banking transformed

white paper

by: Jim Marous

APRIL 2021

The Importance of Future-Ready Payments

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> *Incremental improvement to digital payments operational maturity is no longer sufficient. Now more than ever, financial institutions need to support payments that are fast, easy, safe and embedded.*

— Jim Marous

Owner and CEO, Digital Banking Report
Host, Banking Transformed Podcast

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Letter from the Author

Jim Marous

The impact of the pandemic on the banking industry was immediate and impactful. The shift to digital transactions not only changed the banking industry, but every industry globally, as consumers accepted the need to make purchases and payments using digital devices, with embedded experiences and one-touch engagement.

These changes tested the payments maturity of every financial institution. Most banks and credit unions were unprepared for expectations of the consumer and merchants who wanted payments that were simple, fast, safe and embedded. The combination of customer expectations, back-office operations, technology-driven opportunities, and the increase in non-traditional competitors, quickly exposed much of the industry to the realization that their payments infrastructure was not prepared for the future.

Financial institutions of all sizes must make their payments infrastructure more agile and respondent to the opportunities and threats today and in the future. What was once a planning effort for an unknown time in the distance is a requirement today.

While supporting payments is far from the only priority financial institutions must address as part of their digital transformation journey, it is clear that organizations must achieve a higher level of payments maturity and efficiency, while supporting innovation that will meet customer expectations and increase business value. A payments transformation strategy must include a greater commitment to data, advanced analytics, modernized infrastructure, risk and fraud mitigation. Retraining and reskilling people will be imperative to stay competitive.

Few organizations will build these payments capabilities internally, so the

Letter from the Author (continued)

importance of partnering with future-ready solution providers will be necessary to keep pace with marketplace changes as it relates to modernized technology, digital talent, updated processes and the application of data insights.

This research, sponsored by IBM, is intended to provide a perspective on where the payments industry is today – and where it needs to be in the future – to participate in the support of the payments process at all levels.

We hope these insights provide the basis for debate and shifts in business strategies across the industry in 2021, helping your organization proceed aggressively in the pursuit of improved decision making and customer experiences.

Jim Marous
Owner & CEO, Digital Banking Report
Host, Banking Transformed Podcast

The Pandemic Has Changed Payments Behavior Forever

The pandemic changed the way people work, shop, socialize, do their banking and make payments. While some consumers had already embraced digital options, others have moved to digital options for the first time. As the pandemic continued, short-term behavioral shifts became permanent.

The pandemic altered consumer behavior globally as many consumers were forced to work from home, financial institutions closed lobbies and people worried about everything touched by others. The question became whether initial changes in activities would become fundamental behavioral shifts once the pandemic ended. With people settling into what their "new normal" might be, financial institutions must do the same.

The shift to digital payments on the part of both consumers and financial institutions was already taking place before COVID-19, but the health crisis definitely served as a jolt to the trial and adoption rate as in-person engagement was discouraged or even prohibited.

As physical distancing requirements have loosened and distribution channels reopen, financial institutions are realizing that just because consumers will be able to transact and make payments the way they had in the past doesn't mean they will. And, just because the coronavirus may not be spreading to the same degree as in early 2020, going back to using cash, checks or point-of-sale systems requiring tactile engagement may not be worth the risk … or the extra effort.

In research done by the **Digital Banking Report**, it was found that the pandemic accelerated the digital transformation of banking, payments, and commerce — supporting the expectation of a "new normal" in consumer behavior going forward.

"Even though scientific evidence does not support the probability of coronavirus transmission through banknotes or coins, consumer anxiety about physical currency sped up the trend towards touchless payments."

The research found that:

- Consumers have permanently changed how they interact with their financial institution and retailers, preferring more digital engagement.
- Consumer will use online or mobile banking more in the future.
- Consumers significantly increased their use of a mobile wallet payment platform in the past 6 months.
- There has been a measurable shift away from cash and checks.
- A majority of consumers said they will shop online more in the future than in a store.

Digital Payments Gets COVID-19 Boost

Mobile wallet use has probably been the biggest beneficiary of the COVID-19 crisis. Use of PayPal, Apple Pay and Zelle all increased significantly during the crisis and has continued an upward trajectory into 2021.

The majority of businesses continue to encourage cashless transactions as well, from fast food restaurants to retailers, to toll booths on the highways. Even the World Health Organization encouraged contactless payments where possible.

Embrace Change and Disrupt Status Quo

The shift to digital has impacted all industries and virtually all forms of personal, professional and transactional interaction. As consumers began to realize the ease of digital payments, new ways of doing business are becoming habitual. In fact, many who have moved to digital payments say they won't return to "business as usual" post-pandemic.

This is the perfect time for financial institutions of all sizes to double down on digital banking investment, leverage new technologies, encourage digital payments and partner with solution providers and fintech firms that can assist with all of these transformations. Strains on the revenues of financial institutions in the foreseeable future should serve to accelerate these trends.

Banking Providers Lack Payments Maturity

In recent research, we found that while digital transformation, innovation and data maturity were all advancing among financial institutions, organizations were not keeping pace with consumer expectations. In new research, we found that payments maturity is lagging paytech, fintech and bigtech providers, with gaps in data use, back-office processes, infrastructure and talent.

The need to have a high level of payments maturity has never been more important, as consumers and businesses want to perform payments transactions that are fast, easy, safe and seamless. Organizations that achieve a high level of payments maturity can be considered "future-ready," positioned to succeed in an ecosystem that increasingly puts payments at the center of banking relationships.

To achieve payments maturity, financial institutions will need to start from the inside-out, modernizing legacy infrastructure, modifying outdated processes, increasing agility, and leveraging data and insights needed to create enhanced experiences and minimize risk and fraud. Unfortunately, few organizations indicate that they are future-ready in the area of payments.

The future of payments will require not only the ability to know what has already occurred, but the ability to accurately predict future consumer and business needs and transactions. Organizations will also need to have an innovation mentality — that will be able to quickly respond to new market advancements. These will become 'table stakes' faster than ever.

This requires new back-office operating models that leverage modern technologies and cross-organizational teams. The ability to partner with solution providers and other third parties, including fintechs, paytechs and even non-financial organizations will be imperative.

"To be future-ready in payments means more than knowing how to modernize applications. You also need to work with good partners. Ultimately, this means thinking about payments as a platform."

— Mike Cook
Global Payments Leader, IBM

Listen on banking transformed

Future-ready payment organizations will need to have a cloud infrastructure to support the processing of internal and external data, leveraging advanced analytics, artificial intelligence (AI) and machine learning. The use of cloud technology will both maximize efficiency and optimize effectiveness as organizations balance the need for faster payments and greater security at scale.

The Payments Landscape is Being Disrupted

Most in the banking industry would agree that payments is the area of financial services most ready for digital transformation. With data from payments telling a story with every transaction, and new technology and market innovations becoming mainstream at an incredible pace, it is difficult to keep up with where the industry is going. With revenues in the payments industry approaching $3 trillion, it is obvious why the competition is so fierce.

Digital technology has altered every aspect of banking, with consumers increasingly using mobile apps to do basic banking, pay bills and send money anywhere in the world. The challenge is that existing money networks are closed systems, that are not interconnected. They are often slow and can be expensive.

Existing payment providers and digital wallets are also inefficient, since it is impossible to send money between systems offered by different providers. They operate in separate silos, limiting reach and efficiency.

