Open Banking and Embedded Finance

September 2021

CSI

DIGITAL BANKING REPORT

With the combination of new technologies, data and advanced analytics, innovation and global regulatory guidance, Open Banking provides new business models for banks, new partnership opportunities for fintech firms, and new experiences for customers worldwide.

— Jim Marous

Owner and CEO
Digital Banking Report

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Letter from the Author

DIGITAL BANKING REPORT
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Jim Marous

Open banking is a global trend driven by technology, innovation, regulation, non-traditional competitive offerings, and consumer demand for enhanced financial services and control over how their data is used. Open banking allows for the secure transmission of account data authorized by the customer to a third party provider, leveraging APIs to power new financial solutions.

While the pace of open banking innovations has differed in different regions of the world due to varying paces of regulation, the potential of open banking has moved the financial industry toward data modernization and decentralization. This has provided the impetus for more open and cloud-based technology architectures, expanded data management needs, and the pursuit of new business partnerships.

The U.K. has provided a look into the potential for open banking and lessons to other banking organizations globally. In 2015, the European Union mandated open banking and APIs under its Payment Services Directive 2 (PSD2) and General Data Protection Regulation (GDPR) governing data protection and privacy for consumers. Other countries, such as India and Australia, have followed the E.U.'s approach.

In the U.S., regulators are providing guidelines for open banking, but allowing the marketplace to drive innovation. Guidelines have focused on consumer control and transparency, informed consent, safety, security, data privacy, and accountability for ecosystem risks.

According to the **Federal Reserve of Boston**, "The COVID-19 global pandemic has accelerated the momentum towards a full open banking infrastructure in the U.S., given the demand for expanded connectivity in an environment that is becoming less dependent on an in-person model."

Letter from the Author (continued)

Most banking organizations will have to support open banking and APIs in order to remain competitive. Successful organizations will customize the consumer or corporate client experience. For most banks and credit unions, the impetus will be less about revenue generation than it will be about sustaining customer loyalty and retention.

The mission for traditional financial institutions is to remain at the center of the customer's permissioned data and financial relationships, making the relationship stickier. In the meantime, there is evidence that consumers are currently embracing their own version of open banking, opening new products and services with fintech providers on their own.

We'd like to thank **CSI** for their sponsorship of this Digital Banking Report on the future of open banking. The research shared in this report should provide an excellent foundation for discussion and planning for new business models in the future.

Jim Marous
Owner and CEO
Digital Banking Report

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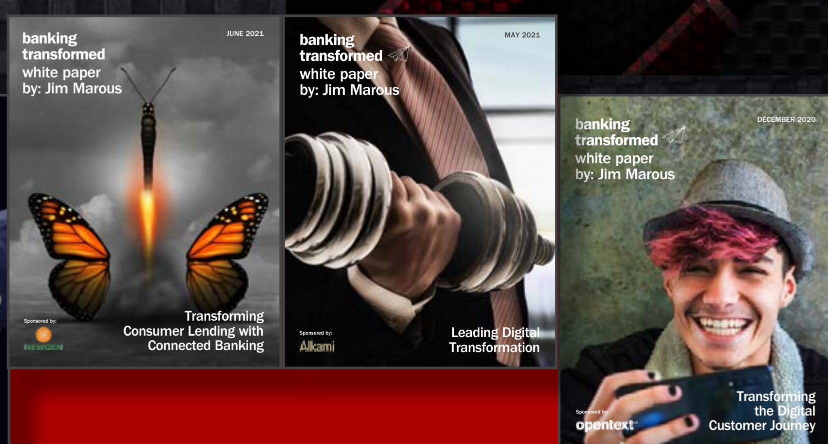

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Key Research Questions and Takeaways

• KEY RESEARCH QUESTIONS:

- What is the open banking maturity of financial institutions globally?
- Who do financial institutions believe will benefit the most from open banking?
- Where are the greatest investments being made for open banking advancement?
- When will the greatest impact be realized from open banking?
- What are the primary objectives for open banking development?

• KEY RESEARCH TAKEAWAYS:

- Open banking is gaining momentum, with close to one in four organizations having an open banking strategy in place. The open banking maturity of financial institutions is directly correlated to asset size, with the largest firms being the most advanced.
- Close to 60% of financial institutions believe consumers will be the biggest beneficiary of open banking.
- 74% of financial institutions are investing in improved infrastructure to support open banking, with 56% investing in outsourcing solutions.
- 72% of banks and credit unions globally believe the greatest impact from open banking will be felt in the next 2-5 years, with 13% saying the greatest impact will be in the next 12 months.
- The top three objectives for open banking development are improving the customer experience, remaining competitive and generating new customer relationships.

Executive Summary

Executive Summary

Financial institutions that have a strong open banking strategy, powered by open APIs, will be in a position to deliver new ways of acquiring, engaging and expanding relationships. This will improve customer experiences and drive new revenue opportunities.

Financial institutions globally are increasingly embracing the concept of open banking, changing business models, re-prioritizing investment strategies and building third-party partnerships that will drive innovation and customer experiences in the future.

The move away from products and services only being built and distributed by traditional financial institutions is gaining momentum, with the use of application programming interfaces (APIs) now seen as a secure and standardized method to provide consumers more control over how their data is used. This shift is transforming the dynamics of customer relationships, disrupting traditional banking business models forever.

Open banking has become one of the major drivers of digital banking

transformation, impacting technology and infrastructure investments, data modernization and decentralization strategies, fintech partnerships and even reskilling programs. The primary beneficiary of these efforts will be the consumer, according to research done by the **Digital Banking Report.**

Massive Opportunity:

Open banking provides traditional institutions an opportunity to increase efficiencies, improve the innovation process, enhance customer experiences and generate new revenue streams.

To prepare for this shift in the way banking will be done moving forward, banks and credit unions must determine the most appropriate business model that will meet their future business objectives. Then institutions must assess the capabilities required to deploy against the model selected and build partnerships with third party providers to make the strategy successful.

For some institutions, the decision may be to build a banking-as-a-platform (BaaP) model or a banking-as-a-service (Baas) model to open doors for selling products and services to an expanded prospect universe. Open banking also provides the opportunity to streamline and automate back-office processes, build a stronger innovation culture and improve customer retention.

Banks Increasingly Embracing Open Banking

The potential to use APIs to broaden relationships and improve the customer experiences has exploded over the past decade, with platform organizations such as Apple, Google Amazon, Uber and Facebook using the model to grow exponentially and grab significant market share from established firms, including banks and credit unions.

But, you don't have to be a tech giant to benefit from APIs — the opportunity is being leveraged in virtually every industry and by organizations of all sizes. In fact, small and midsize financial institutions that want to reach digital audiences beyond their existing geography or traditional product set can leverage open APIs. The options include creating an independent platform, partnering to jointly create a platform, or becoming part of another platform's ecosystem. And there are many third-party solution providers who are willing to assist.

According to the **Harvard Business Review**, "Smaller firms could have an agility advantage by unbundling their capabilities, designing for their consumers, and exploiting opportunities in their respective ecosystems. The beauty of working with digital building blocks is that you don't have to demolish the old factory and build a new one."

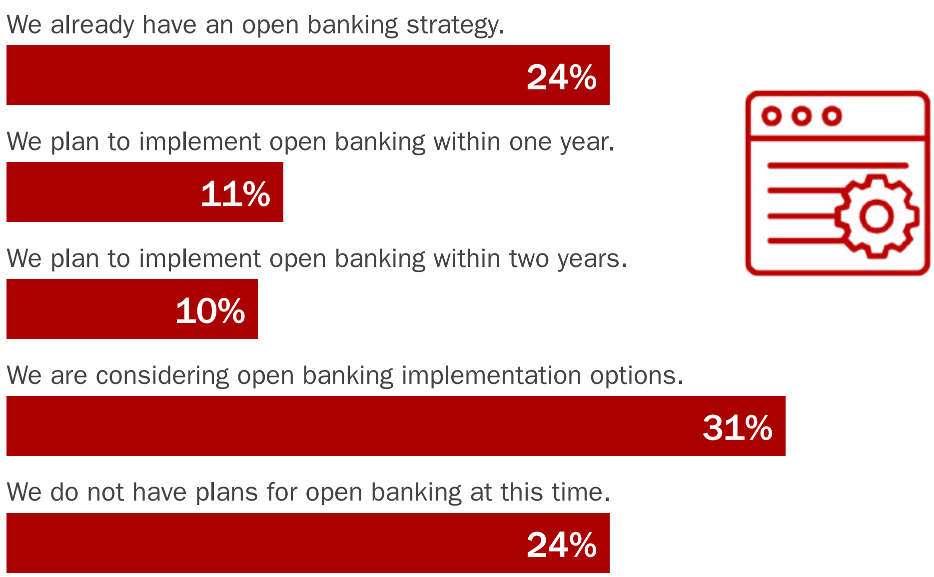
Financial institutions are rapidly moving to develop their own response to open banking progress by fintech and other non-traditional financial institutions. While there are some model agreements in the marketplace, many large FIs have created their own data-sharing agreements, often based on Consumer Financial Protection Bureau (CFPB) principles, such as security, customer control, transparency, and privacy. (For more details about current open banking rules and regulations, see the white paper issued by the Federal Reserve Bank of Boston.)

A 2019 **Deloitte** survey showed that consumers seem receptive to open banking. One in five U.S. consumers expressed that they found open banking valuable, with more interest among Millennials (39%) and Gen X consumers (50%). Despite privacy and security concerns in the use of their personal information, consumers expressed interest in easier financial services and management, including the ability to compare bank services, integrate financial data and personalize budgeting tools.

To build an open banking strategy, financial institutions will need to learn how they can work in this new world of ecosystems which requires a completely new way of dealing with customers, partners and traditional competitors. The good news is that the pandemic seems to have put a new energy into the desire to build such platforms. In our research, 24% of financial institutions already have an open banking strategy, with another 21% planning to implement an open banking strategy in the next two years. The fact that another 31% are considering an open banking option is also encouraging.

CHART 1: OPEN BANKING STRATEGIES GAINING MOMENTUM

Please describe your organization's open banking or platform banking strategy.



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Not surprisingly, when we analyzed responses by asset size, the largest financial institutions (over $100 billion in assets) were the furthest along in their development of open banking strategies, with 32% stating they already had an open banking strategy and another 21% planning to implement an open banking strategy in the next year. Only 5% of megabanks did not have plans for open banking at this time. Midsized organizations ($10 billion to $100 billion) and the smallest organizations (under $10 billion) mirrored the banking industry as a whole when we looked at open banking maturity.

Biggest Banks Doubling Down on Open Banking:

Over 50% of megabanks (over $100 billion in assets) have either implemented an open banking strategy or will do so in the next 12 months.

> *"Transforming existing business models for a digital banking economy is not easy. Despite a growth in the development of open banking platform strategies, the maturity of open banking is still low. To make an impact, organizations must re-allocate capital and resources."*

Reasons for Adopting an Open Banking Strategy

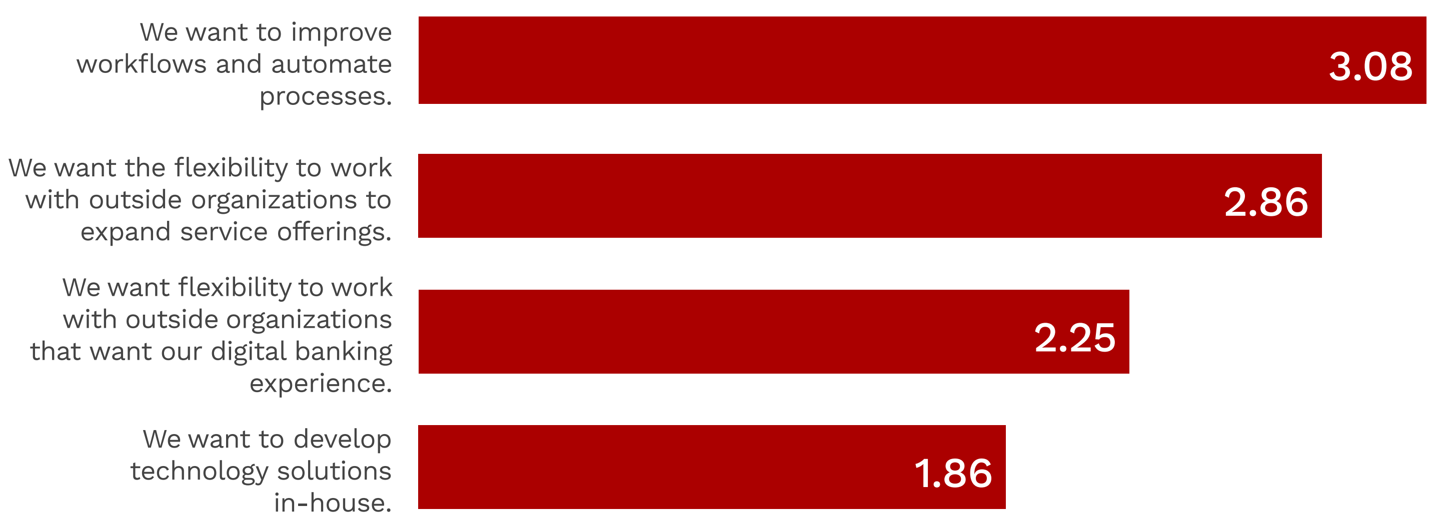
While open banking is required in some regions, such as with the European Union's Second Directive on Payment Services (PSD2) or California's Consumer Privacy Act (CCPA), there are many other strong reasons for banks and credit unions to implement an open banking strategy. These include:

- **Improved digital infrastructure** that simplifies workflows and automates processes leading to increased efficiencies. This also enables data to be better used internally for enhanced customer experiences and increased customer lifetime value.
- **Expanded service offerings** that can create additional direct revenue streams. Open banking partnerships can also be used to create up-sells or cross-sells for other banking products.
- **Third-party collaboration** that leverages existing digital banking expertise to create unique value propositions that can generate new customers.
- **Retention of relationships** by providing solutions that make it less likely for customers to look for alternatives. This increases customer lifetime value, improving long-term profitability.

