



WORLD RETAIL BANKING REPORT 2017

Table of Contents

| | |
|---|-----------|
| Preface | 3 |
| Executive Summary | 5 |
| Chapter 1: Disruption Demands Transformation | 6 |
| Tech-Focused Firms Become Major Disruptive Force | 8 |
| Tech-Focused Firms Gaining Ground in Positive Customer Experience | 9 |
| Non-Traditional Providers Gain Widespread Acceptance | 10 |
| Moments of Truth Matter | 11 |
| Banks Gear Up to Respond to Tech-Driven Firms | 12 |
| Chapter 2: APIs Are Pivotal to Banking's Future | 14 |
| Open APIs Come to the Fore | 16 |
| APIs Underpin Bank, FinTech Collaboration | 17 |
| APIs Expand in Purpose, Priorities | 20 |
| Regulators Push Openness, APIs | 22 |
| Banks of all Sizes Push API Boundaries | 24 |
| Banks can Monetize APIs as Data Takes on New Value | 27 |
| Best Practices Start with Connectivity as a Strategic Imperative | 29 |
| Chapter 3: Going Big in Open Banking Creates Opportunities and Threats | 32 |
| APIs Help Fulfill Strategic Vision of Open Banking | 34 |
| Conclusion | 37 |
| About Us | 38 |
| Acknowledgements | 39 |



Preface

Digital banks and FinTechs have been relentless in their efforts to offer new services and a differentiated customer experience, and it shows. According to our survey of thousands of retail banking customers around the world, tech-directed firms are now more likely than banks to provide customers with positive banking experiences. Non-traditional providers are moving the needle in attracting customers, with nearly one-third of banking customers already banking with at least one non-traditional provider. However, they are yet to achieve significant market share. Details about how much ground banks are losing in the all-important effort to deliver positive experiences is outlined in Chapter 1.

While our report quantifies the threat posed by tech-driven financial firms, it also shows that the outlook is far from grim. Chapter 2 describes the new spirit of collaboration that is starting to characterize the bank/FinTech relationship and lays out the industry's preferences (from both the bank and FinTech perspectives) on the types of business models that industry players believe will play out in the coming digitally-connected economy.

Given the rapid changes the industry is witnessing in the opening up of systems, Application Programming Interfaces (APIs) are emerging as essential tools pushing legacy banking boundaries in the new age digital economy. While most banks are leveraging APIs internally to improve information flow between legacy systems, many are still in the early stages of using them to incorporate functionality from business partners. However, APIs have the potential to strategically deliver innovation and functionality to the business by making their systems and data widely available to outside third parties, as well as creating new revenue streams for both organizations.

Ultimately, the future success of banks will require a shift towards a more open banking model. Open banking can uncork the creativity of third-parties, generating unprecedented opportunity for building and distributing innovative, new products, while offering customers transparency and a ubiquitous banking experience. Getting there, however, will require careful planning, and compel banks to make strategic choices about how to evolve their business models. With technology firms proving their power to delight customers, banks need to act now to ensure they remain a key part of the equation.



Anirban Bose
Head, Global Banking & Financial Services
Capgemini (FS SBU)



Vincent Bastid
Secretary General
Efma



Executive Summary

FinTechs Gain Mindshare and Trust with Banking Customers

- Although FinTechs are among the most recent entrants in the financial services industry, they are already offering higher levels of positive customer experience than banks.
- FinTechs, focusing on specific areas of the banking value chain leveraging agile processes and the latest technologies, are delivering frictionless, personalized, and highly attractive offerings to customers.
- While traditional banks still have significant hold over their customers, non-traditional firms are gaining ground with nearly one-third of banking customers having a relationship with at least one non-traditional firm.
- Countries with thriving FinTech hubs have taken a lead in offering the highest levels of positive customer experience, indicating the growing relevance and impact of FinTechs.

APIs Are Vital to Collaboration and Evolution of Future Business Models

- The ability to rapidly deploy not only the bank's digital agenda, but allow collaboration with non-financial services providers to create a value-based marketplace for consumers is key to improving long-term customer loyalty.
- The value of collaboration lies in being able to bring a trusted bank brand together with the innovative agility of FinTechs.
- Collaboration will become an expected way of doing business, with 91.3% of banks and 75.3% of FinTechs saying they expect to partner with each other in the future.
- APIs will enable service providers to take innovative ideas to market more quickly and cheaply, without having to build their own infrastructure.
- In addition to providing the opportunity to offer new products and services, opening up of APIs will enable banks to monetize their data and open up new revenue streams.
- As banks create their API strategy, they need to consider the potential risks arising out of data security and customer privacy.
- As the prevalence of APIs grows, it will become increasingly necessary for the industry to ensure interoperability of the different stakeholders, enabled by common API standards.

Open Banking Creates Big Opportunity, but Equally Large Threats Loom

- To get the most out of APIs and FinTech collaboration, banks should strive to identify and act upon the role they want to play in the digitally connected ecosystem.
- Open banking will provide banks an opportunity to offer next-generation banking services through various channels, but also presents the threat of disintermediation from third parties.
- A digitally sustainable business model centers on customer innovation through simplicity of use, security across all channels, and a fast ability to quickly consume relevant banking offers.

Chapter 1: Disruption Demands Transformation



INTERNET
LIVE CHAT
MEDIA
PHOTOS
VIDEOS
MUSIC



Key Findings

Traditional bank/customer relationships are coming under pressure, as new-age tech-driven financial firms attack the most profitable part of their value chain, driving down profitability.

- FinTech firms have been successful in identifying specific focus areas where there exist opportunities to ‘wow’ customers with relevant, attractive, and easy to use offerings.
- The new competition deploys advanced technologies aimed at providing a frictionless and enhanced customer experience, and is not bogged down by legacy systems.
- Banks are finding it difficult to respond to the new competitors due to heightened customer expectations, burdensome regulations, a cultural resistance to change, cost pressures, and aging systems.

Tech-driven financial services providers deliver slightly better customer experiences than banks.

- Tech-driven firms reached their fullest potential in North America, a hotbed of innovation, delivering positive experiences to 57.8% of customers, compared to 49.5% for banks.
- A correlation between higher FinTech/digital bank activity and positive customer experience is emerging, as the top five countries in positive experience (United States, India, United Arab Emirates (UAE), China, and Netherlands) are all FinTech hubs.

Non-traditional firms are gaining increased acceptance, with nearly one-third of banking customers (29.4%) using products and services from them.

- More than half (52.4%) of customers engaging with non-traditional firms have a relationship with three or more of them.
- Younger, more tech-savvy customers are the most likely to embrace financial services from non-traditional providers. Nearly half of tech-savvy customers (42.6%) use non-traditional firms, compared to only 12.8% of the non-tech savvy who do. Similarly, 37.2% of Gen Y customers use non-traditional banks, compared to 22.0% of those in other age groups.
- In emerging economies such as China and India, more than half of Gen Y and tech-savvy customers have relationships with non-traditional firms, the highest percentages globally.

Banks can address the threat of disruption by combining their strengths with those of tech-driven financial firms.

- Non-traditional providers have an edge on many fronts, but banks have a number of built-in advantages, including vast customer bases, access to resources, and customer trust.
- APIs will be a key enabler as the banking industry seeks ways to collaborate with tech-focused financial firms, helping bypass issues of technology incompatibility.

Tech-Focused Firms Become Major Disruptive Force

Banks are no strangers to competition, having faced incursions from credit unions, post offices, brokerages, internet-only banks, and other entities seeking a piece of the multi-billion-dollar global retail banking market. However, the variety and severity of forces disrupting traditional banking are now reaching a new pitch, threatening to dismantle long-held ways of doing business.

Most significant is the advancement of much tougher, technology-driven competition. The new wave of digital banks and FinTech companies are wisely putting their efforts into the front-end customer-facing experience, knowing that winning the customer interface primes them to also win over customer relationships, loyalty, and fees.

A large number of FinTechs have identified narrow, specific areas where they felt there was room for improvement in servicing customers, and are now focusing all their efforts in offering frictionless, personalized offerings in this space. They work to focus on what is most relevant to customers today, as opposed to what they can offer.

“

FinTechs found their proposition on strong innovative ideas and a different customer view.

– Andrea Coppini, Chief Digital Officer, ICCREA

”

Compared to the incumbents, FinTechs are typically built on less expensive infrastructure, and employ a high agility in their processes and work culture. This inherently makes it easier for them to be more adaptable to the fast changing market demands.

Without having to bother about the baggage of legacy technology and dated processes, these new competitors are taking full advantage of cheap, readily available technology that “wows” customers. All of these factors put together have helped FinTechs come up with novel solutions that offer superior experiences.

In the UK, app-based Atom Bank, for example, uses gaming software to make customer interactions more engaging.¹ Mobile-only Starling Bank in the UK asks customers to record talking videos of themselves for biometric identification.²

Customers, especially those who are young and tech-savvy, welcome such digital innovations. They have been conditioned by big-tech firms like Apple, Amazon, and Facebook to expect speed, personalization, and instant gratification when using their online or mobile devices. As the population of digital natives expands and as older generations become more comfortable with technology, banks will be under even more pressure to deliver compelling experiences with their banking products.

Merely keeping up with other banks' interest rates on savings accounts or providing mobile apps will not suffice. Today's competitive landscape requires a broader focus, as well as a greater appreciation of new ways of doing things. FinTechs have been fast and successful at demonstrating this, and herein lies the threat for banks.

“

Now with the new players emerging, many banks witness totally new approaches to the finance space and at first, some of those might be hard to understand as competition. Or to put it in another way, banks could miss some good collaboration opportunities here.

– Arto Kulha, Program Manager for Nordea Startup Accelerator

”

A host of other factors also weigh on banks. The need to comply with more burdensome regulations in the wake of the financial crisis continues to eat up time and costs. Aging legacy systems and red tape remain in full force, thereby bloating IT spending and hindering efforts to integrate new technologies. And a cultural resistance toward change blunts many banks' digital and social media efforts. All of these challenges, combined with a continued low interest rate environment, have prevented banks from effectively addressing customer expectations and services, the very area where challenger banks and FinTechs are making their mark.

¹ Independent Tech, “Atom app: Is this the future of banking?”, Feb 03, 2016.