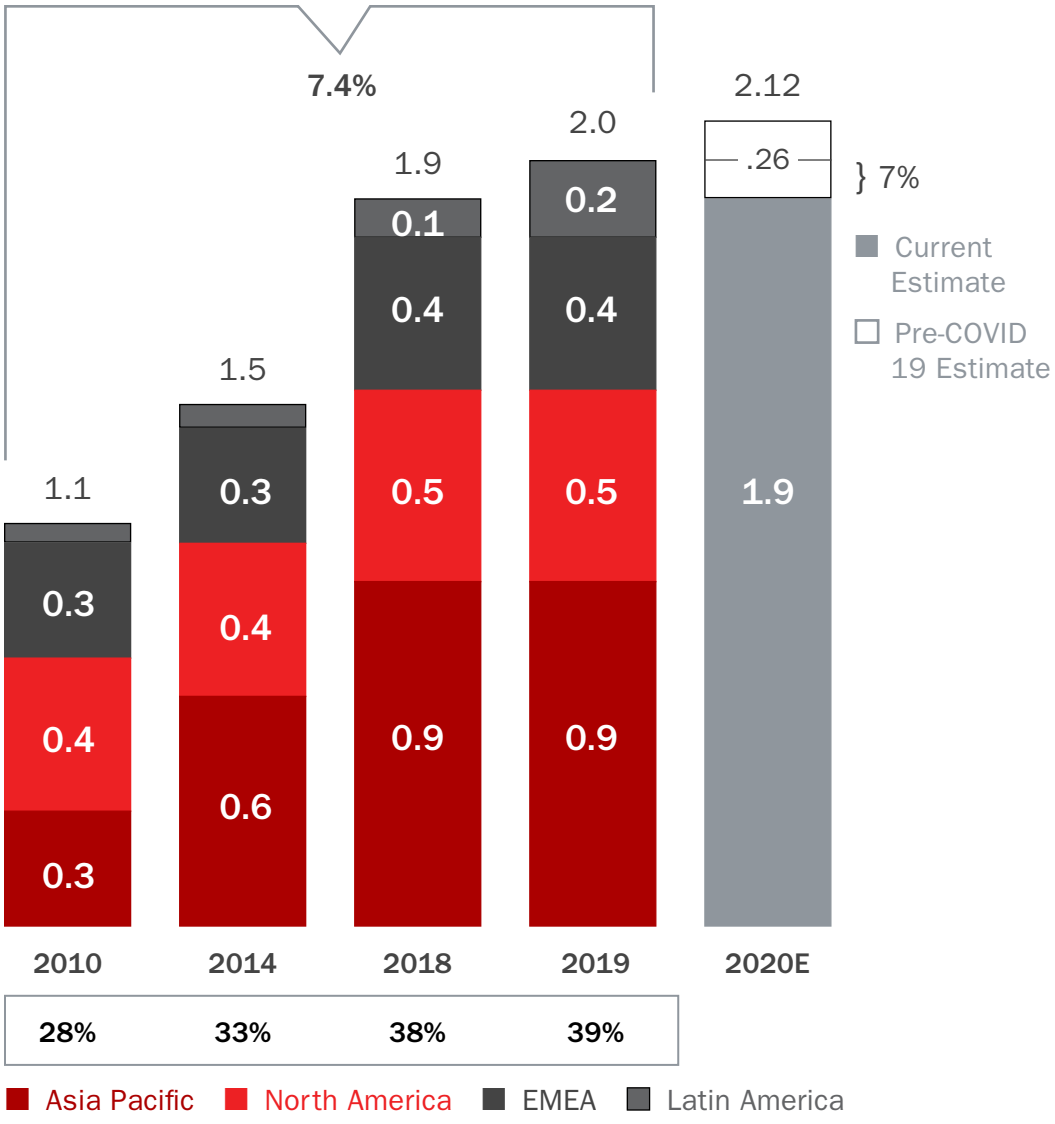
The benefits of payments transformation extend far beyond financial institutions, to include consumers and businesses that receive access to a quick, safe, reliable and inexpensive way to move or spend money. But cooperation between public and private entities will be required, and a balancing act between transparency and privacy is already taking place.

According to the **Digital Monetary Institute**, "It is likely that the future digital payments landscape will comprise a complex tapestry of multiple private and fiat currencies with profound implications for regulation and supervision, and cross-border and domestic interoperability. There will be critical questions about the

balance of cooperation and competition between public and private sectors, and about relationships between nation states and their currencies."

According to McKinsey's latest *Global Payments Report*, payments revenues worldwide doubled in the decade from 2009 to 2019, reaching $2tn. While payments revenues dropped early in the pandemic, there was a massive growth in online and mobile payments. It has already been shown that the consumer habits formed since the pandemic will persist even after the pandemic ends.

CHART 1:
GROWTH PAYMENTS REVENUE ($TRILLION)



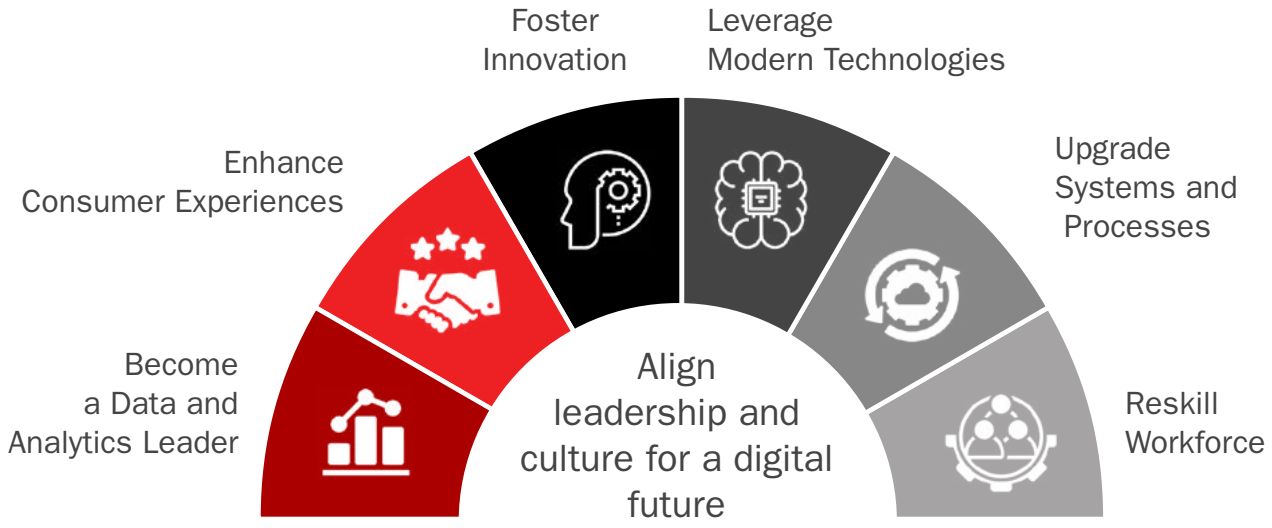
Source: McKinsey © April 2021 Digital Banking Report

As online and digital payments have accelerated, the use of cash and use of ATMs has dropped. McKinsey expects a drop of 5% or more in the share of global payment transactions executed via cash. While this may not seem significant, the drop represents four to five times the annual decrease in cash usage observed over the last few years. Moreover, western democracies are seeing a 20%-40% decline. The reduced use of cash will benefit financial institutions and merchants since the cost of cash handling is not offset by the revenue opportunities from electronic payments.

The importance of prioritizing digital payments transformation with data, analytics, innovation, streamlined and agile processes, updated infrastructure and upskilled and reskilled staff has never been greater. This will also require strong leadership and a culture that supports a future-ready payments organization.

CHART 2:

THE SEVEN ESSENTIAL COMPONENTS OF DIGITAL TRANSFORMATION SUCCESS



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Most Financial Institutions are at Lower Levels of Payments Maturity

Being a part of the payments marketplace requires a commitment to being future-ready and having a level of payments maturity that supports being a player in the payments ecosystem. Payments maturity is essentially the extent to which organizations can prioritize the major components of digital transformation to support payments processing and providing an overarching payments experience. The more highly the support of payments is esteemed and the more sophisticated the technology is to realize the potential of payments, the more payments-mature the organization usually is.

Likewise, an organization that does not move quickly to support digital transformation as it relates to payments is likely to only be in the very early

"Most organizations appear to be reviewing capabilities and building payments solutions, but very few categorize themselves as being adept at supporting the back office capabilities required to be a payments leader."

stages of their payments maturity journey. Most of these organizations also lack leadership support for the unification of a payments strategy across the organization.