Transforming existing business models for a digital banking economy is not easy. Despite a growth in the development of open banking platform strategies, the maturity of open banking is still low. To make an impact, organizations must re-allocate capital and resources. When we asked organizations to rank the priorities for open banking implementation from **1-4 (with 4 being the top priority)**, there was a fairly uniform consistency that organizations were most interested in improving the back-office infrastructure and to expand product/service offerings.

CHART 2:
AUTOMATION AND EXPANDED SERVICE OFFERINGS DRIVE OPEN BANKING

Rank the priorities for an open banking implementation.



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Financial institutions need to be cautious on two different fronts. First, they need to avoid focusing only on finding economies through back office process improvement. The consumer experience can't be ignored. Secondly, it's easy to stick with what has worked in the past, waiting for the open banking trend to 'go mainstream'. With change happening so quickly, being a 'fast follower' will likely result in lost opportunities.

The Need for Speed:

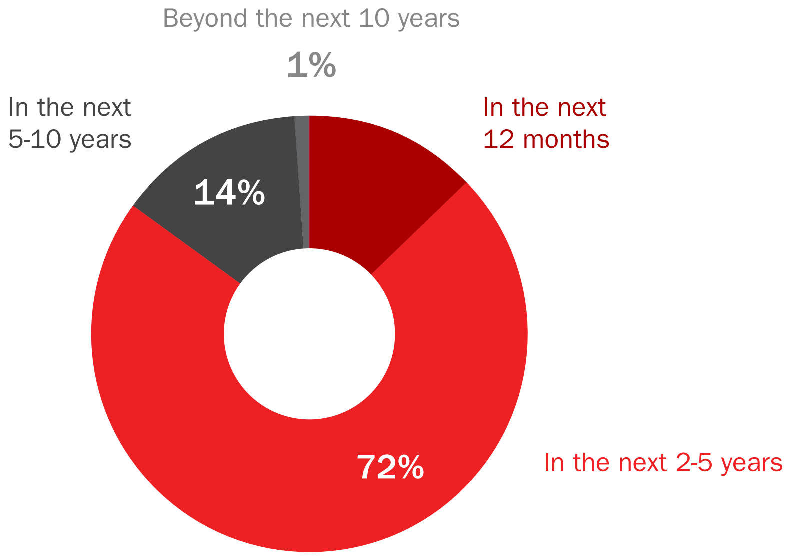
85% of financial institutions believe the greatest impact of open banking will occur in the next 5 years.

When we asked financial institutions globally about how quickly open banking will have a major impact on the industry, it was clear that time is not on the side of those slow to react. While only 13% of all respondents see open banking as having a significant impact on their business in the next 12 months, an additional 72% see the greatest impact between 2 and 5 years. Not surprisingly, the largest financial institutions were the most likely to see the impact the fastest.

CHART 3:

GREATEST IMPACT OF OPEN BANKING EXPECTED WITHIN NEXT 5 YEARS

In what time period do you expect open banking to transform the financial services industry the most?



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Investment for the Future

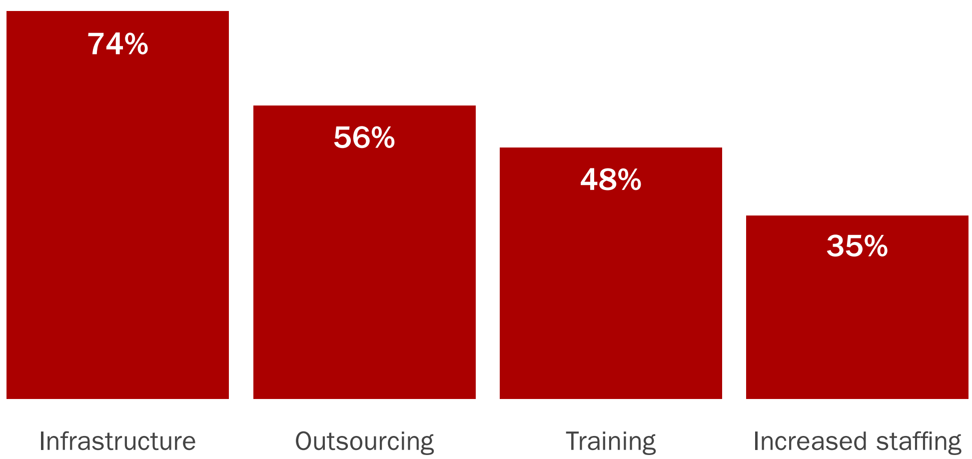
Incumbent banks and credit unions are investing heavily in all components of digital banking transformation as the largest financial institutions, technology giants, fintech firms and digital-only banks continue to gain market share. The investment in transformation strategies extends into making an organization more future-proof with open banking.

When we asked what investments were most important to support open banking strategies, almost three-quarters of organizations surveyed stated the need for increased investments in infrastructure, with over half also saying that outsourcing investments would be required. For organizations with assets in excess of $100B, the investment in infrastructure jumped to 94%, with those indicating an investment in outsourcing dropping to 47%.

CHART 4:

INFRASTRUCTURE AND OUTSOURCING LEAD OPEN BANKING STRATEGIES

What investments does your institution plan to make to support open banking? (Mark all that apply.)



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Consumers Will be Primary Beneficiary of Open Banking

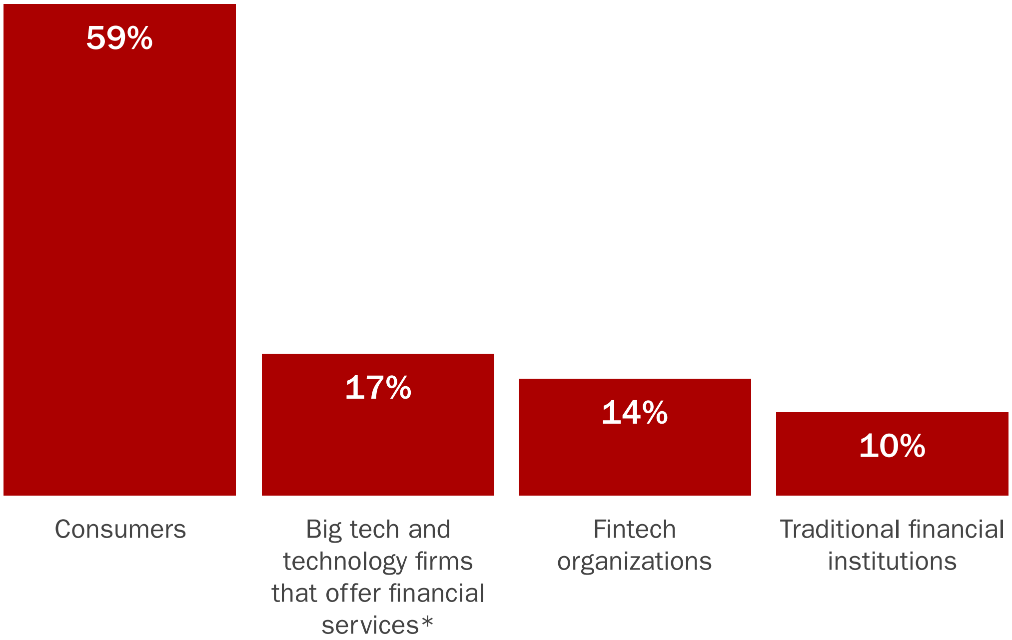
Consumers are increasingly demanding relevant, timely and personalized experiences that can save them time and money. The pandemic illustrated how well organizations in every industry could respond to the opportunity to bring technology and digital delivery together to meet consumer needs. In banking, traditional and non-traditional financial services providers can play an important role in creating open banking opportunities that can serve the institutions while also providing valuable customer experiences.

When we asked financial institutions globally who would benefit the most from open banking, an overwhelming percentage (59%) believed it will be the consumer. Far below that number were big tech and technology companies (17%), fintech organizations (14%) and traditional banks and credit unions (10%)

CHART 5:

CONSUMERS EXPECTED TO BENEFIT THE MOST FROM OPEN BANKING

Who do you believe benefits the most from open banking?



*Like Apple, Google, Amazon, etc.

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

Open banking is part of the inevitable transformation to a platform economy. Every industry is experiencing this disruption at a pace never anticipated before the pandemic. It is no longer a question as to what will happen in the future, but what path each institution will take in the new open banking ecosystem.

Open Banking Trends

Open Banking Trends

For all the debate about it, open banking essentially is the open exchange of financial data, a trend that will only increase. Yes, it empowers fintechs and big techs, and that challenge will loom larger. But a deep analysis of open banking identifies significant operational and competitive benefits for U.S. banks and credit unions that have not previously been recognized.

Contribution by: Bil Streeter
Editor, **The Financial Brand**

Would legendary **Citibank** CEO Walter Wriston, widely considered the father of modern banking, have favored "open banking"?

The term didn't exist when Wriston strode the Earth as a banking colossus in the late '70s to mid '80s. But Wriston famously said, "Information about money is more important than money itself."

"While it's not clear yet exactly how open financial data will evolve in the U.S., the trend toward greater sharing of data between financial institutions, fintechs, big techs and other third-party providers is only going to increase."

Less well known is another Wristonism: "Information is a business in itself. It is also something that has made control impossible … you cannot get customers to accept prices in one place when they know there's a better deal elsewhere. It's a whole new world."

Wriston wasn't one to resist change, he was all about adapting to it. We think he'd be on board with open banking, figuring out a way to make it work to his institution's advantage.

McKinsey suggests that embracing open banking is indeed in the interests of financial institutions as much as it is for fintechs, businesses and consumers.

McKinsey actually pegs a value to the adoption of open financial data: a boost in GDP of between 1% and 1.5% in the U.S., U.K. and European Union, and far higher in some other countries, notably India.

This is not predicated on the implementation of rule-based models such as those used in the U.K. and E.U., but to the broad adoption of the digital infrastructure, and privacy and security protections that will enable the free flow of data to occur.

Wake-Up Call:

McKinsey's detailed analysis, along with recent developments, suggests strongly that financial institutions, if they have not yet taken steps to prepare for a world of open data, should begin crashing on it.

In the U.S., President Biden made a specific reference to moving forward with financial data sharing in his far-reaching executive order of July 9, 2021. That is expected to add momentum to various private-sector efforts to create an orderly approach to open data. The Financial Data Exchange's API-based approach, for example, has been embraced by banking and nonbanking companies that until recently had been at odds over security issues inherent in the practice of screen-scraping of data.

"We don't think it's been so much a case of resistance to open financial data in the United States," observes Olivia White, a McKinsey Senior Partner and one of the principle authors of the Unbound report, "but rather that the openness banks see driven without regulation has created less of an organized push than in other countries."

As the report notes, the U.S. already shares a wide range of data, but lacks standardization. Private-sector data aggregators like **Plaid** "broker data flows between providers and users, with limited consumer control," McKinsey states. CFPB's rule-making could introduce a more standardized framework, although it's unclear at this point what direction the agency will take.

Why Open Data Sharing Will Change Banking

While it's not clear yet exactly how open financial data will evolve in the U.S., the trend toward greater sharing of data between financial institutions, fintechs, big techs and other third-party providers is only going to increase. This will have profound implications for the near-term future of the traditional banking industry, according to McKinsey.

In its report entitled, "*Financial Services Unchained*," McKinsey states: "We believe that if open finance continues to accelerate it could reshape the global financial services ecosystem, change the very idea of banking, and increase pressure on incumbent banks."

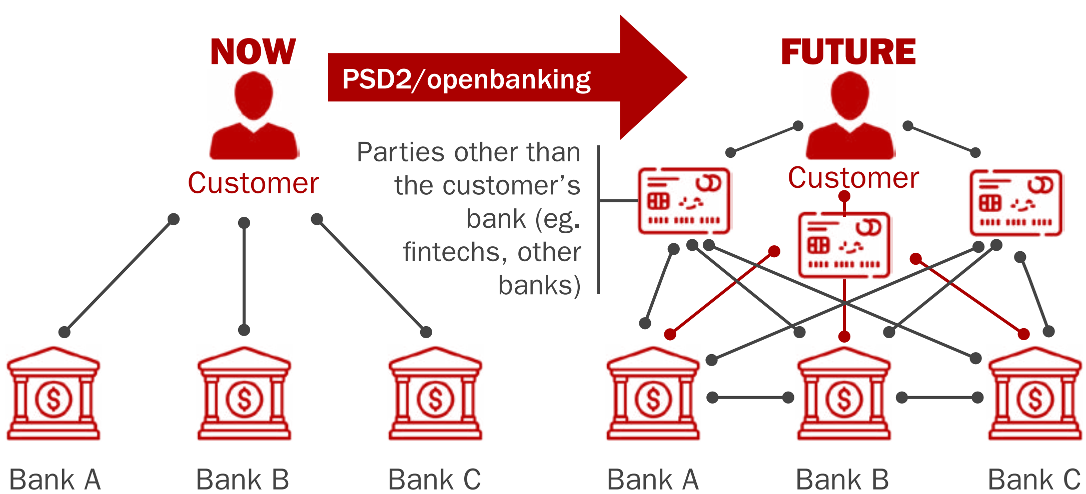
The report further predicts that the " ability for customers to better understand their full financial picture — one of open banking's promises — could result in margin compression, as pricing and charges become more transparent. Banks may also have to contend with margin sharing, as payouts to digital platforms could play a far greater role in customer acquisition."