<http://www.independent.co.uk/life-style/gadgets-and-tech/features/atom-app-is-this-the-future-of-banking-a6851996.html>

² TechCrunch, “Starling Bank, a digital-only UK challenger bank, launches beta”, Mar 16, 2017.

<https://techcrunch.com/2017/03/16/starling-bank-a-digital-only-uk-challenger-bank-launches-beta/>

Tech-Focused Firms Gaining Ground in Positive Customer Experience

The focus of tech-driven firms on convenience, lower fees, and innovation is paying off. Not only are they making inroads into banks' customer bases, they also are starting to better meet customer expectations. Worldwide, non-traditional firms were slightly more likely to deliver a positive experience than their traditional counterparts (Figure 1.1).

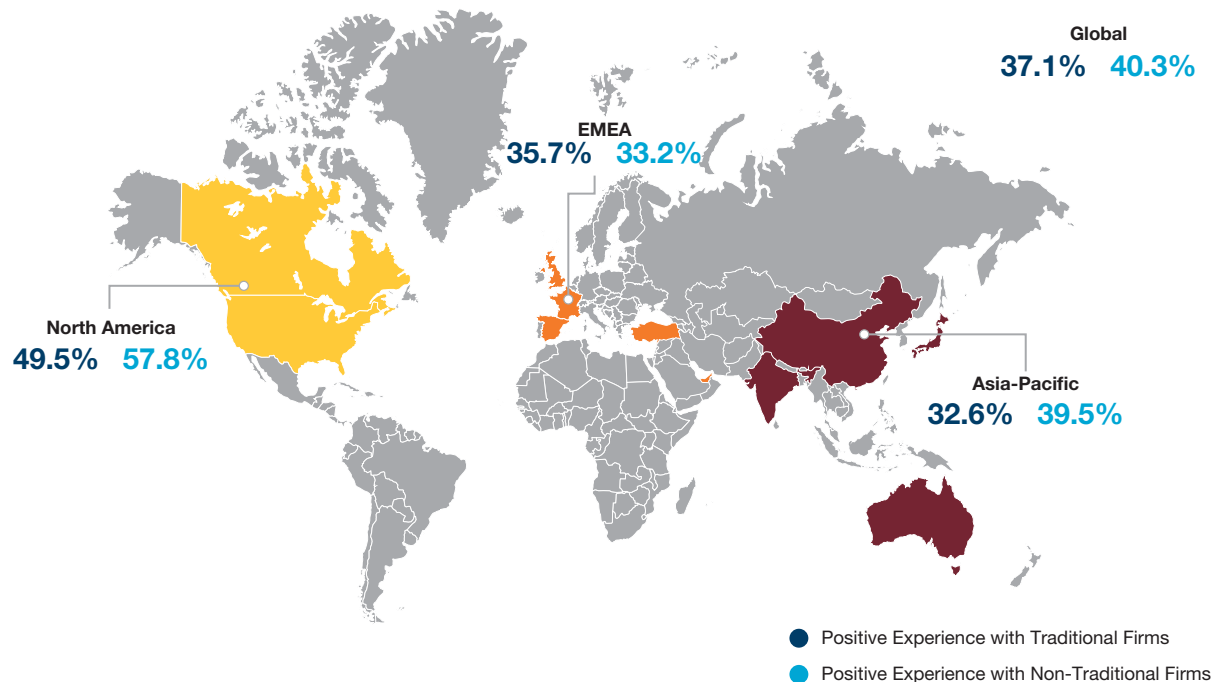
Non-traditional firms performed particularly well in North America, despite the fact that more than 40% of banks there have devoted at least 25% of their IT budget toward digital transformation.³ Tech-driven firms reached their fullest potential there, delivering positive experiences to 57.8% of customers, while only 49.5% of customers had positive experiences with traditional banks.

Non-traditional firms also bested incumbent banks in Asia-Pacific, providing positive experiences to 39.5% of customers (versus only 32.6% by banks). China led the way, with non-traditional firms beating banks in positive customer experience by 15.8 percentage points. With India, Australia and Singapore also emerging as centers of innovation for tech-driven financial services, the regional trend is expected to continue.

Non-traditional firms had less impact in Europe/Middle East/Africa. Only 33.2% of customers had positive experiences at non-traditional firms, compared to 35.7% who did at banks. However, non-banks in Turkey and the UK bucked the trend by margins of 11.6 and 8.8 percentage points, respectively. This could be due to the growing presence of digital banks and FinTech companies in those countries.

Across the world, the strength of the FinTech movement tends to correlate with positive customer experience in that country. The top five countries in positive experience (United States, India, UAE, China, and Netherlands) are also rich in FinTech activity.⁴

Figure 1.1 Positive Customer Experience for Traditional and Non-Traditional Firms (%), 2017



Note: Country boundaries on diagram are approximate and representative only

Source: Capgemini Financial Services Analysis, 2017; Capgemini and LinkedIn WFTR Voice of Customer Survey, 2016

³ Business Insider, "THE FUTURE OF BANKING: Growth of innovative banking fintech services", Dec 15, 2016. <http://www.businessinsider.com/the-future-of-banking-growth-of-innovative-banking-fintech-services-2016-12?IR=T>

⁴ These countries are the top five among 15 countries with the highest positive customer experience, as per Capgemini and LinkedIn's WFTR Voice of Customer Survey, 2017

The United States, with positive customer experience of 53.3%, has one of the most attractive ecosystems for FinTech, with innovation occurring coast to coast, and especially in Silicon Valley, which has spawned high-profile FinTechs such as Yodlee, Square, and Lending Club.

In India, with 53.0% positive customer experience, the government is pushing financial innovation through its recent launch of a smartphone-based money transfer system, and several prominent banks are heavily involved in teaming up with FinTechs. Yes Bank of India, for example, has partnered with dozens of startups through its accelerator program and is pioneering a chat-based payments service, while Axis Bank has established an in-house incubator, an accelerator, and a social networking space for startups.^{5 6} Bank of Baroda, a leading public-sector bank, announced partnerships with seven FinTechs.⁷ DBS Bank has launched the mobile-only Digibank that leverages biometrics and artificial intelligence.⁸ Additionally, State Bank of India, the largest public sector bank in India, was among the first banks to adopt Aadhar (a unique ID number issued to Indian residents based on their biometrics) based services such as Aadhaar Enabled Payment System (AEPS), which enables customers to make transactions using just their fingerprint and Aadhar number.⁹

In the UAE, where positive customer experience reached 48.2%, Abu Dhabi is vying to become an innovation hub by creating a lab for FinTech experimentation and partnering with a startup accelerator. In China, with positive customer experience at 47.2%, investment in FinTech startups hit \$11 billion in 2016.¹⁰ Further, major Chinese banks have partnered with Alipay, China's leading mobile payment platform. And in the Netherlands, with 41.9% positive customer experience, the Dutch government is opening a campus where banks can collaborate on blockchain technology deployments. In addition, the country's largest bank, ING, operates the FinTech Village accelerator and maintains partnerships with more than 65 FinTech companies.¹¹

All the activity underscores that banks need to dive deep into all types of experience-enhancing features – like real-time payments, biometric security, interactive personal financial management, and more – to make an impression on customers. Regional preferences for financial innovations may exist, so banks should holistically evaluate their customers' needs as they invest in digital products and services.

Non-Traditional Providers Gain Widespread Acceptance

Traditional banks still have significant hold over customers, but non-traditional firms are gaining ground (Figure 1.2), with 29.4% globally using at least one non-traditional firm. This number is significantly higher in Asia-Pacific, where one-third of customers (33.0%) use banking products and services from non-traditional firms, followed by North America (24.0%) and EMEA (23.6%).

Customers who choose to bank outside the sphere of traditional banks are likely to engage with a number of non-traditional firms. While a small minority (2.9%) do all of their banking exclusively through non-traditional offerings, more than one quarter (26.5%) tap both incumbent banks and non-traditional firms. More than half (52.4%) maintain relationships with three or more non-traditional firms, while only 7.4% have a relationship with just one.

Alarmingly, banks are losing ground to non-traditional firms among the most desirable customer segments. Those most likely to gravitate toward non-traditional firms are Gen Y customers and the tech-savvy, both of which have high potential. As Gen Y customers mature, they will gain in both wealth and financial need, making them increasingly important to banks, while the volume of tech-savvy individuals is set to explode as smart phones become ubiquitous and the digital-native population expands.

⁵ Yes Bank, "YES TAG - 1st Chat Bot for Smart Banking Crosses 10,000 Transactions", Sep 21, 2016.

https://www.yesbank.in/media/press-releases/ty-2016-17/india_1st_chat_bot_for_smart_banking_yes_tag_crosses_10000_transactions

⁶ <https://www.axisbank.com/thoughtfactory/index.html>

⁷ Let's Talk Payments, "Bank of Baroda Partners With 7 FinTech Companies", Jul 19, 2016.

<https://letstalkpayments.com/bank-of-baroda-partners-with-7-fintech-companies/>

⁸ DBS, "DBS launches India's first mobile-only bank, heralds 'WhatsApp moment in banking'", Apr 26, 2016.

https://www.dbs.com/newsroom/DBS_launches_Indias_first_mobile_only_bank_heralds_WhatsApp_moment_in_banking

⁹ <https://www.sbi.co.in/portal/web/home/cash-at-sbi>

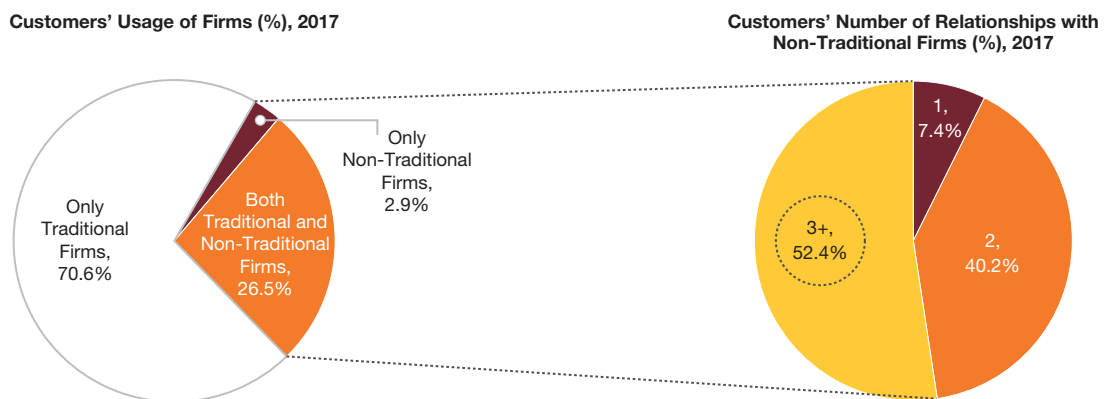
¹⁰ Business Standard, "China's fintech industry shows where the rest of the world is heading", Jan 22, 2017.

http://www.business-standard.com/article/international/china-s-fintech-industry-shows-where-the-rest-of-the-world-is-heading-117012200711_1.html

¹¹ ING, "A fintech love affair", Dec 08, 2016.