In research by the Digital Banking Report and sponsored by IBM, we found that most financial institutions do not rank themselves very highly regarding payments maturity. Most organizations appear to be reviewing capabilities and building payments solutions, but very few categorize themselves as being adept at supporting the back-office capabilities required to be a payments leader.

For a series of multiple choice questions regarding the level of future-readiness organizations were regarding payments, we used the following descriptors to determine payments maturity.

MULTIPLE CHOICE QUESTIONS – ANSWER GUIDE

(The survey questions used these "descriptors" to identify payments maturity.)

1. **Evaluating:** We are at a preliminary stage. Our organization does not plan to invest in these areas in the next three years.
2. **Developing:** We recognize the value of these best-practice standards, but investment, experimentation and development are in the early stages and we are working on a holistic strategy.
3. **Implementing:** We understand the value of these standards. However, the capabilities are implemented in just a few parts of the organization.
4. **Living:** The value of these practices are recognized and the capabilities are widely and consistently deployed across our organization.
5. **Leading:** These standards are central to our organization's strategy, and these capabilities are fully and consistently implemented and optimized across our organization.

"As banks try to ready their payments systems for the future, the ultimate objective is, how can I get the agility and cost benefits of moving applications to the cloud, without sacrificing regulatory compliance or security?

— Mike Cook Global Payments Leader, IBM

Payments Infrastructure Maturity

The payments infrastructure in a bank is often 30-40 years old. Operational risks, paucity of resources for support, limited organizational agility, lower transaction fees, and rising costs are forcing changes in the support of payments and for all banking services.

We asked financial institutions globally the extent to which their institution is making investments to reduce technology debt and prepare for the competitive landscape of the future.

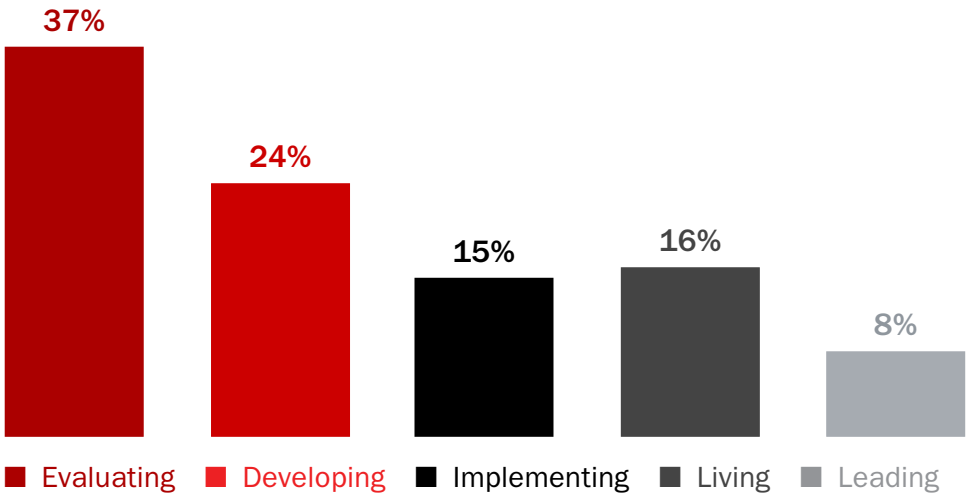
We found that 24% of organizations were either 'Living' or 'Leading' with regards to updating their infrastructure, with 15% of organizations in the 'Implementing' phase and almost a quarter of banks and credit unions stating they were 'Developing' improved back offices.

What is concerning is that almost 4 in 10 organizations stated they were in the 'Evaluating' stage of infrastructure maturity. The organizations at the lower stages of payments infrastructure maturity were mostly from the lower asset categories, where funding of major infrastructure improvements is not currently prioritized. Alternatively, the organizations with the highest levels of payments infrastructure maturity were in the highest asset categories.

CHART 3:

PLANS TO REDUCE PAYMENTS TECHNOLOGY DEBT AND PREPARE FOR FUTURE COMPETITION

Regarding payments, to what extent is your institution making investments to reduce technology debt and prepare for the competitive landscape of the future?



Source: Digital Banking Report Research © April 2021 Digital Banking Report

"To be successful, a payments player must look at reducing their total cost of operating a payment system, including the back-office. Simply upgrading existing operations doesn't remove ongoing costs as effectively as adopting a new platform that is inherently more efficient."

— Mike Cook Global Payments Leader, IBM

It is clear that many organizations will not be able to update their back-office infrastructure adequately by themselves. The best potential for an agile and flexible infrastructure upgrade will be through partnering with a solution provider that can update key components quickly and at a lower cost than a 'build' strategy.

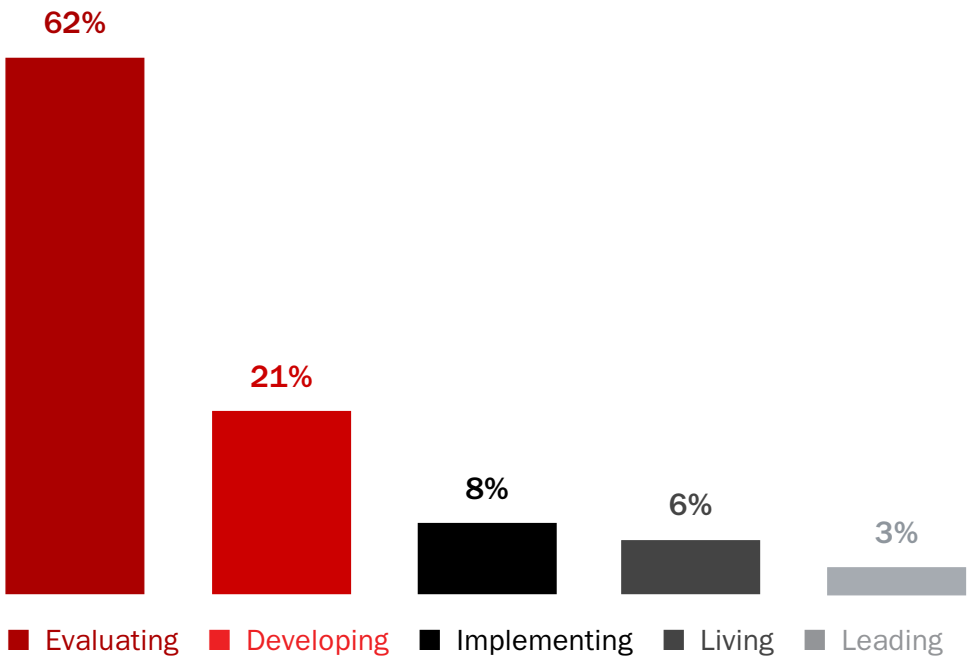
Payments Competitive Maturity

The impact of fintech, paytech and bigtech providers of payment services has skyrocketed in recent years. Players like Venmo, PayPal, Square, and others have escalated the consumer awareness of 'what is possible' by providing better interfaces, delivery certainty, improved pricing and ease of use. We asked financial institutions globally to what extent does their bank or credit union offer B2B & B2C payments capabilities that keep pace with alternative digital payments leaders.

Correlated with the ability to invest in the infrastructure required to be future-ready in payments, financial institutions do not consider themselves prepared to compete with paytech, bigtech or fintech leaders in the payment space. We found that the competitive maturity skewing to the developmental phases of digital payments transformation.

CHART 4: EXTENT OF B2B AND B2C PAYMENT CAPABILITIES TO KEEP PACE WITH NEW COMPETITION

To what extent does your bank offer B2B and B2C payments capabilities that keep pace with new entrants?



Source: Digital Banking Report Research © April 2021 Digital Banking Report

Payments Technology Maturity

More than ever, technology maturity in the payments process has become a foundational requirement that can support APIs and open banking opportunities that reach beyond traditional financial services.

When we asked organizations about their technological maturity to support APIs, micro-services and other next-gen applications, we found that, while not many organizations were in the advanced stages of maturity, there were significantly more organizations focusing efforts to improve the response to innovative opportunities in the future. More than 7 in 10 banks and credit unions globally were either already developing or implementing next-gen applications and modern technology.