The chart below, based on the situation in the U.K. and Europe, gives a visual representation of how things will change.

CHART 6:

HOW OPEN BANKING CHANGES FINANCIAL SERVICES

Change based on U.K./E.U. experience



Banks own the customer relationships because their apps/e-bank and branches are the only ways to access their services.

Banks open access to their core banking services through 3rd-party channels via APIs, enabling much greater transparency and letting nonbanks compete

Customer data

The EU's second Payment Service Directive

Source: McKinsey © September 2021 Digital Banking Report

If that weren't sobering enough, McKinsey maintains that open financial data puts powerful big tech companies in a stronger position to become financial-services players. Google's Plex banking account, offered in partnership with banks and credit unions, is a real-life example of what's coming.

"We think the open data ecosystem is evolving in interesting ways that aren't as simple as banks win or lose and fintechs win or lose."

— Olivia White, McKinsey & Co.

"We increasingly see big tech players entering financial services, and using open financial data as a tool in that product expansion," White states. However, she adds, "data is like sunshine, not like oil." Meaning multiple players can use the same data. As a result, big tech companies will have bank partners, but will continue to face many bank competitors, she states.

The outcome of this increased competition in banking is not likely to be winner take all, however, and McKinsey expects incumbent institutions to continue to play a meaningful part. Still, the consulting firm firmly states it will be imperative for them "to understand and respond to these changes, reimagine offerings, adjust business models, and forge successful partnerships with fintechs or tech companies, to ensure continued success and relevance."

There is Significant Upside Value in Open Data

While it may seem from the above that traditional financial institutions face a tough future, the McKinsey report entitled "*Financial Data Unbound*," outlines seven primary benefits of open financial data. Four of them specifically relate to financial institutions, the other three more to consumers and small to midsize businesses.

For the most part, financial data sharing is still limited in many areas of financial services, resulting in friction, cost and reduced access, the firm states.

Importance of Value Transfer:

Consumer willingness to share financial data doubles when they find an appealing product or service enabled by it or understand the value it might bring them, a McKinsey survey found.

In the following chart, McKinsey plots the benefits of open financial data sharing. The chart looks at the three main benefits to consumers and small businesses, indicating ten specific use cases.

CHART 7:

HOW OPEN FINANCIAL DATA CREATES VALUE FOR CONSUMERS/BUSINESSES

Consumer Actions	Increased access to financial services	Greater user convenience	Improved product options
Understand			• Access to competitive mortgages, traditionally facilitated by brokers, for individuals
Purchase	• Newly allowing access to retail credit through alternative credit underwriting for individuals. • Newly allowing access to retail credit through alternative credit underwriting for MISMEs*	• Simplified application and onboarding process for MISMEs	
Use	• Retail debt consolidation at reduced interest rates for individuals		• Increased deposit yields through easier account switching for individuals. • Increased deposit yields through easier account switching for MISMEs • Improved customer segmentation to reduce switching costs for individuals • Improved customer segmentation to reduce switching costs for MISMEs
Exit		• Automated data portability between accounts for individuals	

* Micro, small and medium sized enterprises

Source: McKinsey © September 2021 Digital Banking Report

Below are excerpts of the three main benefits to consumers and small firms from open finance, as described in the McKinsey report:

1. **Increased access to financial services.** Data sharing enables customers to buy and use financial services to which they might not otherwise have access. For example, open financial data can help assess the creditworthiness of borrowers by sourcing rent, phone, utility and other bills.

2. **Greater user convenience.** Data sharing saves time for customers in their interactions with financial services providers, most importantly during product purchase and exit. For example, open access to data on available mortgage products, with applications automatically prefilled, allows consumers to apply for loans without needing to use mortgage brokers.

3. **Improved product options.** Open financial data can broaden and improve the range of product options available to customers, saving them money. For example, an open-data ecosystem makes it easier to switch accounts from one institution to another, helping retail and small business customers obtain the best yield.

Open Banking Provides Many Benefits

One of the biggest benefits of open banking is the collaboration potential between banks and fintech firms. As opposed to being in direct competition for a consumer's business, the collaboration can result in an almost seamless integration that benefits the consumer. There is also the benefit of innovation speed which is more important now than ever before, given the speed of market change.

According to McKinsey, the general benefits of open banking were efficiency, fraud protection, improved workforce allocation and reduced friction in data intermediation. These benefits applied to both traditional financial institutions as well as fintech organizations.

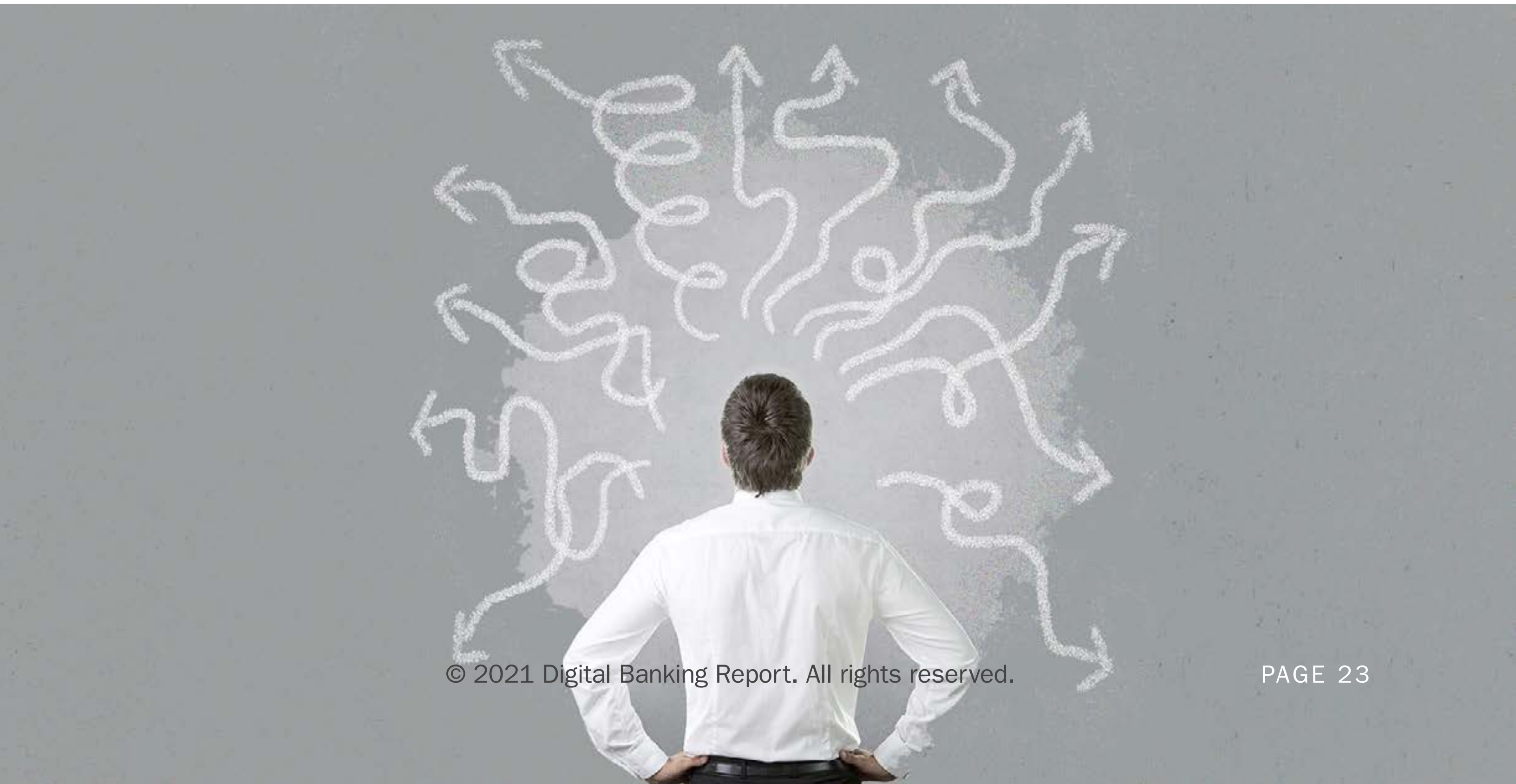


CHART 8:
HOW OPEN FINANCIAL DATA BENEFITS FINANCIAL INSTITUTIONS

Provider Actions	Increased operational efficiency	Better fraud protection	Improved workforce allocation	Reduced friction in data intermediation
Design and market	• Marketing efficiency through data-driven targeting		• Access to market and customer data for product design	• Direct access to lead-generation data traditionally brokered by 3rd party providers
Decision and onboard	• Automated underwriting of standard mortgages • Data availability to drive faster mortgage closure • Automated KYC for individuals. • Automated KYC for MSMEs*			• Direct access to mortgage data traditionally brokered by 3rd party providers
Service and monitor	•Streamlined data entry into CRM systems • Predictive data driven digital/IVR call center operations • Data-driven reductions in the cost of credit recovery	• Fraud reduction through timely and comprehensive data	• Data-driven reorientation of collections teams toward higher risk borrowers	
Terminate and close	• Automated notification of events that should trigger account closure			

* Micro, small and medium sized enterprises

Source: McKinsey © September 2021 Digital Banking Report

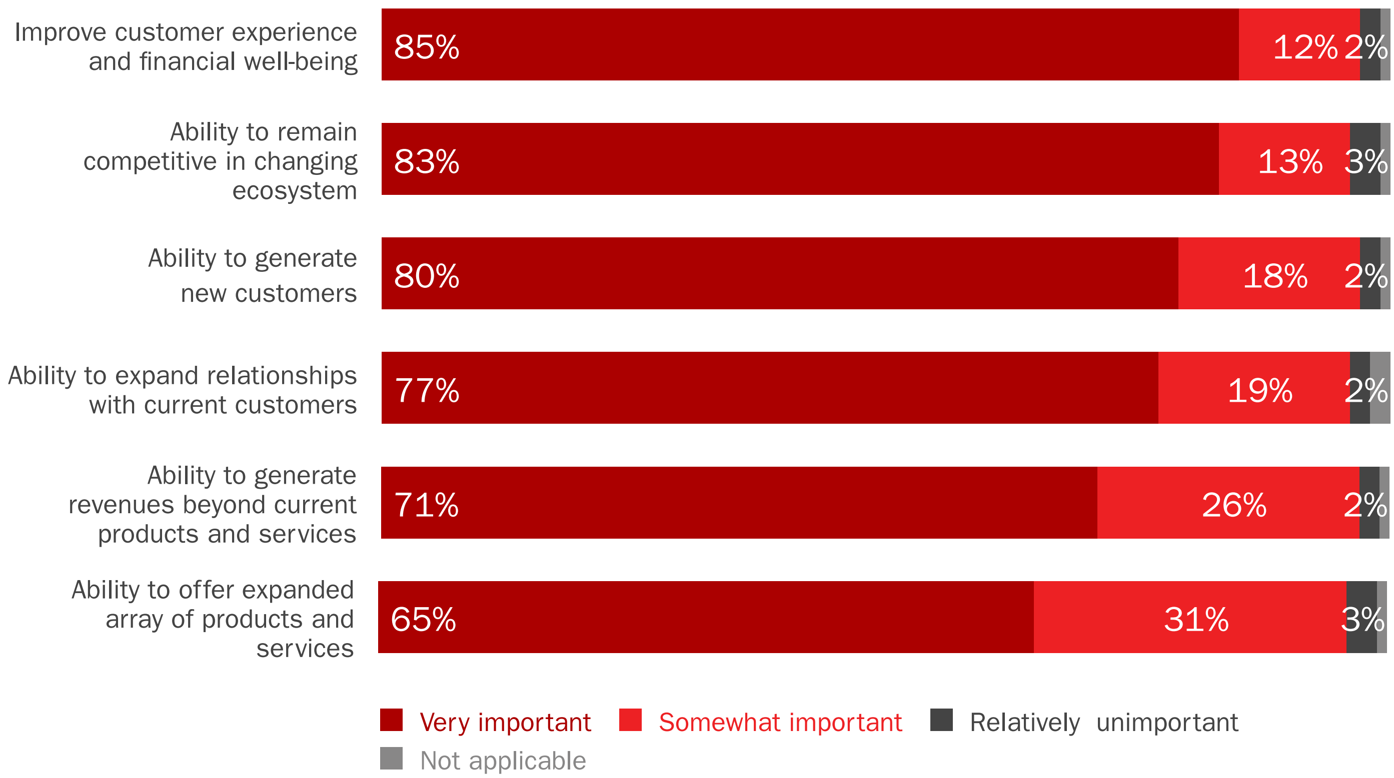
When the Digital Banking Report asked financial institutions globally about the benefits they expected from open banking, the biggest benefit expected was in support of a stronger customer experience and an improvement in financial well-being. Aligned with this benefit was the belief that open banking would allow their organization to remain relevant in an increasingly competitive marketplace.