<https://www.ing.com/Newsroom/All-news/A-fintech-love-affair.htm>

Figure 1.2: Customers' Usage of Traditional and Non-Traditional Firms (%), 2017



Question: "Please indicate if you use the following products and the nature of the firm you interact with for your banking product; Nature of Firm: Only traditional firms, Only non-traditional firms, Both traditional and non-traditional firms"

Source: Capgemini Financial Services Analysis, 2017; Capgemini and LinkedIn WFTR Voice of Customer Survey, 2016

Nearly half of tech-savvy customers (42.6%) use non-traditional firms, compared with only 12.8% of non-tech savvy users. Similarly, 37.2% of Gen Y customers use non-traditional banks, compared to 22.0% of those in other age groups. The movement of these attractive customer segments to non-traditional firms should stand as a warning, though many banks have yet to see it that way.

While banks may take comfort that they remain the principal financial services provider to 70.6% of customers, they cannot ignore the growing acceptance of FinTechs among the most desirable customer segments. By collaborating with non-traditional firms, they will likely have a better chance of meeting the specific needs of younger, tech-savvy customers and attract more of their business.

“

Everyone sees that these FinTechs are doing quite well — they appear to be growing — but I sense the general notion from the marketplace is that, 'It is not really our customers they are targeting,' and that these customers must come from somewhere else.

— Ewan MacLeod, Chief Digital Officer, Nordea

”

Moments of Truth Matter

A service provider's ability to generate a "Moment of Truth" (MoT) is a good predictor of how positive a customer's overall experience will be. MoTs are defined as the instances when customers interact with their financial services provider and form or change an impression about that particular provider, or their product or service. We found that non-traditional providers are proving to be evenly matched with traditional banks in terms of providing positive experiences around the most important moments.

Both Gen Y and tech-savvy customers ascribe the greatest importance to the moment when their transaction limits are digitally updated (Figure 1.3). And both give higher marks to traditional banks for providing positive experiences around those moments. They also ranked real-time alert notifications highly and gave traditional banks more credit for those moments.

However, non-traditional firms made the best impressions around loan-related transactions, specifically in terms of providing real-time loan quotes via mobile and initiating or closing a loan from a digital channel.

The percentages of Gen Y and tech-savvy customers that gravitated toward non-traditional firms varied by region. China and India distinguished themselves by having the highest percentages (in the 55% to 60% range) of Gen Y and tech-savvy customers using services from non-traditional firms. As the governments of both countries continue to prioritize digital initiatives, the segment of tech-savvy individuals will become increasingly important to banks. Globally, the difference in Gen Y customers and those of other ages using non-traditional firms was highest for France (22.6 percentage points), Belgium (19.8 percentage points) and Spain (15.6 percentage points).

Figure 1.3: Top 5 Banking Moments of Truth for Gen Y and Tech-Savvy Customers (%), 2017

| | Top Five Moments of Truth (Gen Y Customers) | Importance Ascribed | Customer Experience |
|---|--|---------------------|---|
| 1 | Digitally update transaction limits | 70.4% | Higher Positive Experience with Traditional Firms |
| 2 | Real-time loan quotes on mobile | 66.0% | Higher Positive Experience with Non-Traditional Firms |
| 3 | Real-time alert notifications | 65.9% | Higher Positive Experience with Traditional Firms |
| 4 | Real-time information to better manage your financial life | 63.9% | Equal Positive Experience for Traditional and Non-Traditional Firms |
| 5 | Initiate or close a loan from digital channels | 63.5% | Higher Positive Experience with Non-Traditional Firms |

| | Top Five Moments of Truth (Tech-Savvy Customers) | Importance Ascribed | Customer Experience |
|---|--|---------------------|---|
| 1 | Digitally update transaction limits | 76.7% | Higher Positive Experience with Traditional Firms |
| 2 | Real-time alert notifications | 75.7% | Higher Positive Experience with Traditional Firms |
| 3 | Real-time information to better manage your financial life | 73.7% | Equal Positive Experience for Traditional and Non-Traditional Firms |
| 4 | Real-time loan quotes on mobile | 70.7% | Higher Positive Experience with Non-Traditional Firms |
| 5 | Initiate or close a loan from digital channels | 69.6% | Higher Positive Experience with Non-Traditional Firms |

- Higher Positive Experience with Traditional Firms
- Equal Positive Experience for Traditional and Non-Traditional Firms
- Higher Positive Experience with Non-Traditional Firms

Question: "Please indicate your importance on a scale of 1–Not at all Important to 7–Very Important for the following interactions with your banking provider"

Source: Capgemini Financial Services Analysis, 2017; Capgemini and LinkedIn WFTR Voice of Customer Survey, 2016

Banks and non-traditional firms were evenly matched in terms of providing real-time information to better manage personal finance.

Armed with the information on which MoTs customers rank most highly, both banks and non-traditional providers can work to improve the impressions they make. Though some distinctions exist, both types of firms are struggling overall to meet customer expectations on the most important moments. For both traditional and non-traditional firms, creating memorable and pleasing customer interfaces will be critical to generating more positive MoTs.

Banks Gear Up to Respond to Tech-Driven Firms

Living up to customer expectations in a digital age is not easy for any type of entity, but non-traditional firms may have an edge over banks in getting there. Non-traditional firms have the luxury of putting 100% of their effort into the all-important customer interface, and they are not afraid to deploy the latest cutting-edge technologies in the process. Artificial intelligence, facial recognition, gaming technology, chat bots, and much more are all in the mix of technologies being enthusiastically embraced.

Not only are new firms unencumbered by inflexible legacy core systems and risk-averse cultures, but they can design their look and feel around the latest devices and graphic concepts, giving them a fresh aura that traditional banks with long-standing brands have a hard time replicating. Tech-driven firms are also adept at deploying customer-focused technology at the back end—such as advanced data mining and predictive analytics—to derive customer insights and quickly react.

Yet traditional banks need not cede ground to the upstarts. Banks have vast and deep reservoirs of knowledge on how to navigate banking networks and regulations. And they are no strangers to many of the advanced technologies being used by newer firms, though they may not be as quick to deploy them. Large banks have resources that far outstrip what even the most venture capital flush tech firms can access. And, perhaps most important, they've already got the customers.

But these built-in advantages will take banks only so far. Customers have moved on in terms of the types of interactions they expect from service providers and banks must keep pace. Clunky interfaces and disjointed service channels will not cut it once customers become accustomed to slick designs and conveniences like biometric IDs and one-click transactions.

While banks have tried to move forward with digital innovation through in-house efforts, these attempts have largely fallen flat with many firms. Also, viewing them as a threat and trying to compete with them hasn't proven to be a very successful approach either. There is a growing realization that banks and FinTechs have some very complementary strengths, and hence, collaboration with FinTechs has emerged as a much more acceptable and potentially successful route.

Given the pressures of cost, regulation, and fast evolving customer expectations that banks are already struggling with, there is only so much they can focus on at the same time. This makes the option of partnering with FinTechs a highly attractive one for banks.

APIs are critical to making such partnerships work (Figure 1.4). Not only can APIs help banks overcome the inflexibility of their legacy systems which may not be compatible with the latest technologies being used by the FinTechs, they also put banks in position to take advantage of FinTechs' many strengths. Learn more about APIs and their expected impact on the banking industry in Chapter 2.

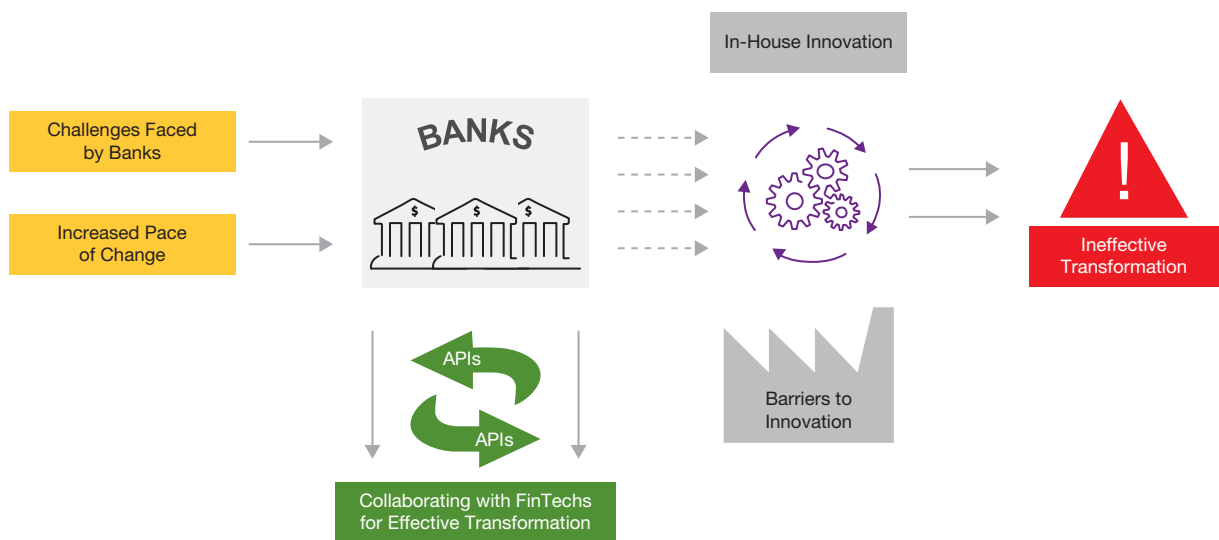
“

The way we see it, we are better together than on our own. If we broaden our scope and look at more ideas, it will be easier to find the best ones and increase the likelihood of success even before the ideas reach the market.