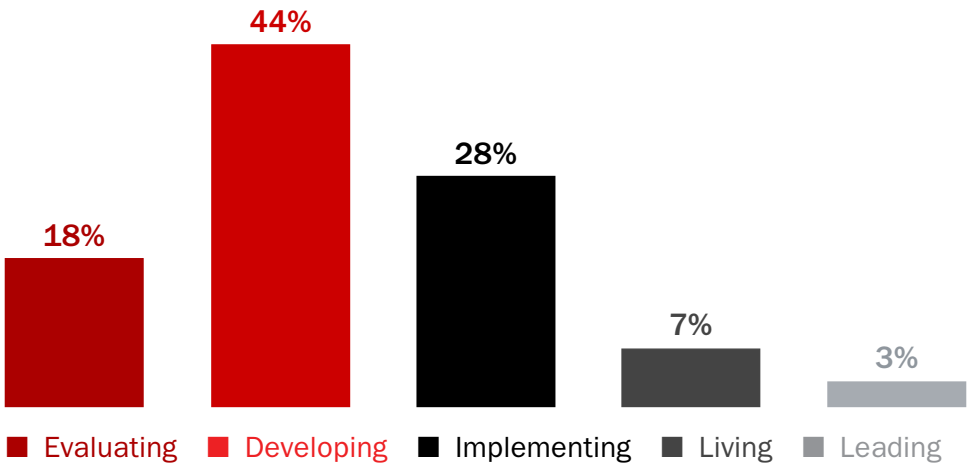
Interestingly, while the more mature organizations tended to be the largest banks and credit unions, the smallest financial institutions were over-represented in the implementing and developing stage, while mid-asset regional financial institutions were under-represented. This finding aligns with what the Digital Banking Report has found in digital transformation maturity overall.

"Only AI and cognitive platforms can efficiently detect and help interpret the relationship between the content of a payment (i.e. the data within the payment) and the payment's context. This leads to quicker insights, with better predictions of future payment behaviours."

— Mike Cook Global Payments Leader, IBM

CHART 5: ABILITY TO LEVERAGE NEXT GEN APPLICATIONS AND MODERN TECHNOLOGIES

To what extent does your business leverage effectively next-gen applications and modern technologies such as APIs and micro-services to support your payments strategy?



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Payments Risk and Fraud Maturity

The payments marketplace is operating faster and more seamlessly than ever as more consumers embrace contactless payments, card-not-present transactions, and alternative P2P payment options. As the quest to speed up payments across digital channels becomes a differentiator, the potential for fraud increases. This impacts the bottom line of organizations at all levels of the payments ecosystem, and creates a balancing dilemma between speed and safety.

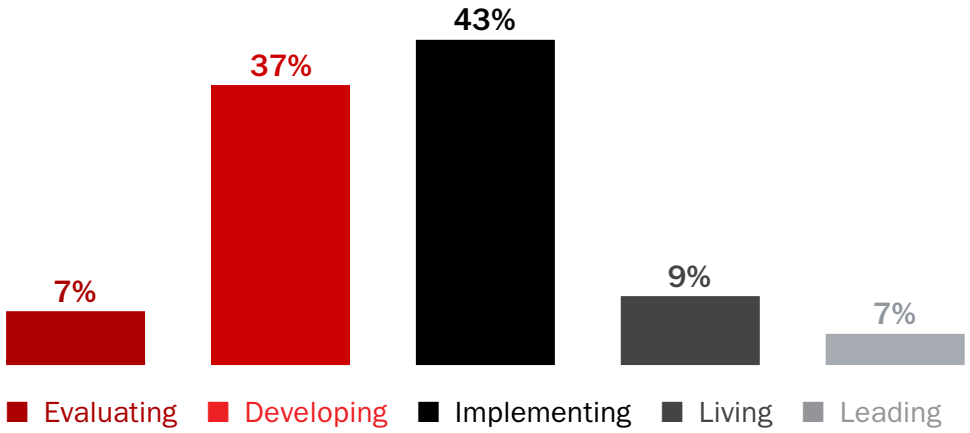
One of the ways to respond to the increased risk of fraudsters and the inherent financial ramifications is to build a real-time payments architecture that is equipped to respond in real-time. In addition, the infrastructure must be able to integrate insight from all available data – both historical and real-time – that can identify the difference between legitimate and illegitimate transactions in a nano second.

The use of data and advanced analytics for fraud prevention (and to comply with regulatory requirements) must be dynamic, real-time, self-improving, easy to update and scalable.

Our research found both an awareness of the increased threat of fraud (that is associated with real-time payments) and a strong desire to move forward to reduce payments risk and increase compliance capabilities. Unfortunately, as we found with other components of payments maturity, the ability to respond to the needs related to risk, fraud and compliance is not keeping pace with the heightened awareness of need. The good news is that the maturity level for payments fraud prevention was the highest of all components of payments maturity.

CHART 6:
ABILITY TO DEAL WITH NEW THREATS

To what extent is your real-time payments infrastructure able to deal with new threats from bad actors?



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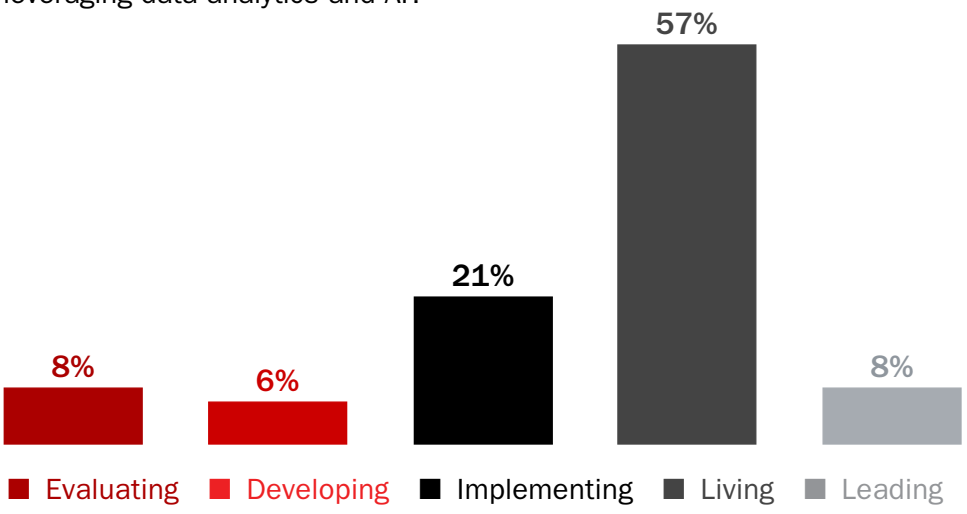
As found in other research conducted by the Digital Banking Report, financial institutions are doing a relatively good job leveraging data, advanced analytics and AI to minimize fraud and respond to regulatory needs. In our research, 65% of organizations believed they were either 'Living' or 'Leading' in the use of data.

CHART 7:
USE OF DATA ANALYTICS AND AI TO COUNTER FRAUD AND COMPLY WITH REGULATIONS

With respect to the payments function within your organization, to what extent does your business counter fraud and comply with regulations by leveraging data analytics and AI?



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The Future of Payments is Fast, Seamless, Safe and Embedded

Interview with: Mike Cook, Global Payments Leader at IBM

Before the rise of PayPal, Venmo and dozens of other new payment solutions, banking probably didn't look at the payments function as the epicenter for innovation. But times have changed.

Digitalization of front, middle and back office processes, plus an explosion of fintech experimentation around the world, have turned the payments function into a competitive weapon instead of a cost center. In parallel, the rise of contextual embedded finance means that payments innovation is changing the operation models for banks and the industries they serve.

The pandemic only accelerated change that was already taking place. In response to the World Health Organization (WHO) advice that physical cash would increase the risk of disease transmission in March last year, there was a larger shift towards digital payments in ten weeks than in the proceeding five years, according to Mastercard. (WHO later clarified that the "advice" was an off-the-cuff statement and not meant as official advice, but the matter was set in motion.)

