

The Convergence of Payments



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Ongoing convergence is already a major theme as part of the broader topic of the Future of Payments and initial data indicates that this is likely to have been accelerated by COVID-19. Pete Tobin, Vice President Product Solutions, at Fiserv, examines how financial institutions need to respond to this change in order to remain competitive.



In April 2020, ATM usage in the U.K. dropped by 60 percent. Alongside this, Fiserv saw a large increase in the proportion of contactless transactions they processed. In the three months from April to June 2020, their data shows that contactless transactions rose in Europe from 60 percent to 70 percent of all card present transactions. Given that some cards are yet to have contactless capability enabled, this is an extremely significant increase. Some of this increase will be attributable to greater contactless limits, but there has also been an increase in the usage of mobile devices to make payments as COVID-19 has led to consumers electing to utilise payment methods that avoid or limit physical contact with cash or point-of-sale devices.

Although most transactions made using mobile devices are based on an underlying card as the payment instrument, this increased use of mobile devices to make payments may well accelerate the adoption of new payment methods – some of which will not utilise a card as the underlying payment method.

This increased use of mobile devices to make payments may well accelerate the adoption of new payment methods – some of which will not utilise a card as the underlying payment method. It is no coincidence that in May, PayPal launched its new QR code-based P2P payment capability utilising the mobile devices of both the sender and the receiver to initiate the payment. Is this a card or a non-card payment – and does it even matter?

The reality is that this is symptomatic of a much bigger structural change confronting financial institutions: the fragmentation of payment initiation at the front-end on one hand, coupled conversely with the need for greater convergence at the back-end. It's a structural change of huge significance and it is probable that it will define the industry for the next decade in a way that is comparable to the way the industry has been shaped by digital over the last ten years. The recent wave of megamergers in the payments industry such as the [Fiserv acquisition of First Data](#) reflects the importance of this as a battleground.

Adapting legacy systems to accommodate these seemingly conflicting requirements carries significant costs and risks. Furthermore, these changes will not be one-offs: as new payment initiation methods continue to emerge, further changes will be needed – incurring additional risk and costs. Many banks' legacy payment and processing systems were built with a very specific set of needs in mind. While they fulfil those needs very proficiently, they were not designed to be

frequently reconfigured. Due to the recent and ongoing proliferation of payment types – and their rapid adoption by consumers – this already represented a major challenge, but this has been accentuated by COVID-19.

Niels Bohr, the famous Physicist, once said that prediction is difficult, especially if it's about the future, but that has not stopped some evangelists trying to frame payment convergence as a rapid transition away from card toward non-card, with cards soon to die out. The reality is probably more nuanced, with both likely to coexist for some time, but with additional methods of payment initiation emerging from both categories and payments jumping from one set of rails to another in the same way as a traveller would transfer from a train onto a bus on arrival at a transportation hub.

Ultimately, the narrative is about the convergence of all these and having the architecture that allows both card and non-card payments to operate alongside each other, while still giving the bank a single holistic customer view and the customer a consistent experience.