– Jarkko Turunen, Head of Open Banking, Nordea

”

Figure 1.4: Effectiveness of Transformation for Traditional Firms



Source: Capgemini Financial Services Analysis, 2017

Chapter 2: APIs Are Pivotal to Banking's Future



Key Findings

APIs enable rapid deployment of banks' digital agendas and collaboration with non-financial services providers to create a value-based marketplace and increased long-term loyalty.

- Collaboration will become an expected way of doing business, with 91.3% of banks and 75.3% of FinTechs saying they expect to partner with each other.
- Improved customer experience (cited by more than three-quarters of both banks and FinTechs), new revenue streams, and reduced time to market for new products are the main expected benefits of collaboration.
- Data security and customer privacy issues are expected to present the biggest challenges, with nearly three-quarters of banks and FinTechs citing such concerns.
- Regulations are playing a key role in the proliferation of APIs, particularly as the Payment Services Directive 2 (PSD2) in the European Union pushes banks to open customer data to third-party access through APIs.
- Early-mover banks are already reaping benefits from their use of APIs and anticipate their experience will position them for dominance in the coming highly connected digital world.

Banks have the opportunity to utilize their customer data to not only enhance customer engagement, but also create new revenue sources.

- A mutually amicable relationship between banks and tech-driven third parties will bring better services to customers, resulting in stronger relationships.
- Banks also have an opportunity to monetize their APIs, thereby creating new revenue streams. A significant number of banks (43.5%) say they prefer a model in which they charge a fee per API transaction.
- Banks are more inclined than FinTechs (47.8% versus 27.2%) to pursue revenue-sharing models.

Banks must make connectivity a strategic and holistic imperative, versus taking a piecemeal approach.

- The banking industry is in dire need of doing away with the complexities that come with non-standard point-to-point connections between myriad different systems.
- A strong, tiered approach to governance will enhance the chances of long-term success of APIs in banking.
- Industry-level consistency in API standards is necessary to ensure different stakeholders can all work together in a connected ecosystem.
- With increased connectivity, considerations of scalability, security, and API portfolio management will be paramount.
- To deliver meaningful value, the API strategy needs to be part of the business strategy, with a well-considered operating model aimed at promoting the usage of APIs.

Open APIs Come to the Front

There may be nothing more crucial to the future of banking as the application programming interface or API. Yes, APIs operate behind the scenes and, at their core, are merely specifications for how software applications should interact. But they are fast becoming the standard-bearer in helping banks create stronger, more dynamic customer ties. APIs allow banks to achieve their digital goals, as well as collaborate with non-traditional providers to create value-based marketplaces that can improve long-term loyalty. What’s more, APIs are fostering a new culture of collaboration by bridging the once-uneasy relationship between traditional banks and startup FinTechs. While banks bring market reach and brand trust to the equation, FinTechs supply new ways of doing business.

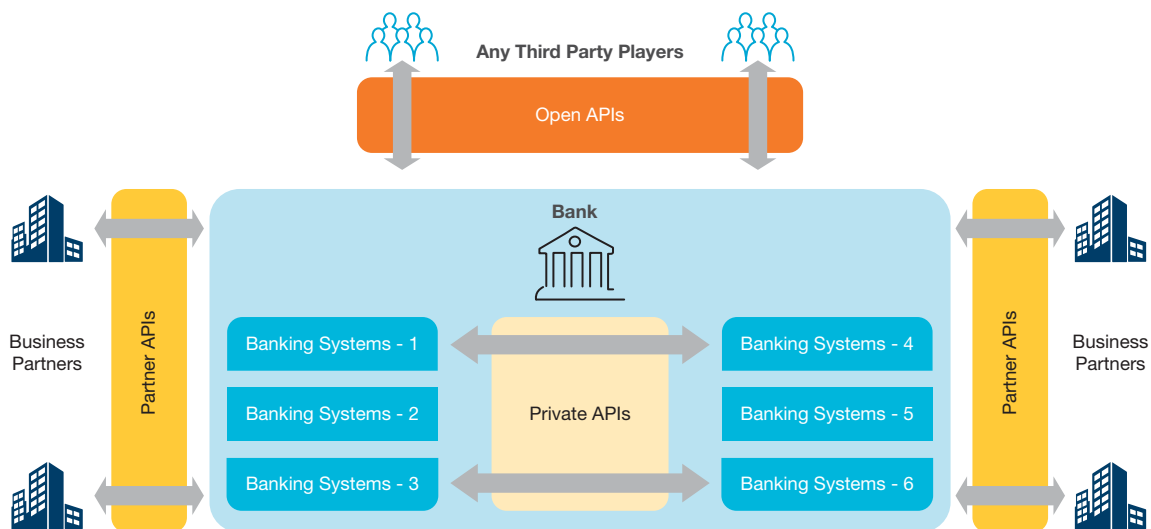
APIs are not new, but their adoption has picked up exponentially in recent years, with estimates (as of April 2016) ranging from 15,000 to 50,000 publicly-available APIs, and the number of private and partnership APIs likely exceeding those totals.¹² And that’s good news for banks. APIs form the basis of partnerships with nimbler FinTechs, allowing banks to shed their traditional sluggish approach to technology and begin embracing creativity and customer-focused innovation. APIs help create a sustainable digital-business model,

where customer innovation thrives alongside simplicity of use, security across all channels, and a fast ability to consume relevant banking offers.

APIs can be broadly categorized into three types (Figure 2.1):

- **Private APIs**—Banks have been using private APIs internally for a long time to facilitate information flow between siloed legacy systems. As their role has grown, private APIs have become the backbone of major bank operating systems, reducing friction between systems and enhancing the operational efficiency of the entire organization. In a 2015 survey, 88% of banks viewed private APIs as essential for the tasks of managing back-office systems, leveraging big data, and maintaining compliance.¹³
- **Partner APIs**—Less prevalent than private APIs, partner APIs foster customized integration between banks and third-party partners, with the goal of enabling particular business processes or offerings. They can help banks achieve various strategic endpoints, including expanding their business, adding new services, or opening new channels.
- **Open APIs**—Open APIs make business data and functionality available to third parties that may not hold a business relationship with the bank. Though the exchange occurs in a controlled manner, many banks remain reluctant to make their data available through open APIs because of security concerns.

Figure 2.1: Types of APIs



Source: Capgemini Financial Services Analysis, 2017

¹² Nordicapis, "Tracking the Growth of the API Economy", Apr 18, 2017. <http://nordicapis.com/tracking-the-growth-of-the-api-economy/>

¹³ Banking APIs – State of the Market, Open Bank Project and Bank Innovation, Nov 2015.

Most banks typically ease into APIs, first applying them internally to resolve legacy issues. Private APIs support cooperation between business units and the IT department, including the ability to tamp down “shadow systems” that may operate throughout the bank but are not centrally managed. APIs also provide consumption statistics that can foster deeper understanding of data processes and lay the groundwork for ongoing innovation and improvement.¹⁴ Over time, APIs are expected to evolve to include a greater focus on partner and open APIs, as banks respond to growing pressures to become more transparent and customer-focused.

APIs Underpin Bank/FinTech Collaboration

Banks and FinTechs have struggled for years to find common ground. FinTechs came onto the scene with the intent of grabbing market share and have succeeded in injecting fresh concepts into banking. But they fell short when it came to achieving the mass scale of banks in terms of processing capability and customer reach. Banks, meanwhile, initially eyed FinTechs with suspicion and mistrust, but have since come to appreciate their entrepreneurial approach to financial services. Unencumbered by legacy systems and a cultural aversion to risk, FinTechs have

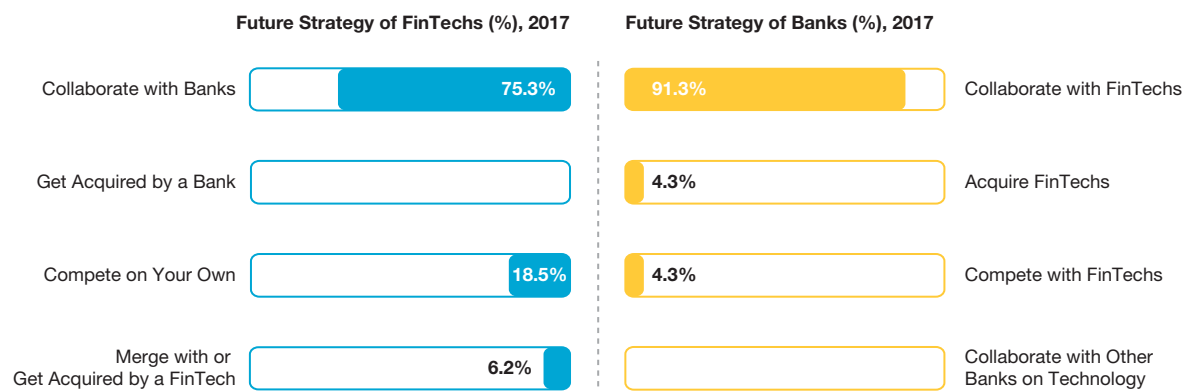
brought a fresh, eye-opening perspective to banking. Increasingly, both sides see that they can create value by combining their strengths.

As noted in *Capgemini's World Retail Banking Report 2016*, recognition of each other's strengths has fostered a fundamental shift in the interplay between banks and FinTechs. Rather than squaring off, banks and FinTechs increasingly are partnering up. An overwhelming majority of banks want to work with FinTechs: 91.3% say their future strategy is to do so (Figure 2.2). FinTechs also are coming around to the same viewpoint: 75.3% say their goal is to work with banks, rather than get acquired by another FinTech or bank, or try to go it alone. *“New ideas coming from FinTechs are pushing us toward partnerships and aggregation,” said Andrea Coppini, Chief Digital Officer of ICCREA.*

In a future where collaboration between banks and FinTechs is inevitable, APIs will play an essential role in helping banks fulfill their goals.

Through APIs, banks gain access to the agility and creativity of FinTechs while sharing their resources, customer databases, and established expertise. The result? Superior interactions for customers. For example, instead of logging into a banking system to transfer money, a customer could send money to a friend through social media or other type of interface. APIs allow collaborative banks and FinTechs to offer more to customers than either could do alone.