As the chart below illustrates, open banking is also anticipated to support acquisition, cross-sell, and revenue objectives.

CHART 9:

OPEN BANKING EXPECTED TO SUPPORT MULTIPLE BUSINESS OBJECTIVES

How important are the following to your open banking initiatives?



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To achieve the benefits that are mentioned, traditional financial institutions will need to change existing business models, leveraging new technologies, and embracing completely new business models. In the future, technologies such as voice assistants and elements of augmented reality will be incorporated into the interfaces of banking institutions. Legacy banks and credit unions will need to determine whether to embark on this journey independently or to use fintech providers to enrich the customer journey. In this new model, there will definitely be a reduced need for physical locations since most of the open banking innovations will be delivered in an entirely digital world.

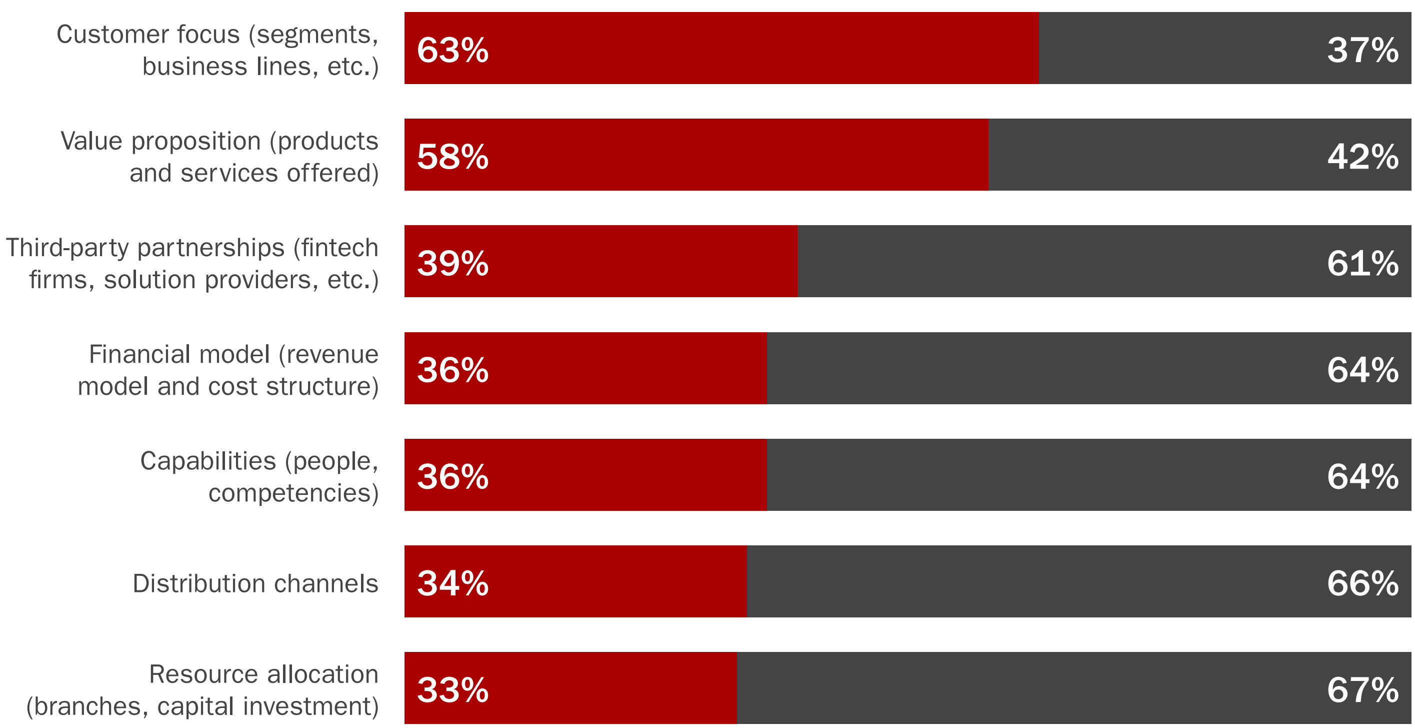
Need a Long-Term View

Open banking offers both short- and long-term opportunities for financial institutions. Beyond the short-term benefits of an improved customer experience, there are significant business model benefits that financial institutions mentioned as part of our research. In the next 5 years, not only do financial institutions expect long-term consumer benefits, but they believe their business models will be enhanced by improved value propositions, a broader array of third-party integrations, enhanced revenues and expanded capabilities.

For most organizations, it will be a case of 'walking before you run', with use cases being created and more sophisticated open banking business models being supported. The objective, in the longer term is to be future-ready, creating the foundation with business model and infrastructure modernization to expand both banking capabilities and services for a marketplace that expects more. This will require a much more seamless flow of digital capabilities in both the back-office and front facing areas of the bank.

CHART 10:
BUSINESS MODEL IMPACT OF OPEN BANKING OVER NEXT 5 YEARS

Please rank the components of your business model likely to be impacted the most by open banking in the next 5 years.



■ Ranked in top 3 ■ Other than top 3 ranking

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Deployment of Open Banking

Successful adoption of open banking will usually require significant re-engineering of existing core banking infrastructure. It will also require an enterprise-wide embracing of new back-office processes and business strategies that will be able to support API-based business models.

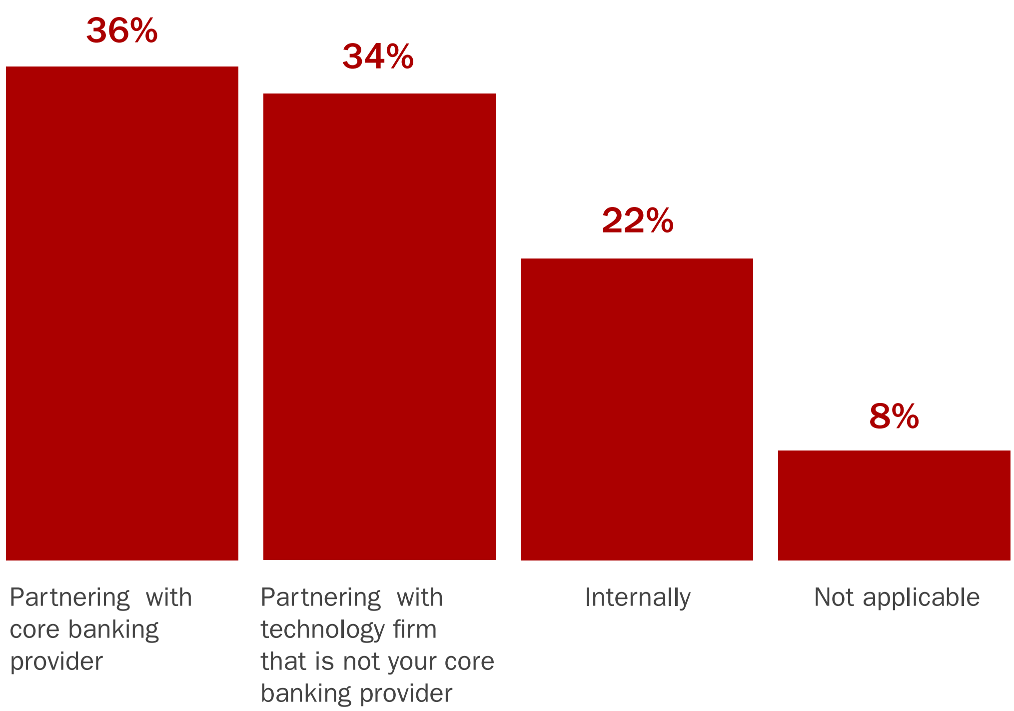
While this transformation can occur in a somewhat phased manner based on both short-term and longer-term objectives, the transformation is not optional to support open banking. Interestingly, when we asked financial institutions how they would support API development, an almost equal number of organizations indicated a reliance on existing core banking providers compared to the option of using a technology firm that was not their core provider.

This diversion of option is most likely a reflection of the confidence in existing core providers to be able to support open banking objectives at the speed of change. This is also consistent with other research conducted by the Digital Banking Report regarding the desire to increase partnerships with multiple third-party providers that have illustrated unique skills to meet future-ready objectives.

CHART 11:

API DEVELOPMENT WILL DEPEND ON CORE AND TECHNOLOGY PROVIDERS

How does your organization plan to develop APIs?



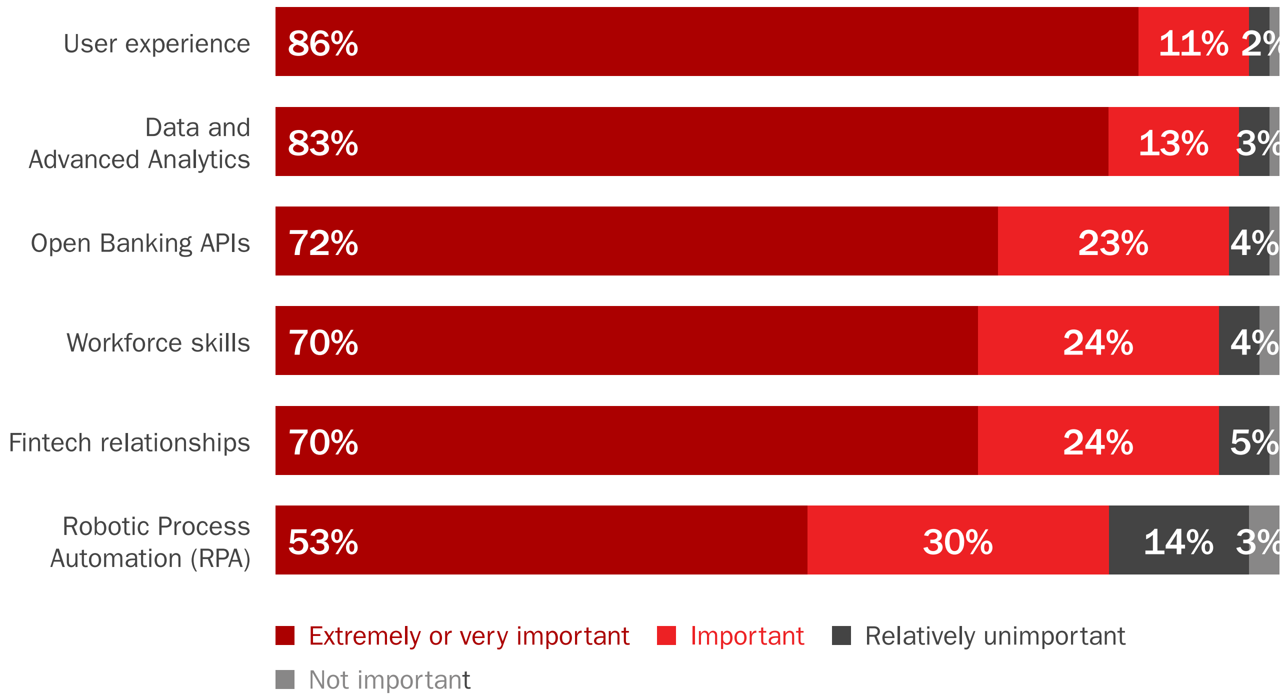
Source: Digital Banking Report Research © September 2021 Digital Banking Report

When we inquired about the importance of third-party partnerships beyond core providers, they aligned with many of the key gaps in digital transformation in general. From improving the user experience, improving the use of data and advanced analytics and building and deploying open banking APIs, most financial institutions did not have confidence that their current core provider could deliver on these needs.

CHART 12:

BANKING RELIES ON PARTNERSHIPS BEYOND CORE PROVIDERS

Please indicate the importance of third-party partnerships beyond your core provider in the following areas.



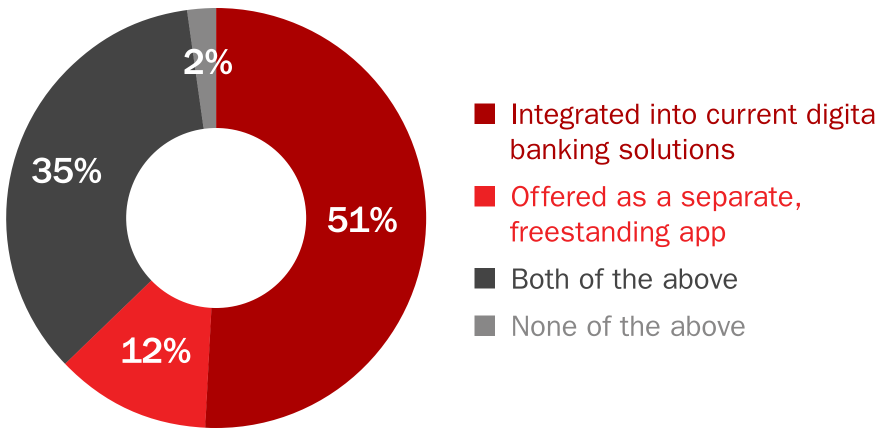
Source: Digital Banking Report Research © September 2021 Digital Banking Report

When asked how open banking would be delivered, more than half (51%) of the financial institutions responded that they would integrate their solutions as part of their existing digital banking platform as opposed to a separate, freestanding app. Interestingly, 35% of the organizations anticipated that open banking would be deployed on both an existing platform and a new, freestanding application.