Contactless and mobile payments around the world exploded, and the convenience factor of "card on file" scenarios has accelerated the adoption of mobile wallets. According to research by ACI Worldwide, global mobile wallet adoption rose to 46% in 2020, up from 40.6% in 2019 and 18.9% in 2018.

To get a perspective on the way banks, merchants and intermediaries across the payment ecosystem are responding to consumer and business behaviors, we interviewed Mike Cook, global payments leader at IBM. We dis-

cussed how the center of transformation in banking is focused on payments, and how legacy financial institutions are prioritizing the shift to digital to protect current revenue streams, and searching for new ones through a fully digitized customer experience.

Can traditional financial institutions compete with firms like PayPal, Venmo, Square and Stripe?

Mike Cook: I think it's critical for every banking organization to find the lane that they're going to play in. You've seen the rise of **Stripe**, a private company with $100 billion market cap and incredible consumer traction, that needs to get deeper into services. So, they sign up with Goldman and CITI for banking as a service. We see PayPal announcing the desire to become a "super app" offering more currency and payment options as well as an expanded array of banking services to hundreds of millions of users.

To compete head to head suggests all organizations have the same assets. In the past, banks have always had the incumbency and the clients. What we see now with these mega paytech organizations, is that they also have a magnitude of client relationships. And they have orders of magnitude, more working capital to create innovation, with a market penetration incentive.

There's absolutely a role for banks to play here. But they've got to pick a lane and focus capital allocation on that lane.

Has the primary financial service moved from a checking account to a payment app?

Cook: Through history we would define the "primary financial institution" by whatever institution had the checking account. But now we have an interesting dynamic, where not only do consumers have more than one transaction account, but the foundation for the consumer relationship of the future may be more centered around the payments function. In some cases, this payment provider may not even be on the normal list of payment providers. Starbucks is an example. That's a payment app, and they're holding a lot of deposits.

Most of life's big events have a punch line ... and the punch line is paying for something. Consumers may recognize that as a bad part of the transaction. But, where the digital transformers have created a change is that they have made the payments part seamless. One of the best examples is Uber. Uber is recognized as having extraordinary customer experience and the joy at the end is where a rider just walks out of the car – and the payment is invisible.

I see that paradigm coming into every transaction. Wouldn't it be great to close on a house where the payment is invisible? That's the experience. That's delightful. We used to get checking accounts so we could write checks. We're now transcended that into another level of digital innovation with digital – and sometimes embedded – payments.

Is the foundation for innovation in payments simplicity, speed, cost and embedded?

Cook: Yes, making the experience really positive, where there's no derailment factors from waiting or wondering where the money is. The magic with the new players coming into the market is that they're not burdened with that legacy set of rails and applications and payment hubs. They have built apps that are cloud-native, forward-thinking, experience-driven, and having all the architectural components in place to do that. Matching that is the challenge for some of the incumbent payment providers.

So, we're back into a capital allocation problem of, "I need to invest in these great, wonderful experiences. But I also have to change the underlying architecture." Most of the new entrants have gone straight to the cloud with cloud-native offerings that have all the API [application programming interfaces] structures they need to tie into whatever transaction experience they want to get.

What role does cloud technology play in updating payments infrastructure?

Cook: The cloud plays an enormous role here. The data we look at says that there's only about 20% penetration in banking moving to the cloud. And much of this transition has been in relatively simple categories of work. The actual workload of core banking and payments has seen very little penetration globally.

Part of this is because of the perception of risks of the cloud not being mature, secure or compliant. These perceptions are beginning to change, however. There are several cloud solutions that are entering the market that are built specifically for financial services. They address many of the concerns.

For instance, IBM has built a cloud solution for banking that leverages learnings from banks as well as from independent software vendors. We built a solution that eliminates much of the replication that we know all banks and credit unions would need to answer as they moved to the cloud, eliminating a ton of time and effort, but leaving the flexibility that all financial institutions want.

As opposed to a complete rip out and replace mentality, financial institutions have embraced a notion of progressive modernization with a structured value-driven approach, where they do a piece at a time that drives some value – defined by making the customer experience better. Organizations can also reduce their operating efficiency ratio in a measured way that doesn't cause massive disruption.

As the amount of data and insight from digital payments expands exponentially, the importance of using cloud technology becomes a requisite for traditional and non-traditional payments providers.

Is it better for institutions to partner rather than taking on modernization themselves?

Cook: Definitely. Digital transformation and payments modernization is a high-risk poker game. And it's really tough to do it all on your own. It causes stress on your organization, stress on your strategy, stress on your capital and stress on your balance sheet. So, determining a bank's specific value proposition, and who the partners are that can deliver this proposition, becomes crucial. I don't think anyone can do it on their own anymore.

Do you see the trend of embedded payments expanding?

Cook: Absolutely. Everyone in the payments business is creating their own business model – and we're running into a period of so many options – evolving as real time comes to market and cross border real time comes to market. At the end of the day, the average consumer or business just wants to make a payment. They want to be secure in the fact that it's going to be a good payment, it's going to happen on time, and they're not going to pay a whole lot of money for it.

This is where banks can help. They can create the central hub to move money, taking advantage of their

brands and trust. They can create the APIs to PayPal, Venmo, TransferWise, Alipay, Tencent or any provider. The customer gets the peace of mind they want in the embedded transaction and all the icky stuff will be managed by the bank.

How do we deal with increasing fraud in payments?

Cook: Any provider in the real-time payments space is using AI and machine learning to identify the patterns as they're happening and building a response to it. Unfortunately, we're finding that many legacy banking organizations aren't ready for this.

We need machine learning at the core of the counter fraud switch, sensing and identifying patterns of behavior. It's doing something that humans can't do. We need to get there through the use of AI and inference engines to help automate the processes.

Big data, AI and machine learning will not only help in securing the payments ecosystem in the future, but improve the customer experience by anticipating future purchases and helping categorize payments already made.

Can AI and machine learning also help improve the payments experience?

Cook: We have an enormous set of payments metadata to improve insight and customer experiences. This includes data to make the actual payment experience better, as well as data to help with future payments not yet made.

For instance, when payments are digitized within the ISO messaging stream, you can provide a Nirvana state of automatic financial reconciliation of what the payment was, and where it went. Closing books won't happen three or four weeks after the quarter ends … but automatically. The other component is to assist the customer with what they may need in the future based on what they did in the past.

How do you see the payments ecosystem changing in the future?

Cook: First, the ongoing trend of declining check and cash use is going to continue. Checks and use of cash are already starting to cause pain because they are increasingly an exception payment mechanism as opposed to the norm. And the pandemic was just kerosene on the fire pit that accelerated these trends. As a result, any part of the payments ecosystem that is structured to deliver digital payments efficiently will have an advantage.

Second, an organization needs to actively evaluate which paytech/

fintech firms in an ecosystem are a competitive threat, an acquisition opportunity, or a partner. Ignoring them altogether is not an option.

Third, for the foreseeable future you're going to see outrageous valuations for payments providers and facilitators. We're seeing this in the valuations of Stripe, Alipay, PayPal and Amazon. That's going to continue for a long time.

Do you see the winners expanding beyond payments?

Cook: The really successful payments players in the future will use their payments capability to launch broader solutions. Platforms like Alibaba, Tencent, Amazon, PayPal and a number of other large fintech players will expand far beyond payments alone.

Watch where PayPal gets into the life management business, and Amazon expands into the medical field. They're going to leverage their extraordinary offerings, extraordinary market penetration, and extraordinary brand, linking payments into life stage engagements. The platforms that have the greatest level of engagement will be the winners.

