How cloud powers the future of payments

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Executive summary

Consumer and corporate payments have never been under so much pressure to change. The COVID-19 pandemic has accelerated the volume of digital payments, and regulation, designed to boost competition, resilience and data protection is evolving.

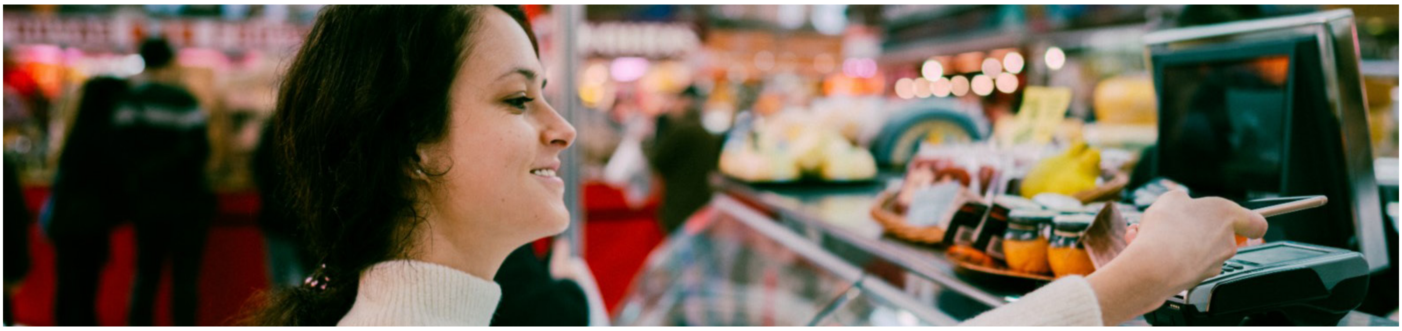
Consumer and corporate clients are demanding simplicity and convenience of instant payments whilst transacting online. One of the key challenges for the incumbents' is the complexity and high cost of running legacy payments infrastructure. Most critically, many banks' payments capability lacks the agility and flexibility needed to thrive in an increasingly competitive landscape.

Public cloud has long been touted as the vehicle for transformative change. For banks, it offers the ability to scale up quickly and safely. It can also enable a modular approach to IT systems deployment, mitigating the risk of commitment to long and expensive projects. The regulators have also made it clear that cloud has an important role to play in improving resilience.

For example, in the UK, the Prudential Regulation Authority (PRA) states that cloud adoption can increase operational resilience and enhance organizations' ability to cope with fluctuations in demand.

However, finding candidates that can demonstrate the value of migrating mission critical applications to cloud, as part of a phased initiative, can be challenging as organizations grapple with the scale of transformation needed to realize the benefits offered by cloud.[1]

With the rise of e-commerce, a payment gateway which offers connectivity into the local clearing schemes is a very strong candidate within the payments value chain for cloud migration. There is an increasingly competitive and mature market of payment processors and gateways (e.g.,Stripe, PayPal) who provide cloud ready solutions to seamlessly connect into card networks. Starting with a payment gateway could be the catalyst for cloud adoption across the payments estate and potentially more broadly, increasing banks' agility and flexibility to not just compete, but also to win in payments.



[1] https://www.ukfinance.org.uk/system/files/PRA%20Outsourcing%20and%20TPRM%20Supervisory%20Statement%20-%20FINAL.pdf

1. Bank payment systems need to change

For consumers, payments in 2022 promise a range of new and exciting services, with account-to-account and real-time payments just some of the areas driving the digital revolution in e-commerce.

Alternative payment methods, including digital wallets and cryptocurrencies are growing in popularity, creating a potential threat to traditional payment methods.

For incumbent banks, these innovations and rising expectations present substantial challenges, as well as opportunities. Banks are acutely aware they need to respond to these changes and deliver a real-time end-to-end experience across a range of payment methods, both domestically and seamlessly across borders. The challenge is how to manage this efficiently while controlling rising costs and meeting regulatory expectations. In this paper, we explore these challenges in more depth. Combined, they present a strong case for banks to act now to secure their payments future.

Ever-evolving regulation with a focus on operational resilience for payments

Although change needs to be executed in a risk-safe way, banks are under constant pressure to focus on operational resilience and to protect critical services such as payments. Public cloud presents a clear path towards better operational resilience, and its adoption is being endorsed by regulators. However, there remain concerns around effectively handling the appropriate controls, governance, concentration risks and exit strategies, which necessarily shift the focus toward a multi-vendor and cloud-agnostic approach.