CHART 13:

OPEN BANKING WILL BE DEPLOYED ON EXISTING DIGITAL PLATFORM

How would your organization deliver open banking solutions?



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Challenges With Open Banking Deployment

Open banking enables financial institutions to connect existing services as well as external solutions between third-party providers and customers through digital channels including online, mobile, voice and chat. It also will open opportunities for workforce automation across internal and external systems. This provides extensive opportunities and new banking models.

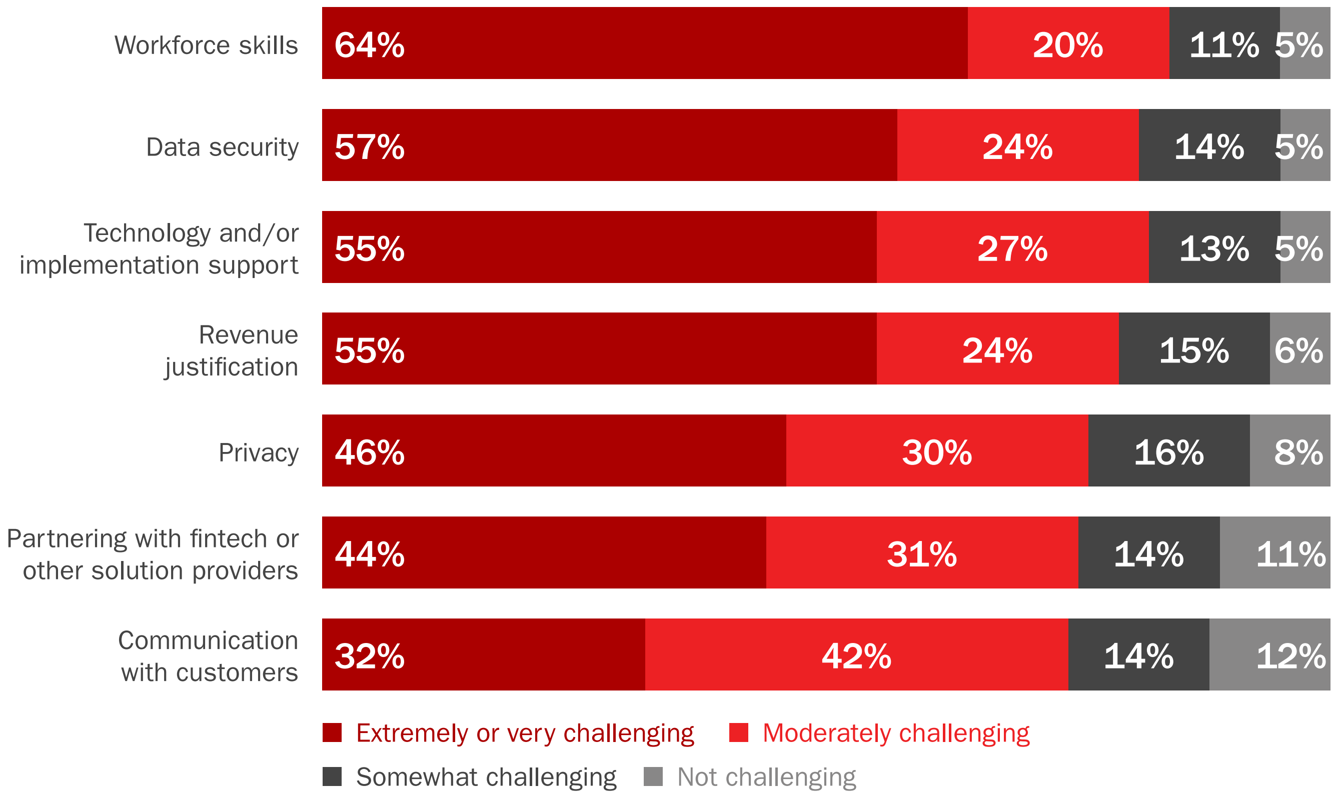
However, traditional financial institutions and fintech firms face several challenges in their effort to support open banking initiatives. Interestingly, the highest rated challenge found in our research was around workforce skills. This may relate to technical skills, but there is also the possibility that a deep understanding of open banking is lacking in many organizations.

Not surprisingly, data security and privacy issues also ranked very high in the challenges mentioned. And consumers are aware of this risk. In fact, research shows that 48% of consumers had negative opinions about open banking because of data and cybersecurity concerns. The good news is that cybersecurity is constantly getting better, looking for vulnerabilities and usually identifying issues before they happen.

Finally, of the major challenges identified, putting the necessary technology and support infrastructure in place was the third most mentioned challenge. In many organizations, this challenge is being addressed through third-party partnerships.

CHART 14:
MAJOR CHALLENGES EXIST FOR OPEN BANKING SUCCESS

Please indicate the level of challenge in the adoption of open banking at your organization.



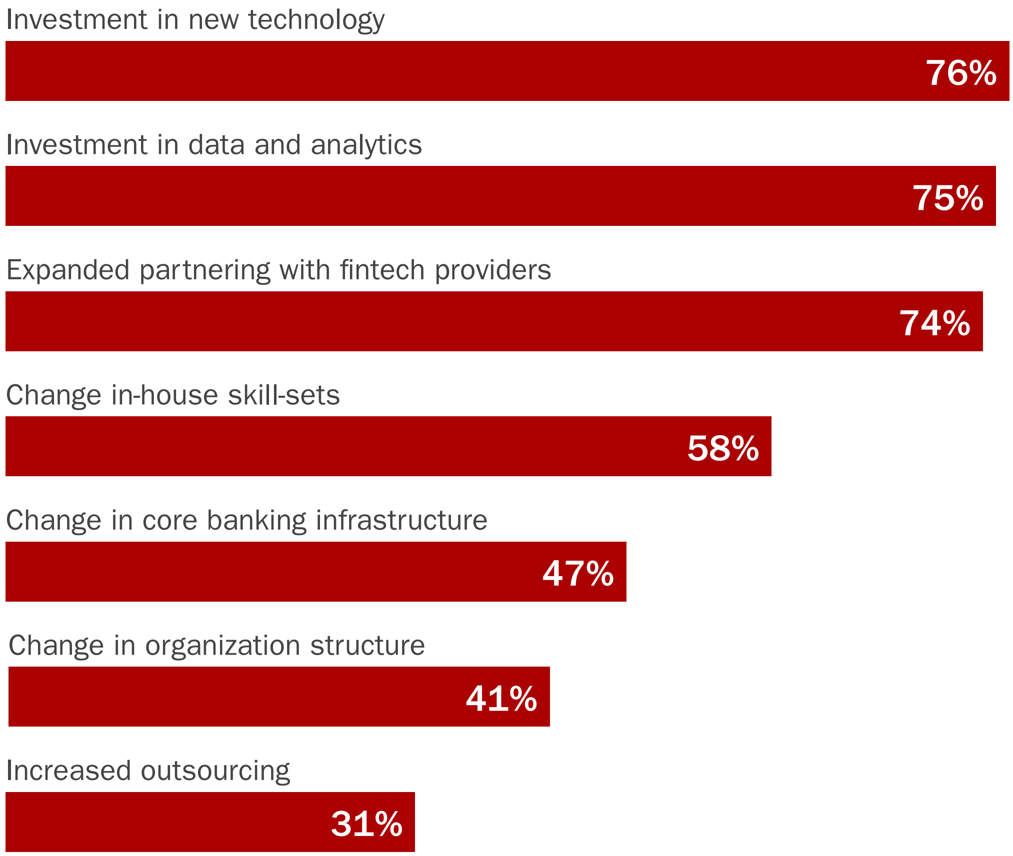
Source: Digital Banking Report Research © September 2021 Digital Banking Report

When we dug deeper to determine where investments would be required to support open banking, the vast majority of organizations stated they needed support to fill in significant gaps around technology, data/analytics, and partnership integration. There was far less concern around investments in skillsets, core infrastructure and other components of deploying open banking.

CHART 15:

GAPS EXIST IN TECHNOLOGY, DATA, ANALYTICS AND FINTECH PARTNERSHIPS

What changes will need to be made to support open banking at your organization? (Mark all that apply.)



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

Open Banking Product Innovation Support

Open banking provides a significant opportunity for traditional financial institutions to broaden the products and services they offer customers. To do so, banks usually look outside their organization to diversify their offerings quickly.

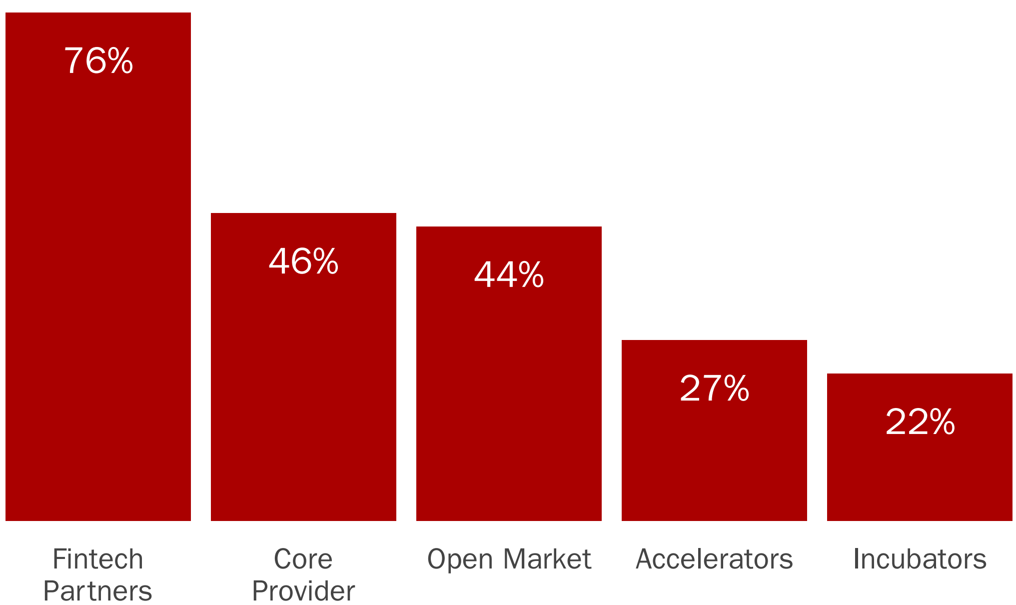
According to **Accenture**, 29% of banking's traditional retail-based revenue streams are at risk, so organizations feel the necessity to partner with outside partners. But the only way these partnerships will prevail is if they can offer more value than could be offered by either party individually in a seamless manner for the consumer.

In our research, the vast majority (76%) of financial institutions believed that fintech organizations would be the primary source of new product and service offerings as part of an open banking solution. Roughly half of the financial institutions surveyed believed that their current core provider or an open market solution would be the source of solutions. Interestingly, more innovative options (accelerators and incubators) were not seen as a major source of products and services in the near term.

CHART 16:

FINTECH PARTNERSHIPS WILL PROVIDE MAJORITY OF OPEN BANKING PRODUCTS

Where would you find product and service offerings as part of your open banking solution? (Mark all that apply.)



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

The Potential for Embedded Banking

The Potential for Embedded Banking

The banking industry is not equipped to respond to the digital banking expectations of most consumers. Bank and credit union customers want the ease and simplicity of an experience that proactively provides advice and solutions based on real-time insights and life stage situations. Responding to these expectations requires rethinking both the operations and culture of traditional banking.

Before online and digital banking became part of daily life, every transaction, including shopping for financial services, opening an account, making a deposit or withdrawal, and even checking an account balance or interest payment required a phone call, a branch visit, or maybe both. Digital transformation enabled consumers who prefer a simpler way of banking to perform most such tasks in the comfort of their home or on a mobile device.

"The scale of change needed in financial services is greater than most industry executives are prepared for – and the gap keeps growing wider despite the investment made by most banks and credit unions. Rising consumer expectations, growing competition, increasing regulations and new technology advances are happening faster than most organizations can respond."

But, have we gone far enough to simplify the consumer's daily life? More importantly, have banks and credit unions changed the underlying processes and legacy cultures, or simply used new technology and advanced devices to "polish" legacy banking? And, has our focus really been on delivering an improved customer experience — or just to find ways to chop delivery costs?

When we compare the offerings from most fintech and big tech firms to legacy banks and credit unions, we can quickly see the difference between completely rethinking banking versus only reconfiguring delivery. Look at Venmo, Acorns, Stripe, Robinhood, SoFi and Credit Karma, among others. Each of these fintech leaders have built seamless solutions on a digital platform designed for the 21st century as opposed to a platform built more than 40 years ago.

The simplicity of design and delivery built from the ground up are strong competitive differentiators for new players. Examples in other industries include Netflix, Uber, Airbnb, and Amazon. Each of these firms completely rethought an entire industry the same way that successful fintech firms have.

Can traditional banking organizations move to the post-digital age the way many other industries have? Can legacy banks and credit unions rethink solutions from the inside out for digital-first consumers? Can they avoid internal "turf wars" and disrupt the status quo?