Figure 2.2: Future Strategy of FinTechs and Banks (%), 2017



Note: The percentage represents the FinTech/banking executives who have chosen the particular option
 Question 1: “What is the primary business objectives of your firm?” (Please choose an applicable option)
 Question 2: “What is your bank’s business strategy with respect to FinTech?” (Please choose an applicable option)
 Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

¹⁴ Nordicapis, “Should Every Company Consider Providing an API?”, Jun 9, 2015. <http://nordicapis.com/should-every-company-consider-providing-an-api/>

“
One conclusion from developing our long-term vision to deliver world-class services is that we will not be able to do this on our own, but will have to collaborate and establish partnerships. We have never really seen FinTechs as competitors and did not believe those who suggested that they would be the end for banks. We focus on understanding which FinTechs have a compelling customer offering or technology and target those for potential partnerships.
 – Rasmus Järborg, Chief Strategy Officer, SEB

“We think that the APIs constitute an accelerator,” said Enrico Bagnasco, Head of ICT Head Office Department of Intesa Sanpaolo Group Services.

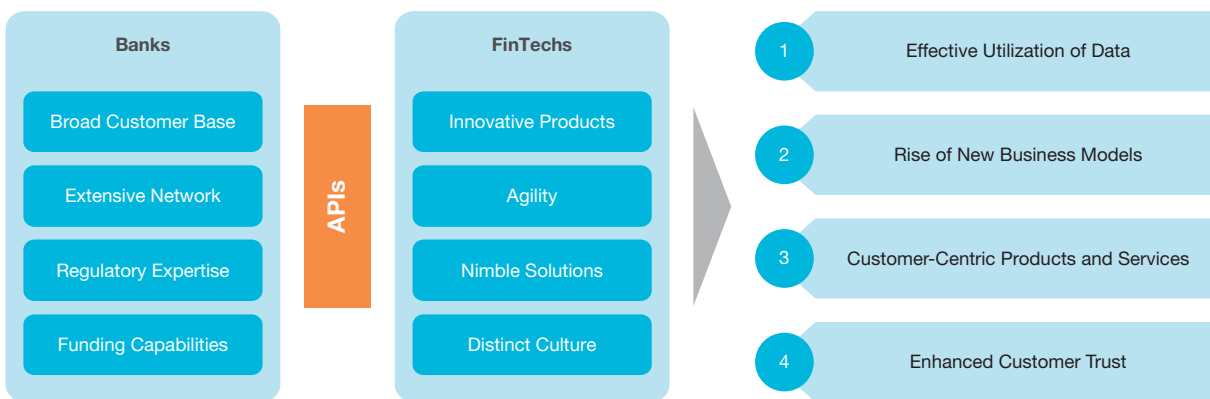
Through APIs, banks and FinTechs will be able to leverage their complementary strengths (Figure 2.3). Banks have enormous customer bases, funding capabilities, and expertise in operating large processing networks and dealing with regulators. FinTechs, meanwhile, can offer new ways of looking at financial products, along with cultures that prize a focus on customer needs and speedy action. Together, the two entities have a better chance of using data more effectively to introduce products that resonate with customers and also generate shared revenue streams.

As banks and FinTechs create links via APIs, the industry will benefit in multiple ways. APIs can help banks pursue all the latest developments in distribution channels, including the creation of new types of channels, enabling them to keep up with the demands of desirable tech-savvy customers. Opening up the spigot of developer creativity and skill also will encourage sweeping customer experience improvement, as new products that push the boundaries of traditional banking come to the fore. Internally, APIs can smooth the way toward digital transformation by enhancing information flow across legacy and other systems. Overall, product development can occur much more quickly.

Early movers are already pursuing fruitful collaborations leveraging APIs. BBVA Compass, for example, is using APIs to offer a real-time payment service to customers through a partnership with tech startup Dwolla—eliminating the hassle and time of dealing with ACH or checking systems.¹⁵ JPMorgan Chase is speeding up loan processing by collaborating with On Deck, a FinTech that uses a proprietary credit score to grant loans to small businesses in hours, rather than days or weeks.¹⁶

More than three-quarters of banks (78.3%) said they are counting on APIs to help them improve customer experience, with FinTechs agreeing in near equal measure (Figure 2.4). Banks and FinTechs also agree, though to a lesser extent, that APIs will help them develop new revenue streams and quicken time to market for new products and services.

Figure 2.3: Evolution of New Business Avenues

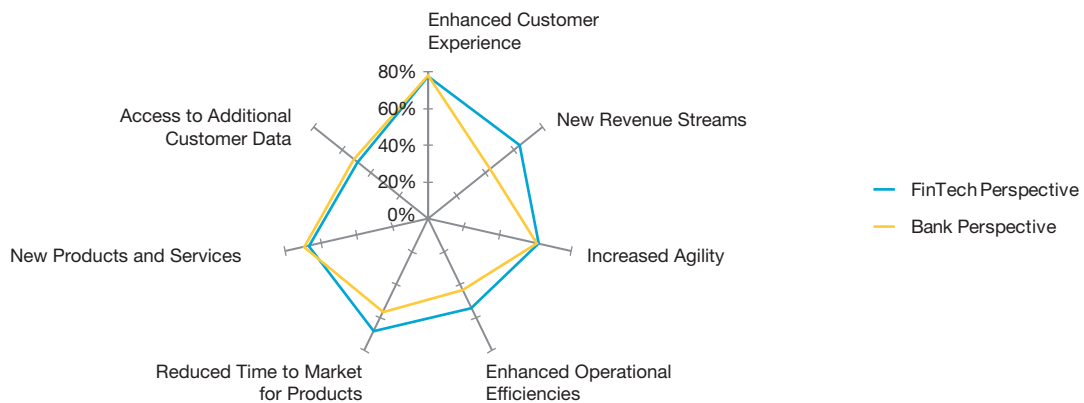


Source: Capgemini Financial Services Analysis, 2017

¹⁵ BBVA Compass, “BBVA Compass, Dwolla begin rollout of real-time bank transfers”, Apr 08, 2015. <http://newsroom.bbvacompass.com/2015-04-08-BBVA-Compass-Dwolla-begin-rollout-of-real-time-bank-transfers>

¹⁶ Bloomberg, “JPMorgan Working With On Deck to Speed Small-Business Loans”, Dec 02, 2015. <https://www.bloomberg.com/news/articles/2015-12-01/jpmorgan-working-with-on-deck-capital-for-small-business-loans>

Figure 2.4: Benefits of Implementing APIs for Banks (%), 2017



Note: The percentage represents the FinTech and banking executives who have given a rating of 6 or 7 on a scale of 1-7 for each of the benefits

Question: "To what extent do you agree the below areas are benefits banks will achieve by implementing their API strategies"? (Please rate the options on a scale of 1-7, with 7 being strongly agree and 1 being strongly disagree)

Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

APIs can also help remove some of the pressure when it comes to new product development. *"Banks feel they make a decision and are stuck with it for a long, long time. APIs give more flexibility in that regard," noted a senior executive from a leading U.S. bank.*

In addition, *"APIs can help banks save money by allowing them to tap into ready-made services," said a senior executive at a leading bank in Italy. "This scenario is perfectly compliant with the cost reduction needs of banks, allowing easy forecasts of investments, profitability and related returns," the executive added.* Overall, the prevailing view regarding APIs is that they will help the industry deliver a more consistent, convenient, and secure end-user experience.

APIs will also enhance the operational efficiency of banks. They may accelerate the demise of banks' back offices as banks realize that they don't need fixed legacy system costs and can move to the cloud. This will give a further impetus to the move from 'Cloud Maybe' to 'Cloud First' that we are already beginning to see.

Open APIs in particular will enable banks to gather actionable data from various sources, including customer buying habits, financial requirements, and risk appetites. Banks can derive insights from this data to leverage analytics and support multi-channel marketing, reducing reliance on above-the-line spending and managing a federated agency network. As a result, banks will be able to better integrate their services and deliver new service offerings.

While APIs offer plenty of benefits, they also present challenges. Data security is a key area of concern, with 69.5% of banks and 74.1% of FinTechs mentioning their apprehension (Figure 2.5). An almost equal proportion

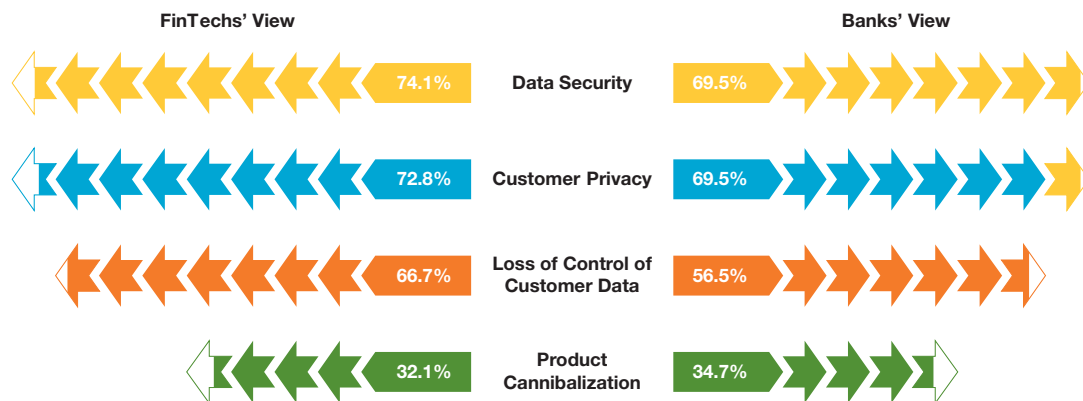
APIs open up the bank. They allow for fast integration of third party offerings as well as data exchange with connected partners in real-time. This equally translates to the adaptability of the customer interfaces. Through APIs, we created an app store, Fidor Finance Bay, whereby customers customise their own bank by choosing from many third party offerings. The customer is in control and can design its own bank. The other great benefit is the future readiness for many payment formats, like PSD2.

– Gé Drossaert, Chief Commercial Officer and Member of the Board, Fidor Group

of executives are alarmed by threats to customer privacy, with 69.5% of banks and 72.8% of FinTechs citing it. The increased incidence of fraud in the form of phishing, smishing, and cybersquatting to enable account takeover has become a serious concern for the industry. By design, APIs are intended to make bank information systems more accessible to third parties, so it follows that poorly constructed APIs may open internal systems to cyber-attack vulnerability.