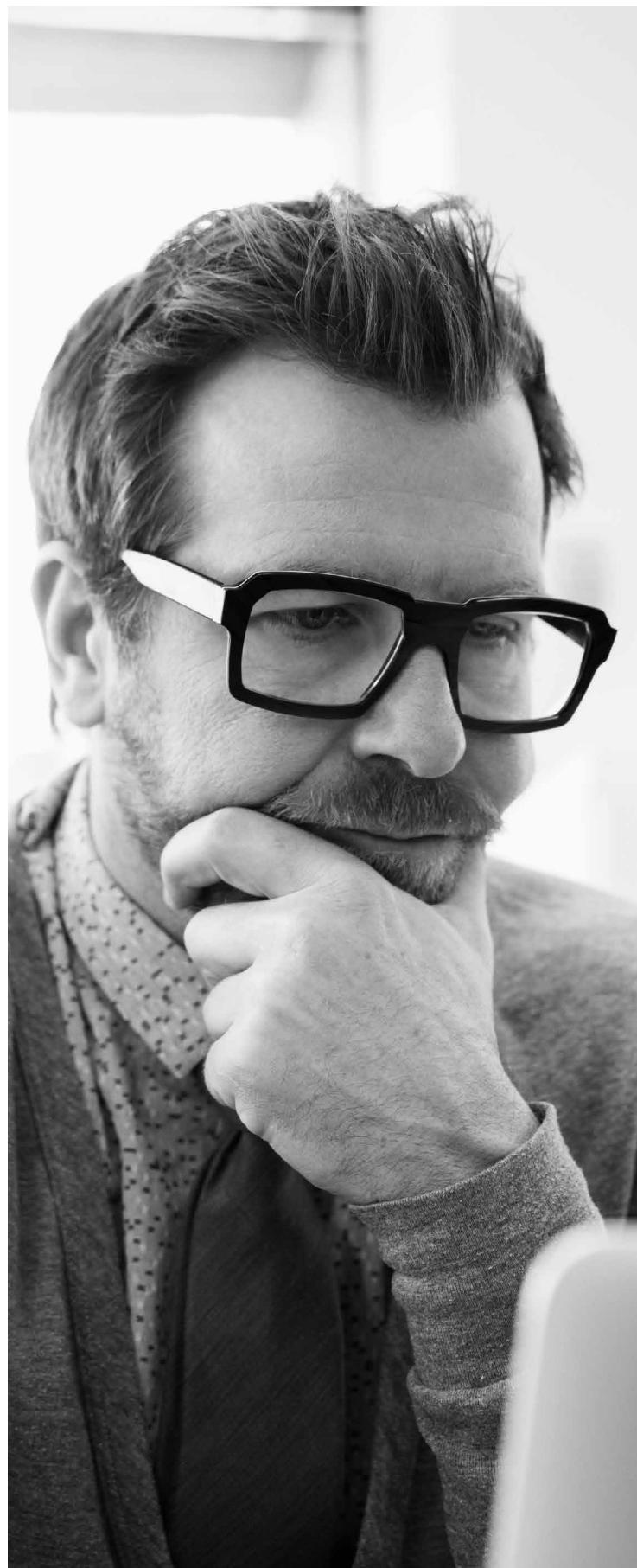
Payments: what is driving convergence?

Historically, payments were seemingly divided between those that are card-based and those that were non-carded with clearly defined use cases for both. Card payments were designed for a customer to pay for goods at a physical point-of-sale and hence they also captured a majority share of payments in the ecommerce market. Non-card payments covered use cases related to the movement of money between bank accounts with different schemes emerging to support real-time, high-value and cross-border. In certain markets they were also adopted as a way of paying for goods in an ecommerce environment usually as some sort of overlay on the internet banking rails for example Ideal in the Netherlands and Sofort in Germany.

Growth in the card space has been focused on the initiation of the payment, with tokenised digital wallets, contactless cards and integrated point-of-sale systems as well as security mechanisms such as EMV® and 3D secure designed to reduce fraud. In the non-card space there has been a proliferation in range of underlying payment instruments, including the rapid adoption of credit transfer push instant payments, the interbank settlement models and the overlay services that these modern, ISO 20022 based instant schemes have at their core.

To remain competitive, financial institutions have to be able to support ongoing changes to existing payment mechanisms and rapidly adopt the new ones as they arrive.

The proliferation of payment methods has been driven by a combination of factors. An important element has been regulatory and governmental intervention intended to drive innovation and competition in the payments space, such as PSD2 and latterly the EU's European Processor Initiative (formally known as PEPSI). Technology has also played a part, with mobile devices and new point-of-sale technology driving innovation and expansion in payment initiation. At the same time, consumer behaviour has been changing,



partly in terms of willingness to adopt new types of payment technology, but also in terms of changing perspectives on the use of traditional credit cards. The historical clear divide between the use cases for card and non-card has broken down and non-carded payment types are increasingly arriving at the physical point-of-sale. As payment divergence at the point of payment initiation has accelerated so the pressure for convergence at the back end in terms of processing and data management has also increased. One important driver for this has been the need to provide a consistent customer experience regardless of payment method. This requires a holistic view of customers' data if they are not to be inconvenienced. For instance, to prevent rejected payments when travelling, customers will not wish to make separate overseas travel notifications for every one of their payment methods through a particular institution. Whilst this might seem a trivial example, it is representative of the large number of digital services that banks have introduced into their card channels in recent times in order for their customers to feel comfortable using their products in the face of fraudsters trying to wrench control from them. These services include customer selected and geolocation based controls and alerts.