Unprepared Leadership and Culture Gaps Hold Back Traditional Banking

The scale of change needed in financial services is greater than most industry executives are prepared for — and the gap keeps growing wider despite the investment made by most banks and credit unions. Rising consumer expectations, growing competition, increasing regulations and new technology advances are happening faster than most organizations can respond.

As a result of this, financial services firms have admitted in a Capgemini survey that confidence in their own digital capabilities is dropping. Financial services executives believe they have a "shortage of skills, leadership, and [the] collective vision needed to shape the digital future."

Capgemini reports that 41% of financial services firms said they had the digital capabilities they needed six years ago. Today, only 38% of banking organizations believe they have the required capabilities. Most concerning is that in 2012, 51% of financial organizations said they had the leadership capabilities required for transforming successfully. Confidence in leadership fell to 41% in the most recent research.

Leadership capabilities included "having the necessary transformation vision, a governance model to lead the journey, necessary information technology and business relationships to produce results, and employee engagement throughout the journey."

Adding to the leadership challenges, financial institutions also believe that cultural issues present significant roadblocks to digital transformation. In fact, the research showed that only 31% of banking organizations believe their organizations are free of bureaucracy when it comes to employees submitting ideas, as compared to 36% in non-financial services organizations. In addition, only 33% of banking thought their leaders were adopting new behaviors required for transformation.

Banking in the Background

To move forward, the banking sector must rethink priorities and the pace of change. There must be an understanding of customer journeys, a doubling down on data and advanced customer intelligence, and a rethinking of overall organizational structure that eliminates a product-focus in favor of a customer focus. The objective should be to make banking as simple and frictionless as possible, integrating with a consumer's daily life.

Taking the concept of "simple" further, banking must become intuitive — using advanced analytics to provide advice and solutions before the consumer is aware of the need. This provides the highest value proposition in a crowded marketplace, serving as a "financial concierge" for optimum deployment of funds and delivery of services.

What the consumer wants is proactive financial advice and contextual solutions that respond to their location, life stage, recent events and financial opportunities. They want their financial institution to know them, look out for them and reward them ... in real time. They want recommendations and "invisible" decisions made on their behalf.

This form of engagement requires both trust and permission. The consumer must believe you are working on their behalf and that the decisions made "in the background" are aligned with the decisions they would make on their own. This requires a level of analytics and solution deployment not seen in most financial institutions. It is the foundation of fintech organizations like Acorns, where savings are accumulated based on "excess funds."

Consumer expectations with all industries show the desire for proactive insights and decision making. In much the same way that Google uses a history of communication to help complete sentences in the Gmail app, or Amazon uses previous purchases to rank order products when a person shops, consumers want their financial institution to simplify their life.

Most legacy financial institutions may not be able to create these experiences on their own. Collaboration with third-party providers will often be required to shift toward banking invisibility. This will require a complete disruption of banking as we have known it in the past to a new focus on product design, delivery and agility that centers on the consumer as opposed to product goals.

Moving Beyond the Conventional Concept of Digital Banking

According to the Capgemini research, several digital and leadership capabilities are needed to keep pace with expectations and to move beyond digital banking.

First and most importantly, banks and credit unions must focus on placing the consumer at the center of the organization, with product silos eliminated in favor of teams aligned around the customer journey. According to the research, 64% of the banking sector's digital masters have "created personae and journey maps to identify and serve customers better."

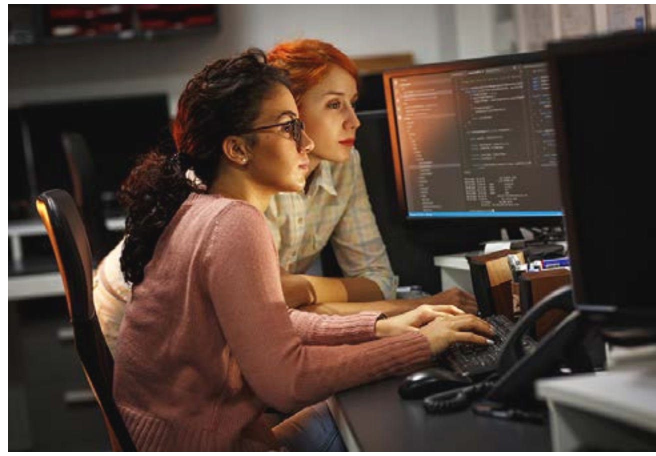
Beyond that, it will be imperative to create an agility and flexibility in delivery similar to what exists in fintech and big tech firms. This will most likely require changes in the composition of boards, top leadership and departmental management who can see banking from a new perspective.

"The appeal of embedded banking is to provide an easy and seamless way to deposit, save, pay or borrow without leaving a non-financial company's app. The result is the ability for non-financial firms to retain customers and increase the overall value of the relationship."

New operating models will also be required that will include the collaboration with third-party providers. There also needs to be support of open banking APIs that will enable the offering of new products both within and outside financial services.

Bottom line, the infrastructure of banking as well as the perspective of banking's role in the consumer's life must change. According to Capgemini, 64% of banks are actively working with a wide ecosystem of partners — such as startups, incubators, technology firms, and even competitors — to co-develop solutions. For the industry to be prepared for the future, this number must increase.

Finally, and potentially most importantly, the "culture of banking" must shift to support both a customer and employee centricity, with a support of innovation and experimentation. Organizations need to encourage the creation of new ideas and simplify the funding of these advances. In conjunction with this transition, "financial institutions will need to implement digital tools and technology platforms that enable rapid development, and provide a platform for employees to execute those ideas," states Capgemini.



To move from an era of digital banking to a delivery of financial services that is both intuitive and invisible, banking organizations will need to embrace a culture of testing and learning, with ongoing measurement of customer satisfaction and engagement to provide a path for ongoing improvement.

How Should Banking Respond to the Embedded Finance Model?

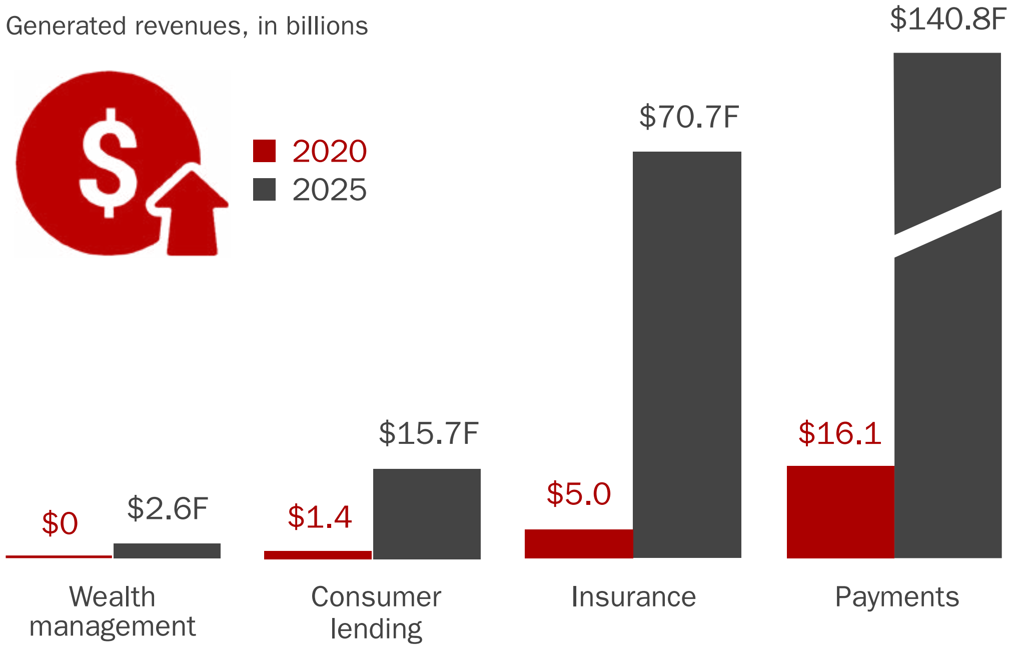
At the same time that most traditional financial institutions are trying to rebuild legacy products for digital delivery, the biggest banking firms and non-financial companies are partnering to embed banking services in non-financial brand apps. This includes deposit services, payments, lending and other services that were only offered by banks and credit unions directly in the past.

The appeal of embedded banking is to provide an easy and seamless way to deposit, save, pay or borrow without leaving a non-financial company's app. The result is the ability for non-financial firms to retain customers and increase the overall value of the relationship. According to **McKinsey**, "Companies of all types and levels of maturity — including retailers, telcos, big techs and software companies, car manufacturers, insurance providers, and logistics firms — are considering and preparing to launch embedded financial services to serve business and consumer segments."

In response to the desire to embed finance within apps outside banking, leading financial institutions are working with fintech firms and non-financial companies to provide banking-as-a-service (BaaS) offerings. While some institutions see embedded finance as potentially threatening traditional banking models and control of current customer relationships, there is also the potential to participate in an estimated $230 billion market opportunity.

CHART 17:
GROWTH IN MARKET VALUE OF EMBEDDED FINANCE

Generated revenues, in billions



Source: Lightyear Capital © September 2021 Digital Banking Report

In the future, embedded finance will reposition financial institutions as software and product providers, often giving control of the customer relationship to consumer brands. According to a research report from **Plaid** and **Accenture**, there are four key ways embedded finance may change how financial and non-financial companies do business:

- **Re-arrange relationships** between financial providers and consumers with potential of shared relationships.
- **Create new revenue streams** for both banking organizations and non-financial firms.
- **Reset competitive ecosystem**, forcing companies to rethink existing business models.
- **Build new partnerships** between fintech and banking firms on behalf of non-financial brands.

What is Driving the Growth of Embedded Banking?

Embedding banking services within non-financial brand offerings is not new. From white-labeled airline credit cards to captive auto financing options to Amazon embedding payment options into their eCommerce app, non-financial brands have often provided access to banking products. What is different today is the scope of the offerings and the number of organizations that are expanding the integration of banking services within their apps.

"For much of the past five years, the embedded banking movement has had mostly a negative impact on traditional financial institutions. As more consumers use payments, lending and banking services that are part of non-traditional banking apps, the traditional banking relationship had been increasingly fractured."

The primary reason for this trend is that consumers want simple and seamless digital experiences that won't require leaving their favorite app. They enjoy being able to pay for a ride within the Uber app, rent a vacation home without leaving the AirBnB app, and finance larger purchases without going to their bank or credit union. According to Ben Brown from Accenture, "Embedded finance is all about the contextual offering of financial services in a way that's relevant to consumers and with an understanding of what their needs are. And that could apply to almost any or maybe literally any section of the financial services industry."

Consumers Want Simplicity:

"Consumers want to stay within an app to research, engage, buy and share experiences."

Beyond the impact of consumer behavior, non-financial institutions and fintech firms want to expand the penetration of financial services to increase average order size, expand engagement, improve customer satisfaction and increase loyalty. According to Accenture, 47% of U.S. businesses said that their companies are investing in, and plan to launch, embedded finance offerings in the near future. In fact, one of the fastest areas of embedded finance growth has been with buy now, pay later (BNPL) offerings.

Deeper penetration of financial services within non-financial brands is happening with Google, Apple, Walmart, PayPal and other brands that have no desire (right now) to 'become a bank', but want to deepen the relationship with existing customers by embedding financial services. Access to open banking APIs and new regulations are supporting this growth.

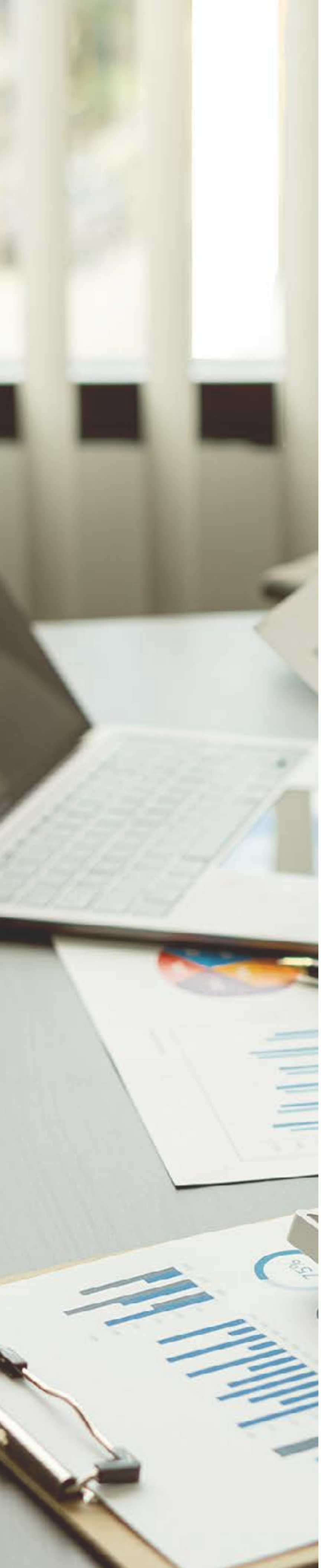
Finally, traditional financial institutions see an opportunity for new revenues with embedded finance. The ability to facilitate transactions that have a relatively low incremental cost, but significant scale is appealing.

Opportunities for Traditional Banking

For much of the past five years, the embedded banking movement has had mostly a negative impact on traditional financial institutions. As more consumers use payments, lending and banking services that are part of non-traditional banking apps, the traditional banking relationship had been increasingly fractured. More importantly, the details of each transaction reside with the non-financial (or fintech) brand and not with the legacy bank or credit union. This has a lasting impact on the ability to build a more robust dataset and relationship.

