment to a customer?”

This is not the same as saying the schemes will disappear, however. “As long as payments are not a monopoly – as long as there are many actors involved,

> **“It’s all about giving the customer choice. Where do they want to purchase? In store, in app, online? We don’t want to make choices for the customer: we want to allow the customer to choose. If you build something that is too complex for a customer to use, they will never adopt it. You have to take away as many clicks as you can and make it as simple to use as possible for the customer.”**
>
> JOAKIM WALLIN, HEAD OF CARDS, RESURS BANK

> **“This isn’t the end of payments systems operators, but the picture will change a lot in the next five years. It is likely we will move to a single set of rails with a single set of rules and requirements, which support multiple different overlay services. Under PSD2, a new PISP could create a challenger to Direct Debit, for example. We will still need a payment systems operator – but we will certainly see new market-generated options running on real-time rails, and it won’t just be the traditional schemes that are the ones privileged to run them.”**
>
> JOHN BOX, HEAD OF STRATEGIC PARTNERSHIPS, RAPHAELS BANK

constituting the role of the network – schemes will be required to precisely materialise the agreements that make the network work,” says Santamaría. “For competitive reasons, because there is a preference to have a number of different providers, there is a need for a network and therefore a scheme. Schemes will remain for as long as we have network-based payments. There can certainly be integration in that domain – as there can also be between providers of infrastructure solutions such as ACHs – but the role of schemes will continue.”

Metro’s Clements agrees. “Schemes and governance bodies play a critical role in maintaining a healthy and well-functioning payments infrastructure, in terms of security, resilience and ensuring all PSPs are using common standard messaging.”

“The technology is the easiest bit,” adds Chaplin. “Infrastructure and standards are important, but you also need the dispute rules and mechanisms – and when something goes wrong is when you find out if the rules really work.”

The payments director at one UK financial institution makes a similar point. “We’ll still need member-driven organisations, where we co-operate over the rules around sending and receiving payments. We will still need a clear understanding of risk and settlement. We will still need that level of control. Indeed, we might find there are more overlay services – but that they are running over the single rails.”

Brown agrees: "Schemes have a future. I think we need to think about this slightly differently. At the moment, the schemes in the UK are thought about as individual identities, but all the schemes are is a set of rulebooks and I think eventually what will emerge from this is a very simple process for managing those rule books, that allows for all participants to make suggestions for changes and innovation. I think they'll be managed much more proactively, with the changes to the scheme rule books being implemented in a very structured way. The schemes as rule books will continue to exist and need to continue to exist because they are helpful for stakeholders, participants and banks. But we don't need a separate company for every rule book we create. Look at Europe as an example. The SEPA scheme rule books are exactly that: a set of rule books managed by one entity. They didn't set up one company for SEPA direct debit and another for SEPA credit transfer."

This outcome will represent a significant disruption to the current landscape however, emphasises Box of Raphaels Bank. "This isn't the end of payments systems operators, but the picture will change a lot in the next five years. It is likely we will move to a single set of rails with a single set of rules and requirements, which support multiple different overlay services. Under PSD2, a new PISP could create a challenger to Direct Debit, for example. We will still need a payment systems operator – but we will certainly see new market-generated options running on real-time rails, and it won't just be the traditional schemes that are the ones privileged to run them."

08

CONCLUSION: CHANGE IS THE ONLY CONSTANT

In one sense, the consolidation of payment schemes in the UK is a phenomenon quite specific to a single market, that is, it is rectifying a situation created by the unnecessary setting up of duplicate infrastructures in the first place. In another sense, however, it is indicative of a broader trend – as systems created for an earlier age respond to the transformation of the payments business.

That there will be more transformation is certain, though exactly how certain key developments will pan out is still open to question. Certainly, the rise of real-time payments gives the banks a very real chance to displace cards in e-commerce transactions, but whether that is what happens remains to be seen.

In the mobile P2P race, systems based on interbank payments and those based on card payments may deliver an identical experience to the customer – but if the card schemes retain an edge in payments protection and dispute resolution, they may attain dominance in this fast-evolving space.

Simplification is a clear driver, both on the customer side (they don't really care about how they pay, as long as they can do it quickly, easily and safely) and for the banks, with the prospect of moving away from siloed legacy and driving cost savings by treating payments generically for as long as possible a compelling one.

However, more and more ways to pay are being developed, and, to take the UK case, the move to a single, easily accessible set of rails coupled with a regulator-sanctioned proliferation of payment initiation providers inspired by the latest in fintech thinking can only fuel the fires of innovation further.

Schemes and infrastructures may separate, real-time may blur the lines between card and bank-led payments and mobile P2P may or may not make interbank payments irrelevant, but diversity will continue, and, as a consequence, for banks, building into their payments capabilities the flexibility required to accommodate this diversity is the only way forward.

09
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09
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