Equally, core services such as fraud prevention also need to be consistent and connected across all a customer's payment channels if they are to be truly effective. Without this, fraud losses will undoubtedly become higher and the customer journey will be frequently broken.

Convergence is not just about the rails used, but the complete customer experience including recourse and the charges made, for all users, whether consumers, merchants or businesses.

As an example, regulatory recourse lags behind the adoption of new payment instruments and this has significant impact on the customer experience and the exception processing needs of a provider. As discussed above, some instant payment schemes have been developed that are in reality no more than an overlay service sitting on top of existing payment rails. Where these rails have

different recourse rules, the customer experience when things go wrong is very poor. For example, if the scheme supports fulfilment of the payment initiation through a card rail, ACH or true instant rail based on reachability, the customer has no way of knowing how recourse would work and the chances of getting their money returned, card rails support chargebacks and regulatory protection such as CCA Section 75 in the U.K., ACH supports returns, but an instant payment is final.

The Infrastructure Implications

A further driver for convergence of payment processing is the need to optimise technology spend. The alternative of mirroring every new payment initiation method with a new dedicated set of payment processing rails is clearly impractical, both in terms of initial spend, ongoing maintenance and operational support.

Where traditional card rails have required 24/7/365 support, until recently only high value RTGS systems needed the same level of resiliency and then only for defined business days. The adoption of instant payment schemes has required even greater resiliency, given the need to process in a 24/7/365 environment processing transactions amounts that are significantly higher than traditional card based transitions with finality to the funds moved. These requirements for high transaction limits coupled with the finality of instant payments has required the core systems to also evolve to ensure that they can deliver funding decisions and provide availability of funds at the same speed as the payment is processed with the same availability.



As mentioned earlier, continuing to do this by modifying legacy core banking systems is both costly and risky. One consequence of this has been increased interest in a concept often described as ‘shrink and surround’ or ‘hollowing out the core’, which essentially consists of putting core banking systems into cotton-wool and building new functionality around them. This effectively means that the core banking system is maintained as just a ledger, allowing it to be upgraded and operated in the new environment without having to replicate the entire legacy functionality.

Some institutions have already put this into practice by copying data out of their core banking systems into high-performing modern databases in order to service their digital channels, a practice known as caching. A similar approach can be taken for managing a customer’s balance, with a high performance ‘available balance engine’ being available to all payment systems on a 24/7 basis feeding into the legacy core systems to maintain the ledger balance.

Strategic flexibility and future proofing

This “caching” methodology offers a hugely important additional benefit: it does not require that the external payment application be built and/or maintained by the financial institution. The segregation of the core banking system from payments makes it relatively straightforward to use a third-party software as a service (SaaS) provider to deliver necessary payment functionality seamlessly across both card and non-card payments for some or all customer segments.

So, what needs to be done is relatively clear. There needs to be an architectural separation of payment initiation, payment processing and payment fulfilment with capability such as risk, fraud, limit management and alerting moving from channel specific solutions to being enterprise level customer-centric capabilities (please see Figure 1).

Alongside this there needs to be a decoupling of payments from the core banking (or any account of record) system. The question is, who is best placed to provide these capabilities?