In response, banks and FinTechs need to ensure they are fully up to date on the full range of API-related security best practices. Education and training should go hand in hand with these efforts, to help alleviate fears and promote acceptance. APIs will likely follow the same path as other new technologies,

Figure 2.5: Concerns for API Adoption in Banks (%), 2017



Note: The percentage represents the FinTech and banking executives who have given a rating of 6 or 7 on a scale of 1–7 for each of the concerns
 Question: "What level of concern do banks have in the following areas when adopting APIs?"
 Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

such as cloud-based services. *As a senior executive from one of the leading U.S. banks noted, "A few years ago, hesitancy about the cloud died down via education and information."*

“
 We need to protect our customers’ data and assets as they have strong faith in security of bank but in order to maintain that trust we need to have control over how we provide APIs. Adding value through API and still maintaining security will be a key challenge.
 – Makoto Shibata, Head of Global Innovation Team, The Bank of Tokyo-Mitsubishi UFJ
 ”

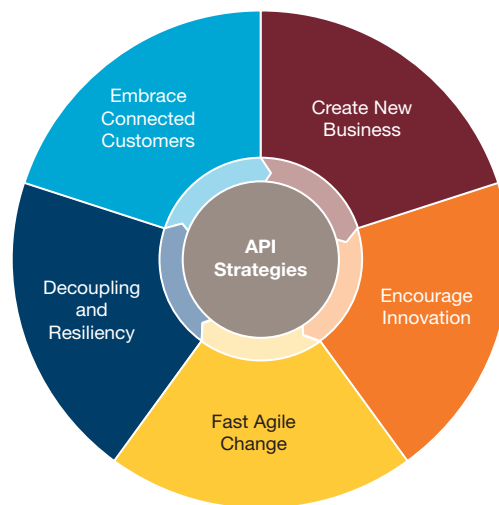
APIs Expand in Purpose and Priority

Financial services APIs are versatile, offering banks numerous paths to adoption. For example, banks that believe they lag in providing engaging customer experiences may seek a partner that places high priority on that endpoint. More than likely, a bank’s overall strategy will guide its goals related to API implementation. These strategies could fall along the following lines (Figure 2.6):

- **Create New Businesses** – Using APIs to promote the reach and depth of business channels, and exploit opportunities for non-linear growth at high margins while simultaneously leveraging effective marketing strategy to attract new customers at lower cost.
- **Encourage Innovation** – Leveraging APIs to encourage interaction and coordination between internal business units, while also reaching out to third parties such as partners, suppliers, and other businesses interested in tapping into the bank’s platform to support innovation.
- **Fast, Agile Change** – By breaking down silos, APIs can improve systems coordination and significantly boost the speed of processes, transactions, and innovation, keeping banks competitive by strengthening customer connections.
- **Decoupling and Resiliency** – Decoupling architectural components into building blocks and rejoining them through APIs allows for independently scalable platforms and greater resiliency. In addition, moving away from a point-to-point infrastructure to a more federated model reduces the cost of development and improves the ability to rationalize applications.
- **Embrace Connected Customers** – APIs can help banks enter into the next age of computing, which will require the ability to work with a wide variety of flexible devices. With an API backbone, banks will be able to use new tools to build very specific use cases around customer management.

Open APIs give software developers access to areas of the bank that have previously been strictly closed off. They allow outside developers to perform tasks on behalf of bank customers, such as validating passwords, pulling bank account balance information,

Figure 2.6: Key Strategies for Firms Adopting APIs



Source: Capgemini Financial Services Analysis, 2017

and analyzing spending patterns. Few banks today are sufficiently comfortable to allow this sort of activity on their own servers. The ones that have, expect to benefit from a steady stream of talent from tech startups aiming to bring fresh ideas to banking.

BBVA Compass and Barclays are among the institutions at the forefront of open API integration.¹⁷ Each has created a standard process, typical to many banks, in which FinTechs can tap into APIs and get on a fast track to developing new services. FinTechs first select an API from a pre-set library, then enter into a development area or “sandbox”, where they can build and test their applications before releasing them into a live production environment. The banks maintain tight controls and oversight over the process, restricting access where necessary and moving carefully before releasing new products. As BBVA puts it in its notes to developers, gaining access to the bank’s APIs in the production environment is “serious business to us,” requiring approval by a group of experts in the bank.¹⁸

Openness to this type of collaboration helps push banking in new directions. One major U.S. bank uses APIs to connect to an online travel service provider that books a high volume of international flights. Through the app, people booking travel on the site can now also purchase foreign currency directly from the bank. Not only does the service provide a timely convenience, it also exposes the bank to a new population of

customers at a very low cost. The travel site gets points for leading customers to a much-needed service, while the bank gets recognition for being in the right place at the right time. The bank also has the chance to turn simple currency transactions into broader relationships over time.

FinTech companies, meanwhile, have been even more proactive than banks in opening their APIs to outside firms (such as financial institutions). They understand the value of being able to team with organizations that have on-the-ground expertise and large customer bases. Financial APIs from dozens, perhaps hundreds, of companies covering areas including payments, trading, authentication, investing, and other applications are currently available, and the list is growing.

Some examples include Finxera, a funds transfer software company, which offers about 30 APIs that let developers validate identities, create bank accounts linked to all types of payment services (such as credit cards, checks, and ACH debits), and move money to and from those accounts.¹⁹ Lending Club, through its Open Integration program, lets financial advisors and broker-dealers tap a suite of APIs to deliver functionality including investing, money movement and real-time reporting, directly through their web sites.²⁰ An API from Authy offers pre-built libraries to help users more easily build two-factor authentication routines.²¹

¹⁷ <https://www.bbvaapimarket.com/>; <https://developer.barclays.com/bdn/#/home/landing>

¹⁸ <https://www.bbvaapimarket.com/support/faqs>

¹⁹ <http://www.finxera.com/api>

²⁰ <https://www.lendingclub.com/developers/lc-api.action>

²¹ <https://authy.com/>

Regulators Push Openness, APIs

The advent of entrepreneurial tech companies is not the only factor causing the financial services industry to more warmly embrace APIs. Regulators around the world have begun prizing innovation through openness and as a result are now exerting considerable pressure on banks to open up the closed systems they have built up over decades, particularly around payments, which prevent outside competitors from gaining a foothold with new offerings. The most significant of these regulations is the European Union's Payments Services Directive 2 (PSD2), set to go into effect January, 2018.

Under the directive, customers will be able to access their bank accounts through third parties, and do things like initiating payments. Through the PSD2's Access to Accounts (XS2A) initiative, banks will be required to allow access to Account Information Service Providers (AISPs) that can retrieve information from bank accounts, as well as Payment Initiation Service Providers (PISPs) that can initiate payment transactions.

Customers' rights will be protected through a framework of data permissions known as the General Data Protection Regulations (GDPR), scheduled to launch May 2018. The GDPR works to ensure that customers understand how their data is to be used and that it will not be shared without their consent. Failure to comply will result in heavy fines for banks, as well as diminished luster for the brand.

Digital ID management is also expected to evolve in response to APIs. Important regulations such as PSD2 plan to use a federated model of ID management where PISPs can verify customers through banks' APIs before initiating transactions. Standard usage of existing IDs for verifications will enable banks to focus more on productive activities instead of dedicating resources for onerous KYC requirements.

In the UK, the Financial Conduct Authority (FCA) has been a leader in coming up with regulations around APIs and FinTechs. In 2015, it became the first regulator to develop a sandbox for FinTech startups and today it continues to be frontrunner in promoting openness in the banking industry.

While similar regulations in the United States do not yet exist, there is growing pressure from FinTech lobbying groups and the Consumer Financial Protection Bureau, a federal regulatory agency, is encouraging banks to make consumer financial data more accessible as a benefit to consumers struggling to manage their personal finances.

In Asia, the Monetary Authority of Singapore supports APIs as part of its Smart Financial Centre initiative, which facilitates financial innovation under the country's Smart Nation effort aimed at harnessing the power of technology. The Economics Committee of Australia and the Financial Services Commission in South Korea also promote the idea of APIs.

As regulations around the world continue to evolve, banks are proceeding unevenly into the world of APIs. Some large banks are moving swiftly, tapping their vast resources to establish one-on-one relationships with FinTechs and developing customized APIs. Though they are contending with legacy systems, these banks are positioning themselves for competitive advantages, as well as a head start as regulations move toward greater openness.

“

There should be clear regulations that provide guidance for banks and other service providers for the risk or queries that arise on working together. Customers would also be more comfortable in sharing their data if regulations address their concerns.

– A senior executive from a leading bank in Asia

”

Digital-only banks have numerous benefits in an API-oriented world. They have been built from scratch to foster innovation and clever design; and they do not have slow cultures or systems to bog them down. Some of these new challenger banks may thrive by offering marketplaces of API-based services that other banks can turn to, while others may opt to be acquired by an existing bank seeking to rev up its own digital transformation process.

Mid-tier banks may face the most difficult pathway into API-based financial services. With fewer resources and less technical expertise to devote to customized API development, they may find it hard to keep up with competitors at both ends of the spectrum. Those that fail to strike up suitable partnerships for API development may choose to merge with another mid-tier bank, or acquire a challenger bank, or be acquired by an incumbent bank. Ultimately, the increasingly competitive market is expected to benefit customers.

Bud – A FinTech Leveraging APIs and Reaffirming Banks' Role As Center of Customers' Finances

Consumers are calling for on-demand, automation and hyper-personalization from the products they use, but banks have been held back by their legacy systems and are struggling to deliver. New regulations and new FinTech companies are helping banks move in the right direction, changing the way they operate to serve their customers better. One such company is Bud.

Established in 2015, Bud is helping banks deliver real solutions for PSD2 and Open Banking. Their goal is to assist banks to take advantage of new regulations. The threat from PSD2 means FinTech firms can disintermediate the banks, relegating the banks to 'dumb pipes' and could shift the customer's relationship away from the bank. Bud's white label solutions aim to reaffirm the bank's role in people's lives as the center point of their finances.

At the core of what Bud offers is API technology. Bud uses APIs to link together multiple financial services products such as bank accounts, investments, loan providers, mortgage brokers, insurance, pensions, etc. in one place. They currently have over 50 financial services partners listed on their site. This integrated marketplace is then deployed within a bank's existing customer channels such as their apps and websites. Bud offers analytics on all of its services so bank customers can get a full view of their financial standing, a service not seen since the days of bank managers.