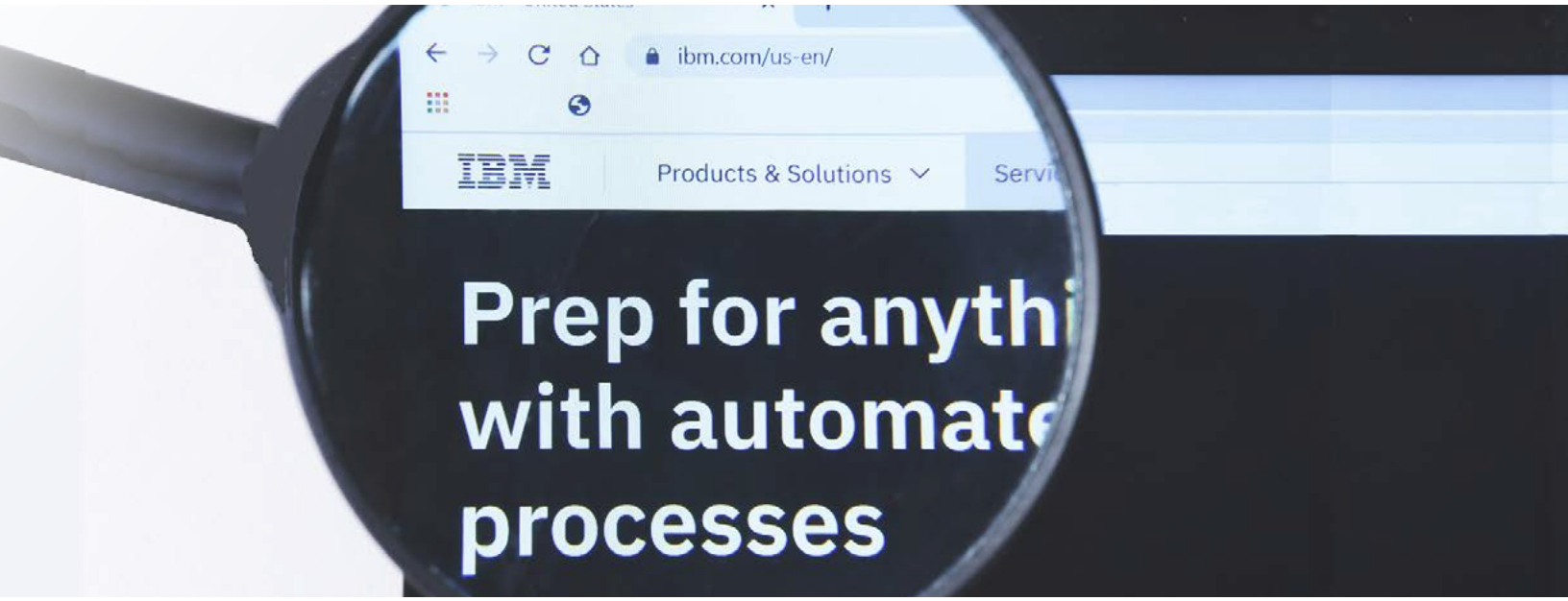
What are the challenges for payments in the future?

Cook: There needs to be greater uniformity of regulations between what the paytech firms need to follow and the regulations of traditional banking organizations. When we see a market that's growing exponentially, any regulator or any central bank must protect their economy and protect their citizens.

And we should be welcoming that. With risk escalating exponentially and bad players succeeding more times than we prefer, the importance of strong regulation can't be overstated.

Mike Cook
Global Payments Leader

IBM



Building Future-Ready Payments Goes Beyond Technology

Financial institutions have different starting points for digital payments transformation, requiring different priorities and investment options. Wherever the journey begins, payments maturity will require using data and advanced analytics to support decision making and improve customer experiences, supporting an innovation culture, automating at scale, modernizing legacy infrastructure and back-office processes, and upskilling human talent.

Creating a future-ready payments infrastructure requires more than technology itself. Digital payments maturity occurs when people and technology unite to create overarching payments business models, leverage the capabilities of industry leaders, use data and insights to drive priorities and invest in technology and digital tools that maximize impact.

A missing element of a strong payments transformation process is often the need for visionary leadership that can not only leverage past experiences, but embrace the change that is needed to become a payments leader. In addition, there is the need to collaborate with outside organizations that can foster innovation and propel payments modernization at the speed of change.

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Leverage the Power of Data, AI and Cloud Technologies

Unlocking the full potential of digital payments transformation requires the use of data, analytics and artificial intelligence to manage risk, reduce cost, build better strategies and deliver an exceptional customer experience. Beyond providing the ability to personalize engagement and improve security and privacy, it has been found that organizations that inject big data and analytics into their operations outperform their peers in both productivity and in profitability.

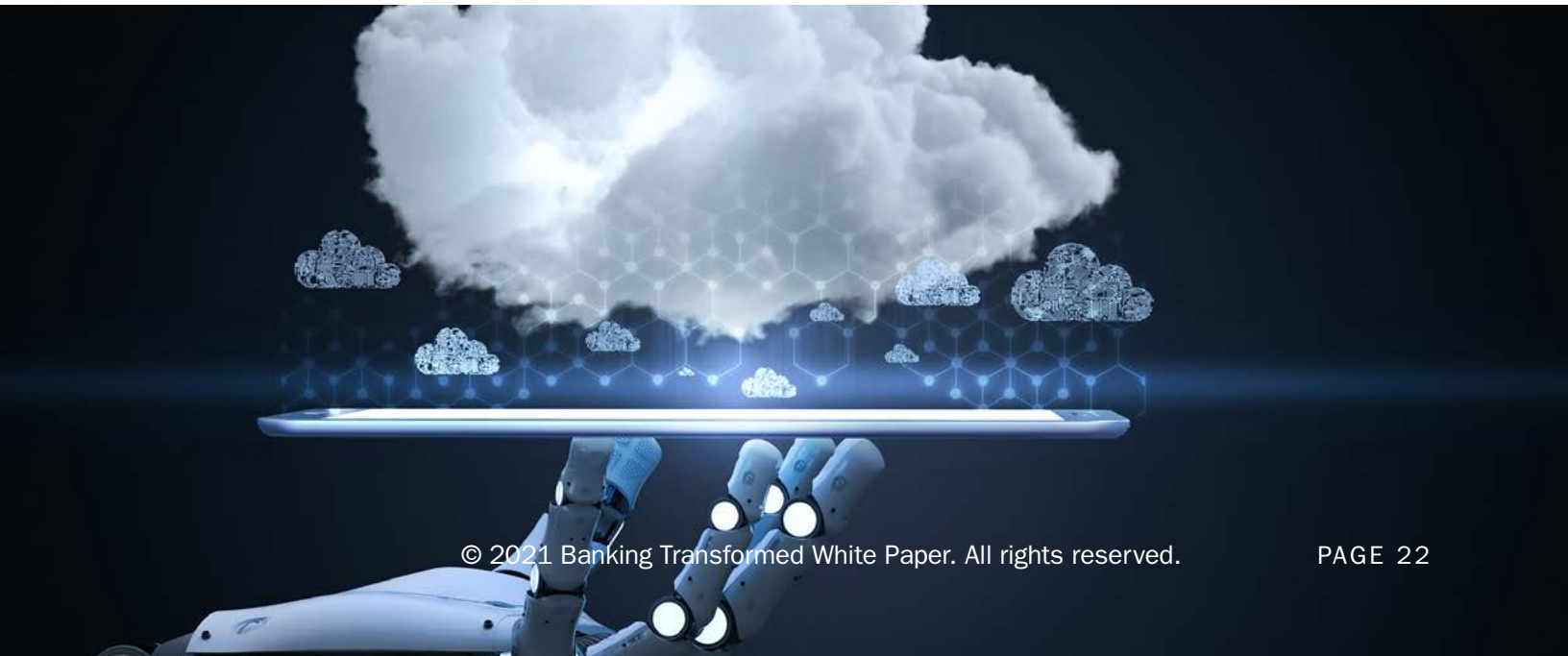
But, advanced analytics and AI should not be a goal in and of itself. These tools should be used to support broader strategies. According to **Wharton**, "Instead of exhaustively looking for all the areas AI could fit in, a better approach would be for companies to analyze existing goals and challenges with a close eye for the problems that AI is uniquely equipped to solve."