Furthermore, data solvency is becoming a key consideration for cloud systems adoption, especially for critical data transfers between multiple jurisdictions.

Rising costs associated with legacy technology

Banks are continuously under pressure to reduce costs across operations, especially in a low-growth and low interest rate environment, yet costs in payments remain stubbornly high.

Much of that is due to legacy technology. Bank payment systems were largely deployed on customized software packages using on-premises data centers. These solutions were costly to implement - and today, they are expensive to maintain and operate, and unable to support rapid innovation.

As a result, the majority of technology spend on payments infrastructure has been used for regulatory upgrades, typically related to security or compliance. It requires a significant investment to continuously meet new regulatory requirements, e.g., ISO 20022. Profit margins for those that fail to upgrade back-end payments processing infrastructure will continue to be squeezed.

Banks are now competing with newer FinTechs that were born in the cloud, can operate with lower costs and are better equipped to bring innovation quickly to customers. As the COVID-19 pandemic has accelerated the adoption of digital services[2] across the banking industry, the urgency to modernize the technology that underpins service delivery to customers has never been greater.

Customer expectations keep rising

FinTech innovation has already had a significant impact on payments. Customers' expectations continue to grow as they look for better, faster and more innovative payment solutions. Banks will only face more competition as payments converge with other sectors such as retail and telco. New changes, such as ISO 20022, which will allow more data within payment messaging, will present newer entrants with the chance for further innovation. Banks need the right infrastructure to allow them to compete.

Key takeaways

Banks are facing severe pressures around their payments infrastructure and modernization agenda:

- Costs remain high, as legacy technology inhibits banks' ability to operate efficiently.
- Legacy systems also mean banks struggle to be agile and to innovate. This is a risk to success as customer demands grow and competitors look to offer new services.
- Regulators expect high resilience and security for payments, which makes infrastructure subject to heavy regulatory and reputational scrutiny.
- Cloud innovation is proving difficult, as the governance and organizational challenges of cloud adoption are often underestimated.

[2] https://www.ey.com/en_gl/financial-services-emeia/how-covid-19-has-sped-up-digitization-for-the-banking-sector

The rapid growth of digital payments

The global volume of digital payments including mobile wallets, P2P mobile payments, real-time payments and cryptocurrencies has seen rapid growth (US$6.6tn in value in 2021, a 40% increase in two years[3].) Scalable platforms are essential for banks as they look to cater for this increased activity. Banks don`t want to build expensive, customized systems that lock them into a single provider and make it difficult to change.