The account aggregation that Bud offers can mine and crunch anonymized transactional data. This data helps the banks understand more who their customers are. It is then used to introduce customers to new products and services that can benefit their life, whether it be a bank cross-selling their own products or adding a third party. This presents a new business model to the bank, one which delivers on personalization for customers and generates referral fees for the bank.

Ed Maslaveckas, Bud's Co-Founder and CEO shared how he feels this will impact the world of finance: "There are more financial products than ever before, and finding the right one involves time, research and, in some cases, an economics degree. Bud takes away the difficulties associated with mastering your money. By deploying our technology through banks, people don't have to download anything new or change their behavior. They can use their trusted bank, plus any of the other services they want, on one screen. That is the experience people expect in 2017."

Bud is already working with some of the largest banks in the world. These banks are using Bud's technology in multiple ways, from smarter mortgage journeys to full marketplace integration. "We are building new features all the time," Ed continued, "we test them safely with banks in a program we call 'Bud Beta Labs'. An iterative testing process that speeds up the development and deployment of features and allows banks to act more like a start-up, building products with an agile approach. This saves the bank money on innovation projects that end up going nowhere."

Bud is regulated by the FCA, won Innovation of the Year at the British Bank Awards 2017, and has advanced to the finals of Capgemini's Innovators Race awards in the FinTech theme (winner to be announced in June 2017).

Banks of all Sizes Push API Boundaries

Early mover banks are using APIs to push into a variety of new directions. Some are global banks with hundreds of millions of customers, while others are startups still in the early stages of building their user communities. The one commonality is that all anticipate their experience in APIs will set them up to be dominant players in the coming highly connected digital world.

Citigroup's API Developer Hub

When Citigroup announced its API Developer Hub in November 2016, it already had considerable experience in working with major brand-name companies to introduce new products leveraging the bank's APIs. Through its Pay with Points API, for example, reward card members have been able to use points to cover all or part of their card purchases at BestBuy.com, 1800Flowers.com, or through the Wonder digital gift app. In Australia, Citi already had been working with Virgin Money to deliver a dedicated mobile money app incorporating its API for credit card functionality. And in Singapore, Citi had deployed a payments API so customers could apply for a Citi cash-back card through honestbee, an online concierge and delivery service.²²

With the global API Developer Hub, Citi is adopting a more formal approach to connecting the bank with FinTechs and consumer brands around the world. Through the hub, developers can access dozens of APIs across several categories, including payments, investments, rewards, and account management. Releasing the APIs underscores Citi's intent to evolve to open architecture. Ultimately, it seeks to create "a collaborative ecosystem of leading brands and developers," said Stephen Bird, CEO of Global Consumer Banking at Citi. The goal is to meet customers' financial needs through a complete set of products, services and experiences, he added.

With more than 100 million customers, Citi is well-positioned to build a scalable, innovative platform. Third-party companies appeared to recognize this strength and came onto the site in large numbers.

Less than 60 days after launching, the Developer Hub had nearly 15,000 visitors and more than 1,500 registrants. Before long, nearly 80 developers had started building applications in the development sandbox with the aim of bringing them into production. These developers are likely to benefit from greatly reduced time-to-market spans. Already, the API Developer Hub has helped reduce the time to onboard new Pay with Points partners to two weeks from six months.²³

OCBC Bank's Connect2OCBC

Singapore's OCBC bank scored points on two fronts when it introduced its open API platform, Connect2OCBC, in May 2016. First, it claimed to be the first bank in Southeast Asia to offer APIs through a developer portal. It also highlighted its support for the government's Smart Nation initiative, which aims to empower society through better use of technology. Much as Singapore aims to embrace technology as a nation, OCBC intends to move toward an "open data economy" that prizes collaboration between the bank and the rest of the online community, said Praveen Raina, Senior Vice President, Group Operations & Technology. "It is about being social," Mr. Raina added. "We want to create a data-social network" that facilitates the free flow of information and creates better user experiences for customers and the community as a whole.²⁴

OCBC is seeking to encourage all types of developers, including those focused on lifestyle applications, to access its open APIs. In addition to APIs for locating branches and ATMs, it launched a card API that offers recommendations on which OCBC card to use for different purposes. Another API provides updated currency exchange rates, allowing online businesses to deliver product prices denominated in users' home currencies. The APIs reduce the time required to integrate functionality into new apps from more than two months to just a few hours.

OCBC hopes its APIs will resonate with customers and prospects as they go about their everyday lives. A restaurant dining experience, for example, could be enhanced by information showing the location of the nearest OCBC ATM, in case funds are needed to pay for the meal. Customers might also appreciate

²² Citigroup, "Citi Launches Global API Developer Portal to Enable Open Banking," Nov 10, 2016. <http://www.citigroup.com/citi/news/2016/161114a.htm>

²³ Citi Developer Hub – Distribution & Marketing Innovation, EFMA, 2017.

²⁴ OCBC Bank, "OCBC Bank is the First Bank in Southeast Asia to Launch Open API Platform," May 17, 2016. <https://www.ocbc.com/assets/pdf/media/2016/may/media%20release%20-%20ocbc%20is%201st%20bank%20in%20southeast%20asia%20to%20launch%20open%20api%20platform.pdf>

recommendations on which credit card to use, say if they want to take advantage of the OCBC 365 card, which gives up to 6% cash back on weekend dining. So far, the APIs have been well-received with more than 400 sign-ups and about 5,000 API hits, as well as the creation of an active forum community. OCBC also benefitted from extensive coverage by the local news media, as well as buzz throughout social media forums.

solarisBank Platform

Not exactly a FinTech and not exactly a bank, solarisBank occupies a space known as Banking as a Platform (BaaP). Equipped with a German banking license, the company empowers non-bank digital companies that require financial services to support their core offerings. For example, solarisBank helps Europe's largest gift card provider, fashioncheque, to track, settle and clear thousands of daily transactions, allowing the company to focus on brand building and product positioning. On behalf of AutoScout24, Europe's largest online car marketplace, solarisBank makes instant loan decisions, helping the firm rev up activity on its site.²⁵

solarisBank executives see the firm as filling a gap left by traditional banks that have been sluggish in meeting demand for financial services in the fast-growing digital economy. solarisBank's modular, API-powered platform services cover three broad categories – e-money, rapid credit and digital retail banking – and act as building blocks, allowing users to construct highly customized services. The easy-to-implement API offers “frictionless and straightforward integration,” said Andreas Bittner, Managing Director, allowing partners to add financial functionality quickly, while keeping their main focus on their core business.²⁶

Since it opened in March 2016, solarisBank has succeeded in bringing more than 20 companies onto its platform, and has grown its team of banking and technology experts from 20 to over 85. One year after its launch, it raised EUR 26.3 million in series A financing. It is set to expand, having passported its banking license to six European countries.²⁷

FidorPay Retail Cash Management Account

Founded in 2009 in the aftermath of the financial crisis, Fidor Bank seeks to model openness, truthfulness, and constant dialogue with customers. Its flagship retail cash management account, FidorPay, was built from the ground up to encourage third-party development through API interfaces. That approach has led it to incorporate numerous state-of-the-art features into what has traditionally been a simple and straightforward banking product.

The award-winning FidorPay distinguishes itself in a number of ways from regular checking or current accounts. In addition to writing and depositing checks, users of the account can also send and receive money by email, text or Twitter domain, engage in peer-to-peer lending, send and receive foreign currencies and precious metals, use a virtual/physical MasterCard, take part in crowd financing, and access virtual currencies such as BitCoins, among other features. During a six-month campaign that ended in mid-2013, the bank incrementally raised the interest paid on FidorPay accounts depending on the number of “likes” it received on its Facebook page. More than 15,000 Facebook users participated.²⁸

Fidor also offers its proprietary Operating System platform (fOS), which uses open APIs to help businesses create their own online banks. In July 2016, the mobile network operator Telefonica announced its German unit would use Fidor's API services to build a mobile-only bank account that includes a debit card, money-transfer services and access to instant, small-scale loans. The account also offers a perk difficult for traditional banks to replicate – additional monthly data allowances for Telefonica mobile accounts, depending on how much customers use the bank account.²⁹

Telefonica is taking advantage of Fidor's “No-Stack” Banking as a Service (BaaS), which runs on top of fOS and lets startups and non-banks build their customer experience on top of the firm's APIs. In addition to handling the technology aspects of running an online bank, Fidor offers access to a German bank license, customer support, card services, compliance, and marketing.

²⁵ Solaris Bank, “solarisBank expands partner portfolio: AutoScout24 launches banking platform's ‘Rapid Credit’ module,” Aug 9, 2016. <http://solarisbank.pr.co/133629-solarisbank-expands-partner-portfolio-autoscout24-launches-banking-platform-s-rapid-credit-module>

²⁶ Solaris Bank, “A tech company with a banking license: solarisBank offers the first banking platform for the digital economy,” Mar 14, 2016. <http://solarisbank.pr.co/124183-a-tech-company-with-a-banking-license-solarisbank-offers-the-first-banking-platform-for-the-digital-economy>

²⁷ Solaris Bank, “solarisBank raises EUR 26.3 million in Series A financing,” Mar 14, 2017. <http://solarisbank.pr.co/145190-solarisbank-raises-eur-26-3-million-in-series-a-financing>

²⁸ FidorPay Account – Distribution & Marketing Innovation, EFMA, 2017

²⁹ Fidor Bank, “Revolution in Mobile Banking: Fidor Bank and Telefonica Germany launch O2's first mobile bank account – O2 Banking,” May 12, 2016. https://www.fidor.de/documents/2016_05_12_Fidor_Bank_Telefonica_ENG.pdf

Fidor got a boost last year when it was purchased by Group BPCE, France's second-largest banking group. BPCE will use Fidor's technology to accelerate its own digital strategy and will support Fidor's efforts to gain international clients for its API-based digital banking solution. "We will be able to focus on expanding our core business offering," said Matthias Kroner, Fidor's founder and CEO. Fidor will continue to run its online bank, which emphasizes the social and community aspects of banking by running a message board where members share advice on financial planning and saving. Between Germany and the UK, into which Fidor expanded in September 2015, the online bank has more than 350,000 online community members and a customer base of more than 120,000.³⁰

BBVA's API Market

BBVA acquired digital bank pioneer, Simple, in 2014 in an effort to become a more nimble and innovative institution. But the acquisition was only one piece of a multi-pronged strategy. Central to BBVA's goal is a commitment to opening its platforms to qualified third parties through its API Market.