Some solutions include everything from fraud detection to facilitating predictive recommendations for customers. Now more than ever, AI needs to be used to deliver human-like intelligence across the entire payments ecosystem. At the same time, machine learning needs to be used to improve data interpretation – as part of the advanced analytics process.

Success in the use of advanced analytics, AI and machine learning will be when it is deployed beyond security and risk — reducing costs and improving efficiency. It will be when organizations use these tools throughout their systems and to create new payments products and services and enhance customer experiences.

A key opportunity for banks to make different – and better – use of data is by improving their ability to scale AI. Banks can improve core processing accuracy and efficiency with advanced AI-powered data and analytics platforms. And as banks look to scale AI, the cloud can boost momentum.

Cloud costs have decreased consistently over the last five years, and cloud security and regulatory compliance offer strong controls. Banks are also getting better at realizing their expectations of cloud – in a recent global survey, 43% of banks reported fully achieving their cost saving expectations and more than 50% were satisfied with the speed to market and resilience achieved.



"The threat for those organizations not fostering innovation as part of the payments transformation process is that traditional and non-traditional competition is changing the banking ecosystem by embracing innovation as part of their business model."

Future-Ready Payments Requires Culture of Innovation

Digital payments transformation can't be achieved without a culture of innovation. As we have interviewed dozens of founders of disruptive payments firms and leaders of exciting new digital units of legacy banks for the **Banking Transformed podcast**, the first thing they mention is the importance of an innovation culture.

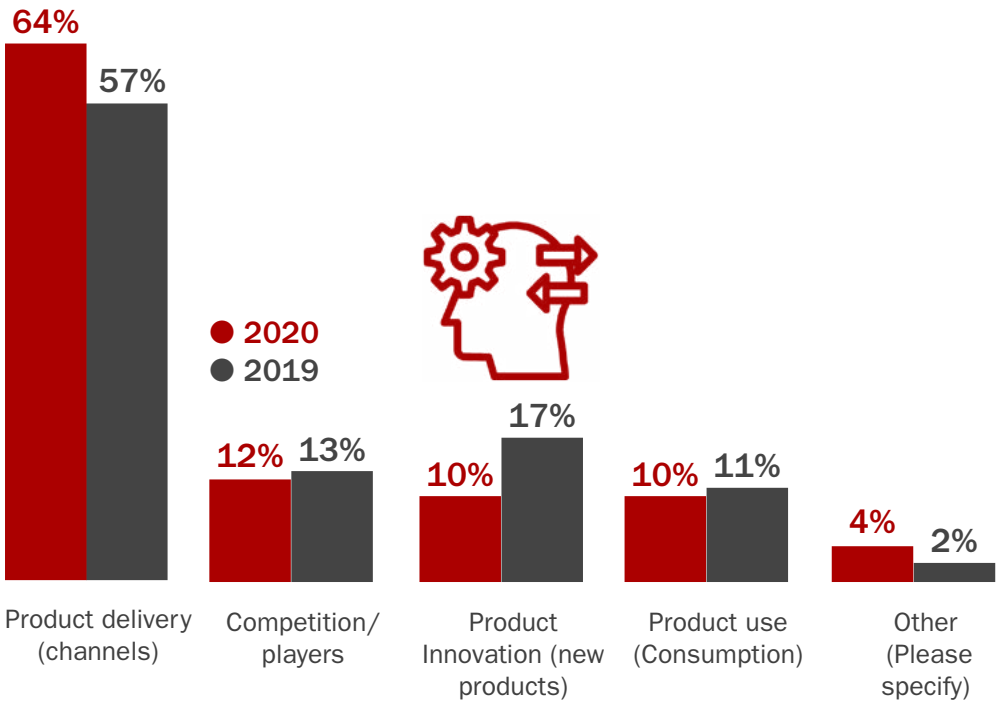
Innovation and digital payments transformation are interlinked and correlated. The organizations furthest along in the payments transformation journey are also those that are innovation leaders. As was found during the early stages of the lockdown with COVID-19, there is an opportunity when financial institutions can use digital to drive innovation and reset the paradigm for both the present and the future. The threat for those organizations not fostering innovation as part of the payments transformation process is that traditional and non-traditional competition is changing the banking ecosystem by embracing innovation as part of their business model.

CHART 8:

AREA OF BANKING TO SEE MOST INNOVATION IN NEXT 5 YEARS

2020 vs 2019

In what area of banking do you see the most innovation taking place over the next five years?



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"The reason for embracing new payments technologies is because the competitive playing field in payments has changed and there is a greater awareness by consumers of what is possible as they order meals from a voice device, engage with others on video, hail a cab with their phone, and get a home loan in minutes."

When looking at the financial services industry, we need to remember that technology is available to all institutions equally. Therefore technology, in and of itself, affords no distinct competitive advantage. Instead, it is the leadership, culture and human component behind the technology and innovation process that sets firms apart.

In other words, digital payments technologies can provide the opportunity for efficiency improvements and improved customer experiences for everyone. But, if the people within the organization lack the innovation mindset to change current processes and solutions, the technology will simply magnify flaws within the organization.

This is not only a problem for financial institutions to solve. Corporations in all markets and asset classes will need to evolve and demand improved payment services for themselves and their clients from the partners they choose as payment service providers. These partners may not always be traditional financial institutions, especially those who are slow to become future-ready.

When looking at innovation initiatives, financial institutions must start with consumer needs. In other words, any effort must be preceded by a diagnostic phase with in-depth input from consumers concerning what they expect — knowing that these expectations are shifting rapidly. And, as opposed to trying to hit the center of the target in a single major change, most organizations have found that the best way to improve the customer experience is to make smaller-scale changes to different components of the engagement — that can be implemented more easily with rapid iterations over time.

Remember, as with digital payments transformation, innovation is not a destination, but a journey that involves evolution over time.

Invest in Modern Technology

Research discussed in the book *The Technology Fallacy: How People Are the Real Key to Digital Transformation* reveals that the human and organizational aspects of digital transformation are often more important than the technological ones. That said, modern technology is still required to digitally transform the payments process within a financial organization.

In other words, financial institutions must deploy new technologies into all areas of the business, changing the way they operate and deliver value to customers. It also requires an ongoing challenge to the status quo, with experimentation and an increasing comfort with failure. The reason for embracing new payments technologies is because the competitive playing field in payments has changed and there is a greater awareness by consumers of what is possible as they order meals from a voice device, engage with others on video, hail a cab with their phone, and get a home loan in minutes.

Some of the technologies that enable digital payments transformation in banking include:

- **Mobile apps.** One of the fundamental changes in the banking industry is the movement from physical delivery to web and online applications to mobile apps. In fact, many organizations are foregoing the development of online capabilities, using mobile upgrades to be the forerunner to online

improvements. The most progressive organizations are making incremental upgrades more frequently than ever, focusing on speed, simplicity, and safety within the user experience.

- **Cloud computing.** Cloud computing has democratized data collection and increased the capacity and security of information processing, allowing financial institutions of any size to upgrade legacy systems piecemeal or all at once. By moving all components of the payment process to the cloud, financial institutions can move quicker and better manage scale.

- **Automation and AI.** More and more functions within banks and credit unions are being automated and improved with robotics and artificial intelligence. One of the most common uses of automation and AI is in customer service, where firms use data, analytics and automated systems to respond to basic inquiries from consumers. This not only saves money, but improves the standardization of solutions, allowing humans to be used for more important tasks.

- **Voice technologies.** While still in the formative stage at many organizations, the ability to perform inquiries and transactions using voice is quickly becoming a differentiator as consumers become accustomed to the functionality of Siri, Alexa, etc.

- **Internet of Things (IoT).** From smart watches to sensors throughout the home, the potential for embedded payments is becoming more commonplace. As organizations are looking for ways to make payments easier, more and more will be done using interconnected devices that talk to each other.

- **Blockchain.** Distributed ledger technology has moved quickly beyond cryptocurrency and has been used by the financial services industry for everything from smart contracts to the simplification of payments processing. A consortium of banks in Canada have even used the technology to give people more power over the data collected by financial institutions.