"Seventy to eighty percent of banks see embedded finance as a threat," says Amit Mallick, Global Open Banking Lead at Accenture. "They are very worried that it will disintermediate them."

But, the future of embedded finance can have positive implications. According to the research by Plaid and Accenture, "Embedded finance can not only provide access to new markets, it can also reduce customer acquisition and servicing costs. In addition, an underlying benefit of embedded finance is that it offers ways to monetize without charging customers more, and therefore enables companies to eliminate barriers to adoption of their core offerings."



OPEN BANKING AND EMBEDDED FINANCE

Open Banking Revenue Opportunity:

"The ability to leverage open APIs for expanded platforms increases revenue opportunities from outside the traditional financial ecosystem."

In addition, financial institutions understand the intricacies of offering financial services, which gives them an essential role to play in the embedded finance trend. This includes an understanding of risk, compliance and regulations that most non-traditional providers and non-financial firms do not completely grasp. Banks and credit unions have also invested heavily in technology that may be prohibitive for non-bank entities.

"If an organization has the primary bank account for somebody, and that bank account is being connected to a lot of the financial and non-financial apps that exist across the ecosystem, the consumer is much more likely to continue using that organization as their primary bank account than if that's not the case, stated Eric Sager, COO of Plaid in an exclusive interview on the **Banking Transformed podcast.**

In fact, the Accenture research found that for those already implementing embedded finance solutions, 70% said they are using partners, buying, or licensing technology as part of their embedded finance strategy. This illustrates the desire by non-financial firms to partner with legacy banking organizations.

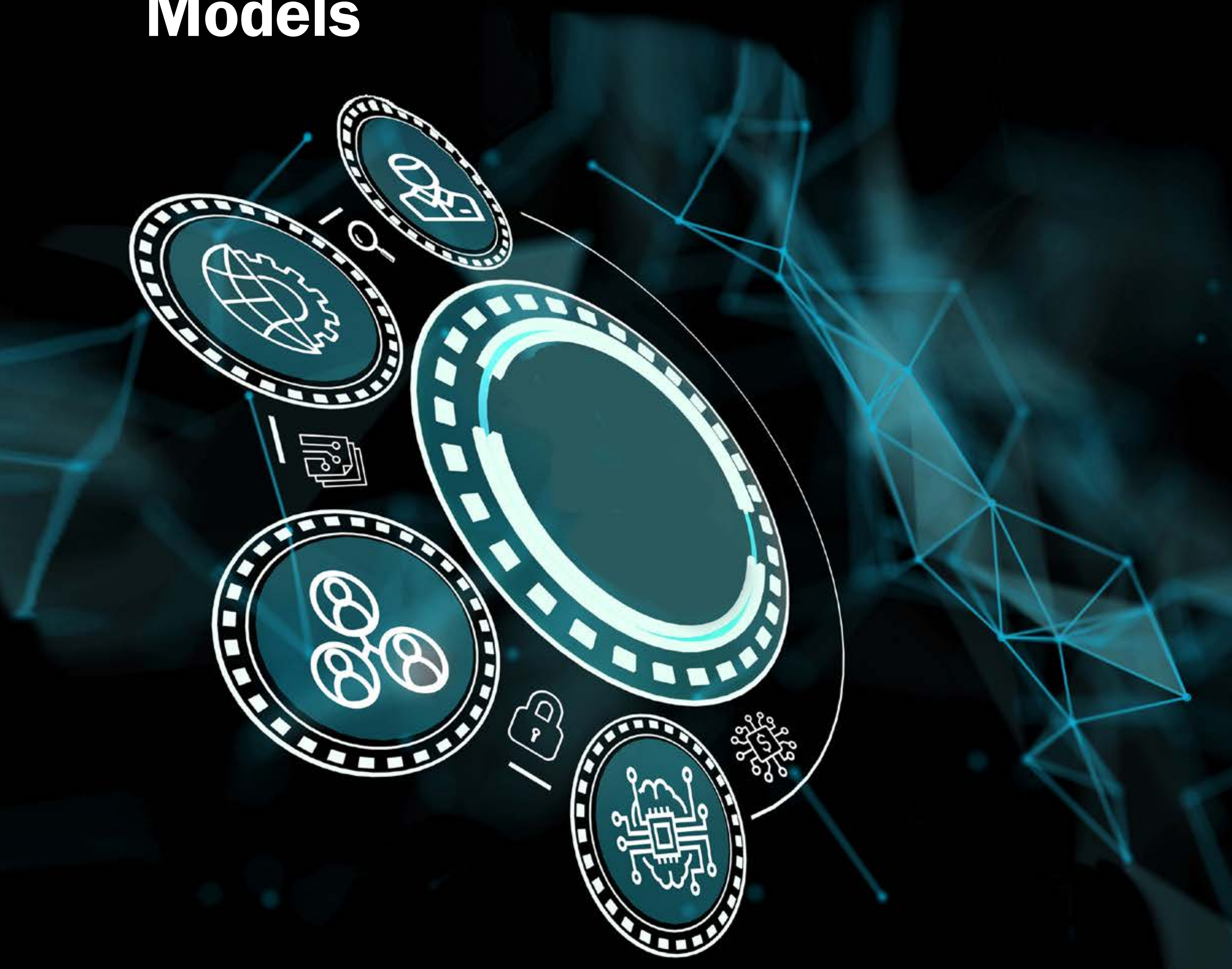
Contextual Banking with the Bank

The ability to engage with banking services without going to a bank is what more and more consumers and businesses desire, especially for transactions. The pandemic made consumers aware of how digital engagement and new technologies can provide the right financial solution, on demand, integrated into non-financial applications. While most of these solutions are in the payments and lending space right now, they are rapidly expanding to improve overall consumer experiences.

"Across every segment there is a market transition — consumers want to do everything digitally," says Sager from Plaid. "The tools to help brands be part of the next-generation change is rapidly expanding." Financial institutions must decide if they want to be a provider of financial services 'in the background' or whether they prefer to be the hub of both financial and non-financial services for their customers as well as the customers of varied services.

JPMorgan Chase CEO Jamie Dimon said his $3.4 trillion bank should be "scared s—less" about fintech and other digital-native companies expanding their market share. As organizations embark on their upcoming strategic planning journey, there needs to be an analysis of how embedded banking will fit into the future business model of the organization.

Final Thoughts Rethinking Revenue Models



Final Thoughts
Rethinking Revenue Models

Financial institutions need to build a strategy for leveraging APIs and Open Banking to expand product offerings, improve the customer experience, create efficiencies and as an opportunity to generate new revenue streams from both financial and non-financial partnerships.

Since the onset of COVID-19, most financial institutions have been playing catch-up, developing and updating digital applications, responding to consumer and small business needs for financial relief and dealing with a work-from-home (WFH) reality. Not nearly enough banking organizations have been focused on innovation and the development of new opportunities presented by the expanded digital economy.

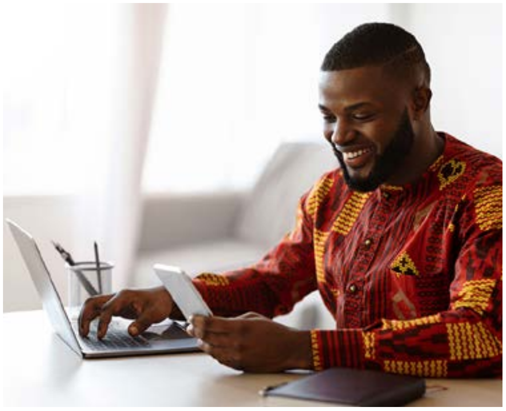
One area banks and credit unions need to examine more closely is API-enabled

opportunities and the potential for Open Banking monetization. While APIs have the potential to encroach on banking products and services that traditional financial institutions have provided for centuries, there are also opportunities to expand offerings that could create new revenue streams. Traditional banks and credit unions could also use APIs to create seamless experiences that would take years to develop without third-party partnerships.

Despite the lack of clear guidance from regulators in several countries (including the U.S.), the threat of not investigating options provided by APIs is that fintech start-ups or large tech firms will continue to take market share and inhibit organic growth. Taking advantage of new opportunities during this time of digital transformation also can improve customer experiences as consumers become increasingly aware of how non-financial platforms have made everyday life easier.

Finally, not to be ignored, is the opportunity to serve previously unmet needs of segments of the population that are better (and more economically) served through new digital applications. With the potential for some of the costs to be assumed by third parties interested in reaching these unique segments, traditional banks can avoid relying only on penalty fees and services charges to make products viable.

The Need for an Open Banking Strategy



Organizations that do not rethink traditional operating models run the risk of falling further behind as non-traditional fintech and big tech providers continue to use APIs to power unique products and platforms. More importantly, with margins razor thin, and operating costs under pressure, all revenue opportunities must be investigated. According to Accenture, “Banks with a vision for Open Banking beyond regulatory compliance will be able to deliver the experience their customers expect and thrive in a new competitive and collaborative landscape that includes new players like fintechs, big techs and non-financial-services.” In the Accenture study, they provide two primary ways to leverage Open Banking.

Banking as a Platform. Similar to the platforms we have observed in retail, the platformification of banking usually refers to the aggregation of services and/or capabilities beyond the limited portfolio offered currently. The building of a platform is intended to expand offerings from third-party partners in a seamless manner, providing the consumer more financial and non-financial options and increased convenience.

This option is often delivered by larger financial institutions that can benefit from expanding services to a broad consumer base of organizations wanting to serve a specific segment more completely. While developmental tools will be provided to potential partners, data from the financial institution is usually not shared with third parties.

CHART 18:
BANKING AS A PLATFORM - KEY CHARACTERISTICS

CUSTOMER EXPERIENCE
Owned by the bank as the primary channel owner

BANK'S CHANNEL
Mobile or web

FINANCIAL PRODUCT OWNERSHIP
Owned by the bank or a third party depending on the use case

BANKING LICENSE
Managed by the owner of the financial product

CUSTOMER ONBOARDING/KYC
Shared between the bank and a third party (each having own obligations) depending on the use case

CUSTOMER SERVICING
Provided by the channel owner or the bank and supported by a third party (each having own obligations)

RISK OR LIABILITY
Predominant risk or liability is with the owner of the financial product

Source: Accenture © September 2021 Digital Banking Report

CHART 19:
BANKING AS A PLATFORM BENEFITS

GENERATES NEW REVENUE STREAMS by cross-and-upselling of the new services and products.

ATTRACT MORE CUSTOMERS with the wide range of products and tailored offerings.

ACCELERATE SPEED TO MARKET and **ENHANCE THE QUALITY** of product offerings.

REDUCE COSTS for developing new offerings.

Source: Accenture © September 2021 Digital Banking Report

Banking as a Service (BaaS). The BaaS alternative allows fintech firms and other third parties to connect with the systems of traditional banking organizations through APIs so the third party can build offers and capabilities on top of the providers' infrastructure. In many countries, the BaaS alternative has allowed traditional financial institutions to keep pace with fintech and big tech providers, while also providing a platform for innovative fintech firms.

This strategy is good for banks and fintech firms that want to rapidly expand distribution reach and access new markets. This strategy has been used extensively by firms in the payments, lending, investment and transaction banking ecosystems.

CHART 20:

BANKING AS A SERVICE (BAAS) CHARACTERISTICS

CUSTOMER EXPERIENCE
Owned by a third party and managed in its channel

BANK'S CHANNEL
Developer portal

FINANCIAL PRODUCT OWNERSHIP
Owned by the bank in most cases

BANKING LICENSE
Managed by the owner of the financial product, in most cases the bank

CUSTOMER ONBOARDING/KYC
Shared between a third party and the bank (each having own obligations) depending on the use case

CUSTOMER SERVICING
Provided by the channel owner or a third party and supported by the bank (each having own obligations)

RISK OR LIABILITY
Predominant risk or liability is with the owner of the financial product, in most cases the bank

Source: Accenture © September 2021 Digital Banking Report

CHART 21: BANKING AS A SERVICE (BAAS) BENEFITS

EXPAND DISTRIBUTION CHANNELS AND MARKET REACH via access to new customers.

GENERATE NEW REVENUE STREAMS by selling services and products through partners.

DEVELOP FASTER GO-TO-MARKET OPPORTUNITIES by accessing the new customer base.

REDUCE OPERATING AND MARKETING COSTS for products and services.

Source: Accenture © September 2021 Digital Banking Report

As progressive organizations start to build solutions using APIs and Open Banking benefits will materialize at scale and we will witness an accelerated shift towards Open Banking utilization. Both banks and external service providers can create benefits for their mutual customers, strengthen their competitive position in the API economy and potentially establish new avenues for revenue growth.

Open Banking is Not for Everyone

The extent to which an Open Banking pattern will be successful depends on a bank's Open Banking strategy, the organization's existing product portfolio, the competitive positioning of the institution and the size of the customer base. Another major component of success (as with all digital transformation strategies), is the innovation culture of the leadership within the organization.

Banks and credit unions that are willing to embark on an Open Banking strategy can learn from open business models in other industries as well as the few progressive banks that have launched their own developer portals with APIs and sandbox environments. This allows banks to offer access to third parties to interact and use the bank's functionality and customer data to create next-generation financial services.