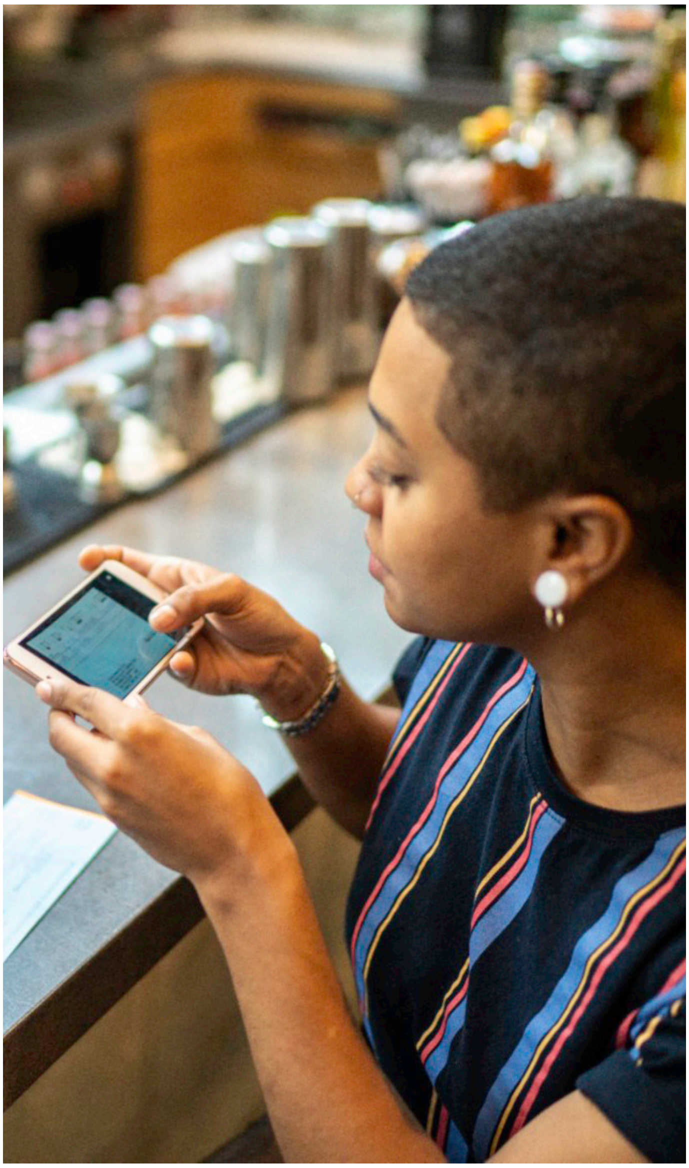
Connectivity across global schemes

Banks currently manage numerous types of payments, which means multiple connections, each requiring regular updates and maintenance. The arrival of real-time clearing and settlement systems globally adds to the complexity. For example, in managing real-time payments, a bank will deal with numerous regimes such as Faster Payments in the UK, The Clearing House (TCH) in the US, the Single Euro Payments Area (SEPA) in Europe or the New Payments Platform (NPP) in Australia.

This means banks need to resource processing and gateway technology for each payment system, as well as ensure they are updated as each system changes rules. This is complex, inefficient and expensive.

As we explore in section 3, banks could instead use one flexible, single platform, through a specialist technology

[3] https://www.cpapracticeadvisor.com/accounting-audit/news/21208440/digital-payments-to-hit-66-trillion-in-2021-a-40-jump-in-two-years



provider. That specialist could offer single access to the universe of payment schemes through application programming interfaces (APIs), lowering the cost and complexity for banks.

Climate agenda

The large, historical, private data centers that banks typically use for payments have a significance. For example, our recent sustainability research shows that they are responsible for 20% of the worldwide energy consumption of digitalization. Banks are under pressure to be greener. While cloud providers have been challenged on their own carbon footprint, it is likely that the net impact of banks moving to the cloud will be a reduction in the sector's carbon footprint. As disclosure of climate transition plans starts to be a requirement in 2022, cloud adoption for critical services will become a key priority for financial services.

Many of these challenges were not material even 24 months ago, demonstrating the speed of change in the market.

Beyond any specific requirement or regulatory need, this pace of change illustrates how critical it is for firms to increase agility and organizational resilience. Those who stay inflexible will not survive, let alone thrive in payments. Value-driven cloud adoption may provide a path to future-ready payment infrastructure.

[4] https://www.ey.com/en_ch/decarbonization/how-digitization-acts-as-a-driver-of-decarbonization

2. The case for accelerating cloud adoption

Public cloud is a viable option

The last 10 years have seen unprecedented growth and advancements in cloud technology. However, until recently, these advancements have been slow to emerge in financial services, banks and the payments industry, particularly in the back office.

This is despite the clear advantages cloud offers:

- A flexible and robust platform that can automatically scale up and down to meet business need is critical to manage the peaks and troughs of payment flows more efficiently.
- Flexibility that allows banks to pay only for what they need, rather than having to build extra infrastructure if payment flows increase materially.
- Reduction in the presence of IT systems – with the high cost and execution risk that can bring.
- Regulators have made it clear they understand the benefits in optimizing resilience in critical services such as payments, in which cloud can play an important role.

Banks have made some initial moves to utilize the cloud

- EY’s latest cloud adoption survey[5] showed that nearly every bank plans to make significant investments in public cloud, which is expected to be one of the most transformative technologies.
- Technology vendors continue to push cloud-based software–either renewing products on a software-as-a-service basis or as products in the public cloud market place.
- Material investments have been made to progress foundational activities in the cloud adoption journey (building a cloud landing zone, establishing key risk and controls, etc.).

However, the majority of critical bank workloads are yet to be onboarded to the cloud. EY’s latest cloud adoption survey found that 80% of UK banks have migrated less than 10% of their business to the cloud. It has proven difficult to reach agreement on the necessary governance, strategy and, ultimately, organizational buy-in.