- **5G.** As payments transformation hits full-speed, the speed of data processing and customer engagement become more important. Fifth generation wireless (5G) technology will enable exponentially faster data transmission and uninterrupted connectivity, opening doors for solutions previously impossible with 4G technology.

Upgrade Outdated Payments Infrastructure

The prevalence of legacy systems still hinders most financial institution's ability to successfully embark on a payments transformation strategy. In research done by the **Digital Banking Report**, legacy systems are considered a primary barrier to banking and payments transformation. If an organization is spending 75% of their IT budget on supporting legacy systems, there is a limit to what is available for modernization.

The good news is that there are many solution providers that can upgrade systems incrementally, allowing organizations to focus on areas of greatest need.

"Sometimes the biggest challenge is for leaders to agree on the optimal target state, and a path to reach it, for the best client-centric payments experience. A digital payments strategy needs to be driven by a vision that aligns the goals of an organization with that of its clients."

— Mike Cook Global Payments Leader, IBM

For banks and credit unions to keep pace with the rapid marketplace changes in payments, many firms are also moving to cloud computing and adopting agile principles, which allow for the processing of massive amounts of data and insights in real time and at a greatly reduced cost.

Legacy systems modernization doesn't happen in an instant. It is an incremental process that differs for each organization based on institution objectives and anticipated business needs. For most financial institutions, it will involve the integration of cloud computing, mobile technologies, advanced analytics, cybersecurity, etc. The goal is to build a flexible infrastructure that can support existing needs and future innovations within payments.

Just as important as changing legacy technology, financial institutions must completely rethink existing back-office payments processes that were created decades ago. These processes transcend the roles of product development, delivery, sales, marketing, and customer service. It goes beyond simply using a digital channel to deliver legacy payments solutions. Payments transformation must begin and end with the customer experience and therefore be built from the inside-out. These systems must also support a robust risk and fraud elimination strategy.

All existing processes must be rethought from the perspective of digital delivery, which requires the removal of friction, the contextuality of engagement, and a focus on speed, ease of use, safety and user experience.

The Need for 'Future-Ready' Leadership

As mentioned often, digital payments transformation requires more than just updating technology or building new digital payments applications. Failure to align the efforts, values and behaviors of leadership and employees can create friction and risks within an organization.

Alternatively, when leadership embraces the changes that are needed, and supports a comprehensive and collaborative effort to advance payments modernization, all efforts to "become digital" will have a greater chance of success. Part of any payments transformation effort is having the communication and actions support the efforts at the top of the organization. It also requires support and buy-in by those in other levels of the organization, including the same middle management that has been doing things the same way for decades.

In addition to making the goals of the payments modernization clear (and how the process will positively impact corporate objectives and strategies) top management and boards must focus on communicating the cultural aspects that will help efforts succeed, including transparency, accountability, and a willingness to experiment and even fail.

Despite the uncertainty about the future, the time to act is now. Those institutions that do so will emerge more prepared to compete in a ever-changing payments ecosystem, with a stronger value proposition, greater efficiency, and higher profitability.

About the Research

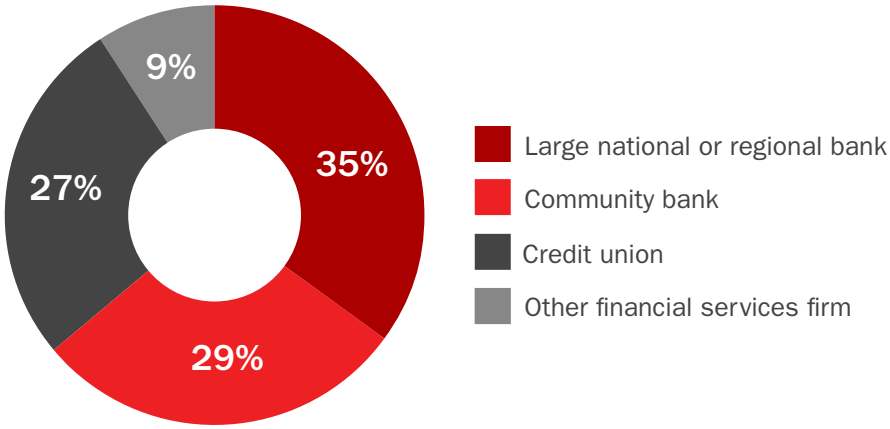
The analysis in this report is based on a Digital Banking Report survey of global banks and credit unions conducted from March 29 – April 6. The survey used the subscriber lists of **The Financial Brand** and Digital Banking Report, which includes organizations of all sizes worldwide.

Responses from non-financial organizations were not included in the results. The responders were self-selected after receiving a nominal incentive of raw survey results.

Among overall survey respondents, 35% are from large national or regional banks, 29% are from community banks, and 27% are from credit unions with 9% from other financial services firms. This distribution is very similar to other research done by the Digital Banking Report, allowing for valid comparisons based on the type of organization.

CHART 9:
RESPONDENTS BY TYPE OF ORGANIZATION

What type of organization do you work for?



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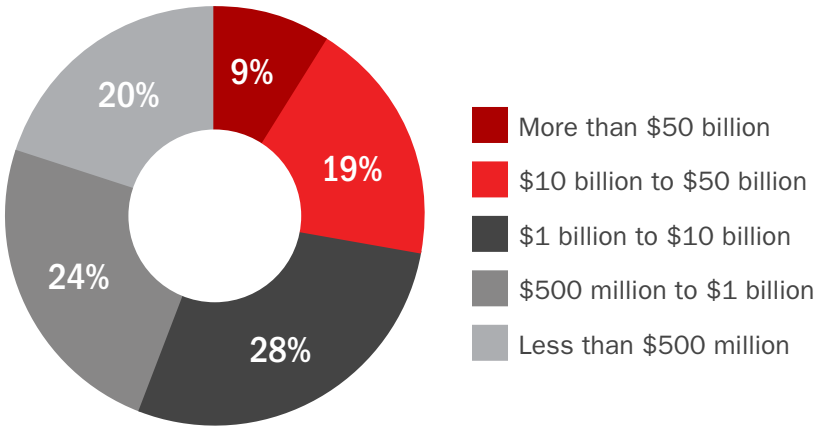
Of the respondents to our survey, 9% of respondents are from FIs with more than US$50 billion in assets, with 19% having US$10 billion – US$50 billion in assets, and 28% representing firms with US$1 billion – US$10 billion in assets. 44% of organizations surveyed were smaller than $1B.

The distribution by size of organization is comparable to the majority of the previous research done by the Digital Banking Report.

CHART 10:
RESPONDENTS BY ASSET SIZE (IN US$)

What is the asset size of your organization?



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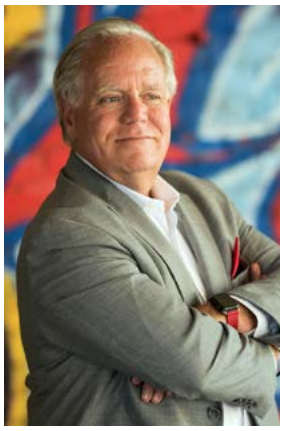
About the Author



Named as a top 5 influencer in banking, Jim Marous is an internationally recognized financial industry strategist, co-publisher of **The Financial Brand**, owner and publisher of the **Digital Banking Report** and host of the **Banking Transformed podcast**. The Digital Banking Report is a subscription-based publication that provides deep insights into the digitization of banking, with over 200 reports that can be accessed in its digital archive.

The Banking Transformed podcast features weekly interviews with global leaders who provide insights into the impact of digital disruption across all industries.

As a sought after keynote speaker, author and recognized authority on disruption in the financial services industry, Marous has been featured by CNBC, CNN, Cheddar, The Wall Street Journal, New York Times, The Financial Times, The Economist, The American Banker and numerous other global publications. He has spoken to audiences worldwide on the impact of change to the banking industry. Jim has also advised the White House on banking policy and is a regular contributor and guest host for the Breaking Banks podcast.

You can follow Jim Marous on **Twitter** and **LinkedIn** or visit his professional website.