The Monetization of Open Banking

APIs threaten to fragment banking products and services that large institutions have owned for centuries, according to **Capco**. It also provides the potential for exciting new services with revenue opportunities. New banking solutions – with seamless customer experience at the front end and multiple interconnected providers in the background – will become the norm in the near future. Some organizations are already having success with these new models. Both imagin from **CaixaBank** and Liv from **Emirates NBD** are examples.

"The future of any Open Banking offering will depend on the value it provides, or the monetization options it creates. Participants can bundle or unbundle offerings and services and generate direct or indirect value. The quantum of value generated will depend on the overall market proposition, customer ownership model, partner value-adds, risk/liability share etc."

— Accenture

According to Accenture, banks pursuing a banking-as-a-platform model can generate value directly or indirectly. For instance, they can generate direct revenues by offering third-party access to the bank's distribution network, in return for a fee or revenue sharing. Alternatively, they can generate indirect value by leveraging the partnership to expand their customer base, lower their product costs or increase efficiency.

In a banking-as-a-service (BaaS) environment, value is generated by distributing financial services through third parties. As with the banking-as-a-platform model, value can be generated either directly with fees or indirectly through increased distribution or reduced costs of delivery.

CHART 22:

PARTNERSHIP EXAMPLES TO MONETIZE OPEN BANKING CAPABILITIES

USE CASES	PARTNERSHIPS	EXAMPLES
Personal Financial Management	**Bank and Fintech**	Starling and Emma; ABN Amro and Tink
Shopping, Offers, Loyalty	**Bank and Fintech**	Monzo and flux
Shopping	**Bank and Retail**	Paydirekt (40+ banks, 1100 + retailers)
Accounting, Bookkeeping	**Bank and Fintech**	Starling + Xero; RBS + FreeAgent
Digital Banking	**Bank and Telecom**	FidorBank and Telefonica
Insurance	**Bank and Insurer**	N26 and Allianz Assistance
Real Estate	**Bank and Property Portal**	DBS + EdgeProp
Travel Bookings	**Bank and Travel Portal and Airlines**	DBS + Expedia + Singapore Airlines
Travel Payments	**Bank and Industry Body**	Deutsche Bank + IATA

Source: Accenture © September 2021 Digital Banking Report

In both examples, the partnerships can be either with financial firms or organizations from other industries. Several cross-industry partnerships have been created in the payments and traditional banking industries with retailers, hospitality firms, media companies, telcos, insurance carriers and even gaming platforms. Any cross-industry partnership usually depends on the market segment being pursued.

The Future of Banking Requires 'Out of the Box' Thinking

The increase in competition, customer expectations and the technology to drive new banking models is forcing financial institutions of all sizes to consider new ways to reduce costs, increase revenue and rethink traditional products and services. The goal is to find new ways to monetize banking and make engagement both easier and more "sticky."

Where consumers once saw websites and mobile apps as a way to learn about products or transact linear transactions, they now see them as integrated platforms with embedded capabilities to make life easier. Efficient interfaces, immediate gratification, and interconnected solutions have become the norm.

According to Capco, "The lesson of the last few years is that competition in this market is based not on APIs' technological capabilities but on their ability to deliver business value." They must meet an untapped consumer need and be invaluable to their distributors (i.e. developers, startups and fintechs).

The future of financial services will not be a menu of simple products and services, but it will be based on customized platforms that will integrate solutions — to make the lives of consumers easier.

About the Research

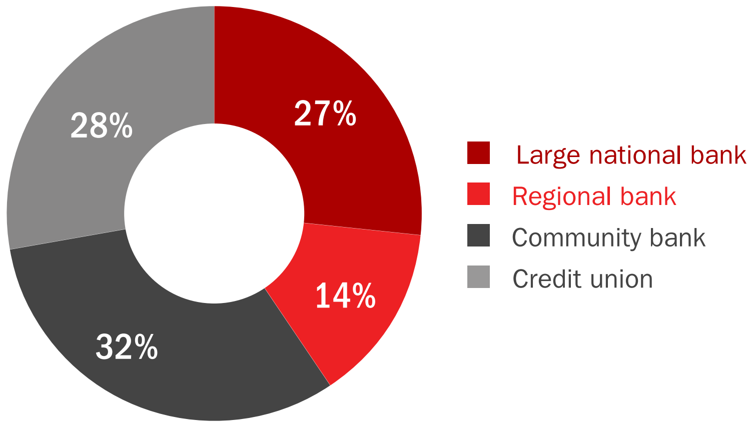
About the Research

The analysis in this report is based on an August 2021 Digital Banking Report survey of global banks and credit unions. The survey used the subscriber lists of The Financial Brand and Digital Banking Report, which includes organizations of all sizes worldwide.

No responses from non-financial organizations were included in the results, and only completed surveys were included. The responders were self-selected after receiving a nominal incentive of raw survey results.

Among overall survey respondents, 27% are from large national or regional banks, 28% are from credit unions, 14% are from regional banks and 32% are from community banks. This distribution is similar to the majority of research conducted by the Digital Banking Report.

CHART 23:
RESPONDENTS BY TYPE OF FINANCIAL INSTITUTION



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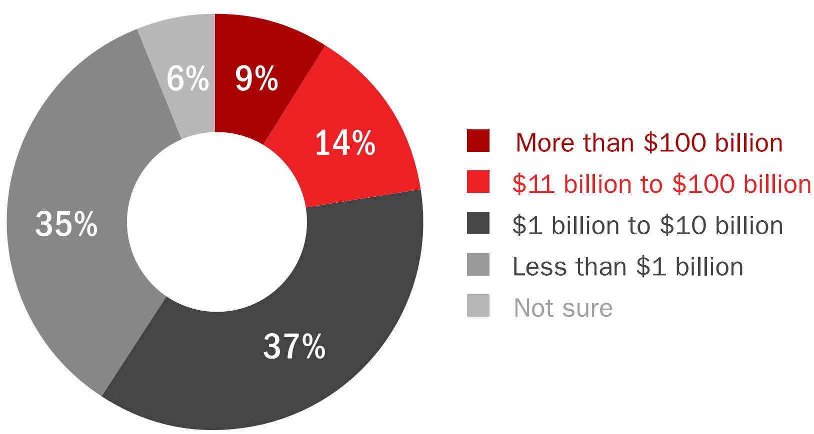
In this research, 9% of respondents are from FIs with more than US$100 billion in assets, with 14% having US$11 billion – US$100 billion in assets, and 37% representing firms with US$1 billion – US$10 billion in assets. The distribution by size of organization is comparable to the majority of the previous research done by the Digital Banking Report.

CHART 24:
RESPONDENTS BY ASSET SIZE (IN US $)



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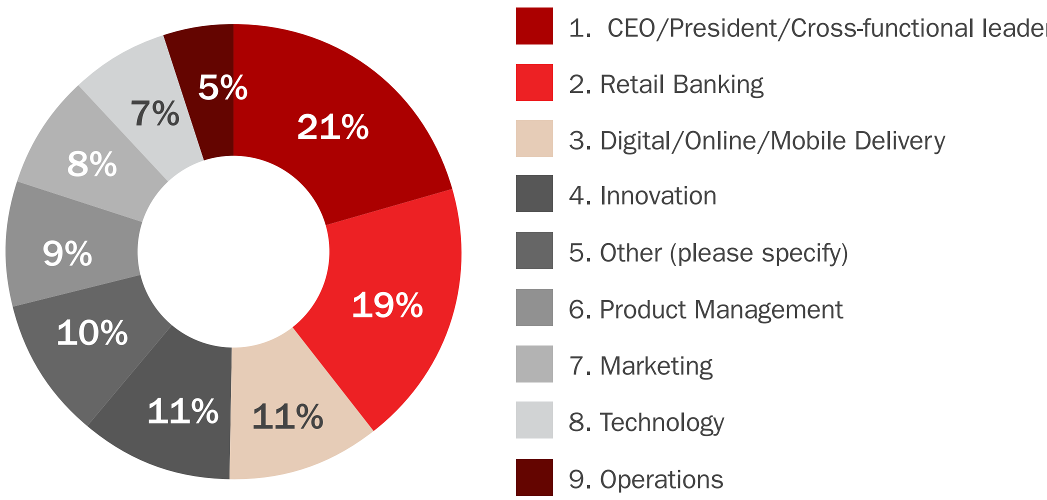
When we looked at the role/department of the respondents, we found 9% were in marketing, 11% owned the digital/online/mobile channels, with another 19% in charge of the retail banking area. There were 21% that had a CEO, president or cross-functional role, with the remaining respondents being from multiple areas of the organization.

CHART 25:
ROLE OF RESPONDENT

Which of the following describes your role at your financial institution?



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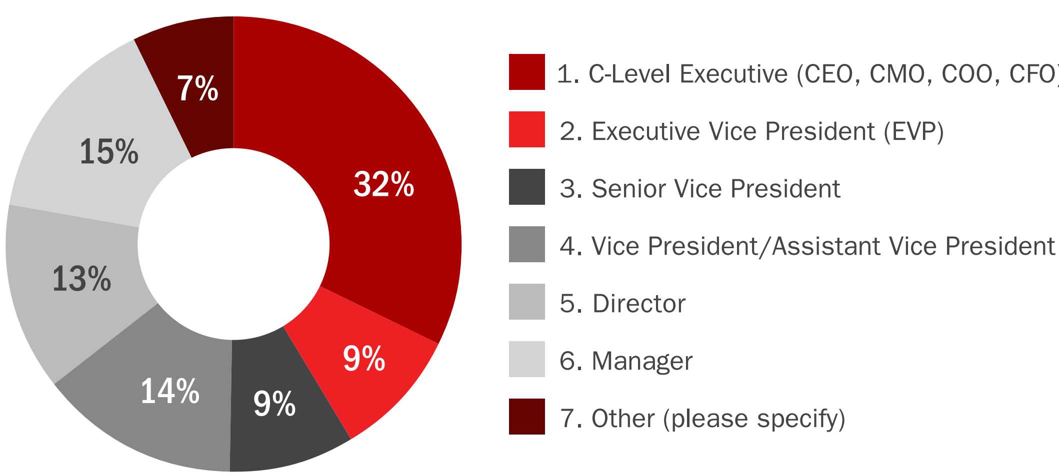
When we looked at the position/title of the respondents, we found 32% of the respondents were C-level executives, 9% were EVPs, with another 23% being SVPs/Vice president/AVP level. In addition, 13% were directors, with 15% being at the manager level. These were slightly higher ranking individuals compared to previous studies.

CHART 26:
POSITION/TITLE OF RESPONDENT

What is your position/title?



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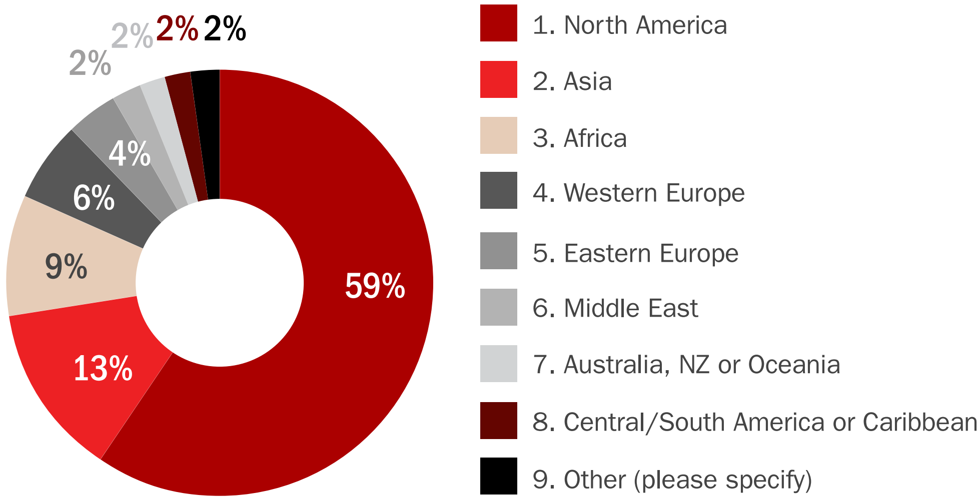
Finally, the respondents who participated in our research were globally headquartered. While there was an over sampling from North America (59%), 10% were from Europe, 9% were from Africa, and 13% were from Asia.

CHART 27:
LOCATION OF RESPONDENT'S ORGANIZATION



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About the Author

Named as one of the most influential people in banking and a 'Top 5 Fintech Influencer to Follow', Jim Marous is an internationally recognized financial industry strategist, co-publisher of **The Financial Brand** and the owner and publisher of the **Digital Banking Report.** The Digital Banking Report is a subscription-based publication that provides deep insights into the digitization of banking, with over 200 reports in the digital archive available to subscribers.

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As a sought-after keynote speaker, author and recognized authority on disruption in the financial services industry, Marous has been featured by CNBC and CNN, Cheddar, The Wall Street Journal, New York Times, The Financial Times, The Economist, The American Banker, Accenture and the Irish Tech News and has spoken to audiences worldwide. 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.

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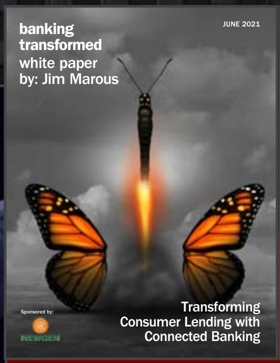

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