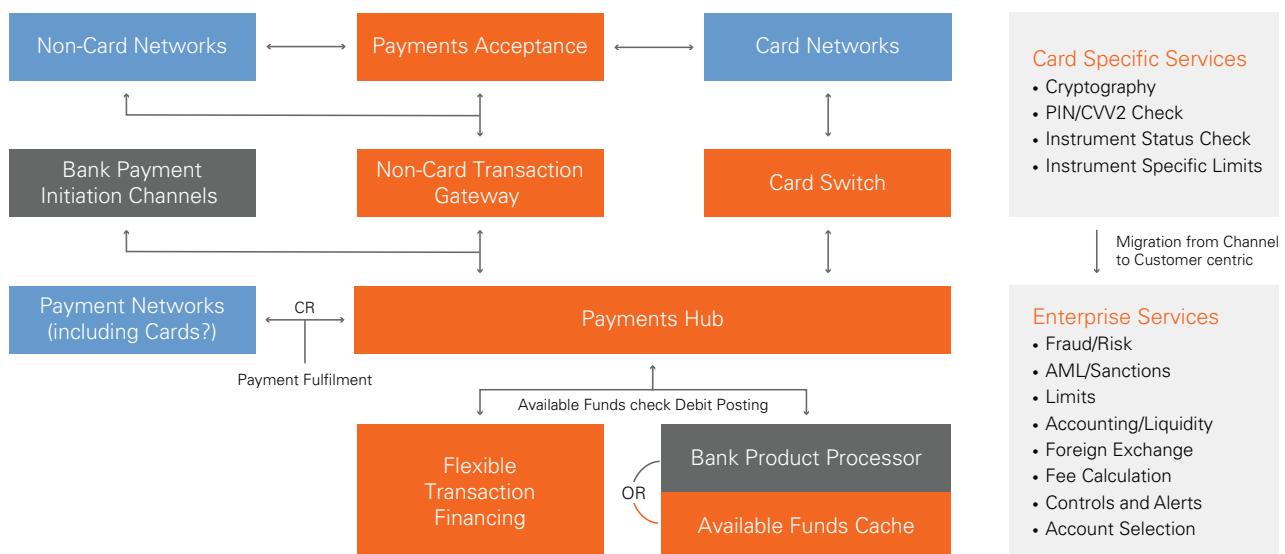
While there is nothing to stop banks creating this functionality themselves, there are strategic advantages to outsourcing it, both now and in the future. One of the most obvious is reducing operational risk. A suitably qualified provider will be implementing new payment types and the associated consolidated processing infrastructure on a massive scale on behalf of multiple financial institutions. It will therefore have ample experience of any potential issues and how to resolve them, plus of course all the necessary multilevel redundant and resilient infrastructure.

Furthermore, this approach also offers considerable economies of scale, particularly in situations where a new payment initiation method may become popular in a local context but not globally. An individual bank attempting to support this method may find the relatively low transaction volumes do not justify the capital expenditure (CapEx). By contrast, the pay per transaction model of a global SaaS payments provider avoids this issue of poor return on investment, as the CapEx is amortised across a much larger number of transactions from multiple bank clients.

Payment providers are also looking at the role that payments provide in their business – if they need to provide payment services, do they actually need to be a payments provider or can that provision be undertaken by a specialist third party?

While this obviously also confers a measure of future proofing with regard to the emergence of new payment types, it also delivers future proofing for other payment-related innovations. Payment processors are looking at payments holistically from payment acceptance through to transaction financing. A good example of this is the increasing interest in supporting new ways of financing transactions, such as providing instalment lending to current account customers at the point-of-sale. As the balance is paid down each month, this has obvious regulatory capital advantages for banks over the need to make full provision against a credit card limit. In addition, banks need to be able to expose existing lending facilities such as credit card revolving lines across multiple payment channels. Being able to access this and many other payment-related innovations through a managed service delivers a strong competitive edge through a combination of future proofing, lower costs/risks and faster time to market.

Figure 1. Payments End State Target Architecture



Conclusion

It looks likely that COVID-19 will prove a catalyst for many changes in the payments industry, as well as more generally. One of the most important is perhaps an increased sense of urgency over the need to address the convergence of payments, which is already a major inflection point for the payments industry. The significance of this change is borne out by the fact that many banks are reorganising around the concept of a central payments team covering both carded and non-carded payments. The same organisational change is happening within the new breed of consolidated payment processors such as Fiserv.

From a technology perspective, there is an increasing realisation that solving this problem requires routing all of these new payment initiation types from channel specific gateways into a consistent, holistic transaction processing and data management environment.

For banks with legacy technology, this presents exceptional challenges. Previous attempts to adapt such technology directly to this new

environment have often been problematic. Retaining core legacy technology purely as a ledger and copying data in/out to be processed externally by new payment technology is potentially a promising alternative. Nevertheless, that still leaves the question of who is best placed to provide the technology. Building it in house carries risks, costs and possible weak return on CapEx, while also committing to continued additional investment as new payment types (and associated products) emerge. There is therefore a strong case to be made for adopting a SaaS solution to deliver the necessary robust, scalable and extensible payment technology, where costs will be transparent/predictable, risks manageable, while scale economies and future proofing are achievable. Additionally such SaaS services when provided by a top tier payment processor also allow access to a strategic roadmap covering the entire payments value chain including payment acceptance and flexible transaction financing, all of which are essential for any Financial Institution preparing themselves for the Future of Payments.

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