[5] https://www.ey.com/en_uk/banking-capital-markets/uk-banking-public-cloud-adoption-banks-must-think-big-to-transform

Successful cloud adoption or being able to drive business value from cloud is not just about the technology. It requires an evolution of culture, processes and governance across the whole business. Businesses need to understand not just the narrow system gains from using the cloud but also how it can transform the whole business. This more holistic view would allow:

- An evolved cloud target operating model that redefines processes and capabilities to onboard, build and run cloud workloads
- An improved approach to shaping business cases and tracking value realization in a more iterative way
- A modernized approach to governance, risk and controls that moves away from the "assurance" model at the end of the process, becoming instead a continuous "enabler" throughout the technology life cycle
- A shift and modernization of the internal skillset and ways of working
- A pragmatic, iterative and value-driven migration approach to cloud

Banks are still grappling with the Catch-22 of using the cloud – it will only gain traction once it demonstrates value, but there is understandable reluctance to go "all in" until it has proven itself. The payment gateway provides an opportunity to break this cycle.

Given the need for flexibility identified in section 1, the cloud presents a strong option through which banks can address this need. Although such a fundamental change will be difficult to achieve, the status quo is not an option. In the final section, we explore how banks can start their journey.

Key takeaways

- Cloud technologies can offer significant benefits across banks' operations and as an enabler for transformation.
- Banks have made little headway in adopting cloud to date.
- Banks need a cultural change to see cloud as a business, not a technology, transformation.
- Payment gateways are a strong candidate to accelerate progress and increase confidence in cloud technology.

3. Payment gateways may be the first critical pathfinder into cloud

The pressures banks face on payments are increasing the urgency to modernize their critical services through safe and accelerated cloud adoption.

Start at the end

An important part of the payment life-cycle is the transfer of payment requests to the local clearing schemes for processing and offers a compelling opening for the use of cloud-native payment gateways. Counterintuitively, despite payments' systemic importance, payment gateways are potentially one of the lower risk areas for banks to use the cloud:

- Payment gateways are one of the most mature and proven in the value chain, with established solutions able to support scale, compliance out of the box, covering global schemes.
- The preparation of payments for submission to local clearing schemes requires a high level of compliance.
- It is a standardized and repeatable process, which is an ideal candidate for outsourcing.
- This stage of the process offers no brand or competitive advantage to a bank.
- Scheme processing is expensive to run and needs to be updated periodically to reflect changes in regulation and scheme standards.
- As the last step of the process, the payment gateway is not intrinsically vital for other internal processes, so can be de-coupled to run as a modular process.

In the same way that retailers partner on the last-mile delivery to couriers, banks have an opportunity to outsource this step of the payment journey. Adopting cloud-based payment gateway solutions could therefore enable quick wins such as:

- Reducing operational risk by removing the burden of maintaining some key back-office payments infrastructure, compliance and security requirements
- Freeing up resources by reducing time spent on updating and monitoring
- Avoiding the need to deploy new hardware to deal with increasing payment volumes
- Increasing resilience and leveraging distributed cloud deployments across geographies, with continuous compliance against new regulations and guidelines as the underlying technology is maintained
- A more flexible cost model leveraging a pay-as-you-go approach, which can support sudden and less predictable peak demand, rather than the traditional upfront peak volume investments

“A journey of a thousand miles begins with a single step”

Cloud-based payment gateways may not sound like the start of a cloud migration revolution. However, done correctly, they could allow financial services organizations to build confidence in migrating critical workloads onto the cloud. They could also ultimately enable the flexibility to change that is key for survival.

Given the systemic importance of payments, migrating payment gateways should give non-payment functions the confidence to explore the use of the cloud more fully. For the payments function, success in the last step will naturally be followed by other opportunities across the value chain.

Ultimately, the many benefits of using cloud – such as lower costs and increased agility – will become evident once the technology is used, even in a limited way. This may then act as a pathfinder to evolve both business and IT toward a cloud-ready state.

What banks need to do

For banks ready to make the change and reduce their cost base, the key steps for success are:

- Shape a medium-term, top-down strategy to provide a direction for the organization while progressing short-term, bottom-up, iterative, value-driven cloud adoption changes.
- Recognize that cloud adoption isn’t just a technology play. Key challenges are often related to the non-technical elements in the journey to cloud. For example, evolving the target operating model, the governance model and the cost management capabilities in order to fit with modern technologies and ways of working that cloud brings. These challenges will require investments to establish a foundational capability that will enable safe and effective use of cloud.
- Identify the most suitable partner for a cloud-based payment gateway solution.

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Form3 offers a fully managed payment technology platform for financial institutions and FinTechs-as-a-service. Form3 helps customers orchestrate its payments business in a secure, scalable and cost-effective way through an API-first, cloud-native platform.

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