The API Market invites FinTechs to pour their creative energy into building new services on top of BBVA's core platform, allowing them to take advantage of its expertise in managing scalability, risk, compliance and processing. The bank sees itself as playing an essential role in supporting an ongoing revolution in finance and technology. "In the end, we enable this whole revolution to happen," said Shamir Karkal, Head of Open APIs, BBVA.³¹

Simple was one of the first firms to use the APIs, and BBVA continually assesses proposals from other firms in areas related to customer data, cards, payments, and accounts.

“

APIs are nothing short of essential to banking's future. They are going to drastically change the way we do banking and banks will have to find their place in this new environment to really become a winner.

– Gabriel Sanchez-Iniesta, Chief Information Officer,
BBVA Compass

”

However, these are not the only banks trying to be the leaders in this space. Similar to Telefonica, the French telecom firm Orange is also marking its foray into banking, having acquired 65% of Groupama Banque in April 2016. It plans to launch 'Orange Bank,' a 100% mobile bank, nationwide in July 2017. Initially, it will feature only current and savings accounts, contactless mobile payments, and P2P payments, but it has plans to expand into loans and insurance in the future. Also, going forward it aims to offer APIs to enable FinTech startups to connect their services with Orange's financial services platform.³²

The German bank, N26, which is operational in several European countries, is also known for providing smooth services to customers by leveraging APIs. Identity verification at the time of account opening is done via video call from the N26 app to IDnow. An instant verification helps the bank to open new accounts in under eight minutes. It also leverages the services of TransferWise to let customers transfer money in 19 different currencies.³³

Mandated by the Competition and Markets Authority, several banks in the UK are also working to leverage APIs to provide innovative services to customers. The Open Banking group, which is working on defining and developing the required APIs, security and messaging standards, is comprised of many major banks, including the Bank of Ireland, Barclays, HSBC, Lloyds, and RBS.³⁴

Banks Tap into FinTech Mindset via Hackathons

Recognizing that ideas are the lifeblood of innovation, more banks are inviting outsiders to participate in intense, short-lived, sometimes sleepless events known as hackathons, in which developers collaborate, often randomly, to identify business problems and solve them through technology. Hackathons typically occur over a weekend and ideally result in actual applications that tackle challenges in a new way. Barclays, RBS and Citigroup are among the many banks running hackathons to encourage idea flow and innovation.

³⁰ Fidor Bank, "Fidor Group acquired by Groupe BPCE", Jul 28, 2016. https://www.fidor.de/documents/Fidor_Group_acquired_by_Groupe_BPCE.pdf

³¹ BBVA, "BBVA API Market, the platform for financial innovators, May 4, 2016. <https://www.bbva.com/en/news/general/bbva-api-market-platform-financial-innovators/>

³² Finextra, "Orange Bank preps July launch", Apr 20, 2017. <https://www.finextra.com/newsarticle/30460/orange-bank-preps-july-launch/startups>

³³ TransferWise, "N26 and TransferWise join forces", Feb 25, 2016. <https://transferwise.com/gb/blog/number26-and-transferwise-join-forces;https://support.n26.com/read/000001250?locale=en>

³⁴ <https://www.openbanking.org.uk/about/the-initiative-open-banking/>

Barclays made a big impression in September 2016 when it hosted what it says was the largest single hackathon event in financial services history. The hackathon, which attracted 1,045 participants in 547 teams working across two continents, marked the first time Barclays had released its APIs to external developers. The bank hoped to foster development around three challenges – the impact of the European Union's PSD2 on payments, managing risk in corporate treasury, and removing interfaces between retail customers and the bank. Over 37,620 hours of coding, the hackathon produced 105 working prototypes and six winning teams.³⁵

Billing itself as the Bank of APIs, **RBS** encourages safe API experimentation within its developer sandbox, Blue Bank, which holds representative data to help third parties build prototype banking apps. Over 18 months, RBS held eight Blue Bank hackathons during which developers created solutions around themes such as faster banking, helpful banking and inclusive banking.³⁶

Citigroup raised the bar on the typical hackathon by conceiving it as an ongoing virtual competition conducted globally. It launched the Citi Mobile Challenge in 2014, first in Latin America, then in the United States, and eventually throughout the world. The Challenge brought together developers and technology sponsors to build a global developer ecosystem. In the first year of the Challenge, Citi worked with more than 165,000 developers across six continents in 62 countries. It selected 23 top innovations and has been working with many of the teams to bring solutions to market.³⁷

Banks can Monetize APIs as Data Takes on New Value

The banking industry has spent the last several decades building up services that tightly integrate the customer experience on the front-end, financial products on the back end, and all the processes in between. Through it all, individual banks have collected reams of data related to customers, transactions and products, all of which can be extremely valuable in selling additional products or developing new businesses. The value of this data is not lost on FinTech firms, which are keen to tap into it via APIs as they work on new ways to deliver financial services and engage with customers.

As third-party providers increasingly tap into bank APIs, banks have the opportunity to charge for their data and create new revenue sources. These fees could be based on several types of data-based offerings.³⁸

Banks can charge third parties for access to **raw data** in all kinds of accounts, including checking, savings, credit card, mortgage, and other loan accounts. The only exception to this will be checking accounts offered by European banks. Under the European Union's PSD2, European banks must allow third parties access to checking account data for free. **Calculated data** includes data that has been enriched in some way, say by ranking it, segmenting it, or using it to make predictions. Some examples include liquidity forecasts, credit scores, and categorized account activities.

Banks could also charge for services based on **combined internal and external data**. For example, they could offer customer identity and authorization services by matching customer inputs against internally kept data, or they could identify a money-saving offer based on transaction history. Banks are also well-positioned to offer **payment initiation services** like payment authorizations and real-time payments. They could also charge for various account information services, such as those related to personal financial management services and product comparisons.

The industry is exploring several ways to charge for API-based services, but the "business" of APIs is new territory for everyone and firms will likely take time to create optimal revenue models for different types of arrangements. At this point, the possibilities appear to be wide open. Clearly, banks must focus on the revenue aspects of APIs.

“

One risk is that the banks forget about the business model. They are eager to provide the new benefits and values to the customers, but forget about how to make money.

– A senior executive from a leading Swedish bank

”

³⁵ Barclays, "Hackathon: fighting for the future of banking," Oct 7, 2016.

<https://www.home.barclays/news/2016/09/hackathon--fighting-for-the-future-of-banking.html>

³⁶ Open Banking and the API Economy, FinTech Network, Nov 2016, page 11.

³⁷ Citigroup, "Citi and IBM Align to Accelerate Digital Banking Innovation Through Citi Mobile Challenge," Feb 24, 2015.

<http://www.citigroup.com/citi/news/2015/150224b.htm>

³⁸ The Programmable Bank: Opportunities for Open Banking, The Financial Brand, Dec 12, 2016.

A popular model, preferred by both banks and FinTechs (43.5% and 54.3%, respectively), is to charge a fee per API transaction (Figure 2.7). Another option is to pursue a revenue-sharing model, in which third parties consume an API and then use it to drive new sales, both sharing the proceedings as per their agreement. Such an approach is intended to spur both banks and FinTechs to seek out new business opportunities and greater market share. Banks are much more inclined than FinTechs (47.8% versus 27.2%) to want to adopt such as arrangement. *“Starling will look to drive revenue from lending but in a cost-effective way,” said Ms. Anne Boden, CEO of Starling Bank. “The business model is one in which revenue sharing with other providers can be enabled.”*

Somewhat less popular among banks is to charge an API call fee, in which third parties pay each time they call a service offered through the API. Banks are less inclined to opt for annual or monthly licensing fees, or support fees for providing customer service to application developers. They are also less inclined to charge fees for sharing raw data or data-driven insights. As banks look to monetize their APIs, some of them treat their API portfolios as products that serve specific business purposes, and have marketing plans and ROI goals tied to them.

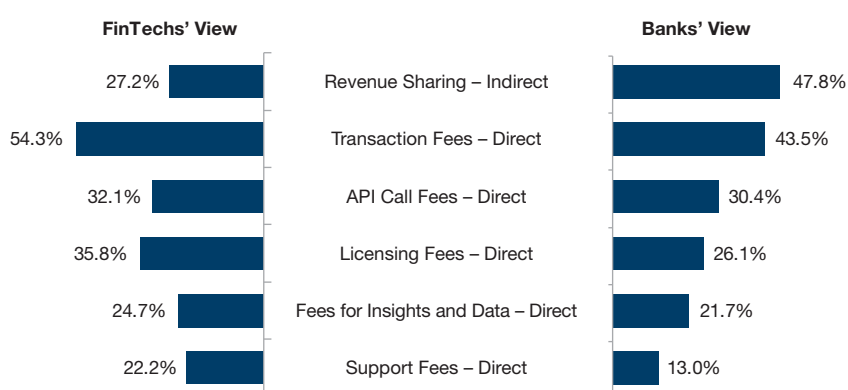
With so many possible routes to API revenue generation, no single path stands out as the best. To identify and prioritize the most promising opportunities, banks will have to follow a systematic approach, starting with a thorough review of the various processes

or data assets that have monetization potential. Once specific APIs and monetization steps have been identified, it is critical to commit to a roadmap. Process steps can be broken down as follows (Figure 2.8):

- **Select and Validate** – Pick the most promising ideas and rigorously evaluate them with all the relevant stakeholders.
- **Design and Prototype** – Once a shortlist of APIs has been identified, engage customers in an iterative design and development process.
- **Deploy** – Develop the APIs, then test and deploy them in an integrated process.
- **Market and Manage** – Provide developers with resources to perform self-service, while also investing in marketing tools.
- **Extend** – Seek to use APIs as a strategic asset to deepen customer relationships, while monitoring their use and incorporating community feedback.

Given its relatively long-term focus on providing open APIs, Fidor has considerable experience developing revenue streams around API-based businesses. While Fidor makes most of its money through its community-banking model, via net interest income, fees and commissions, about a third of its revenue comes from activities related to its fOS, including providing open APIs and white-label solutions. As its volume of white-label partnerships grows, more income will be generated from shared revenue streams as partners expand their businesses.³⁹

Figure 2.7: Preferred API Monetization Model for Banks (%), 2017



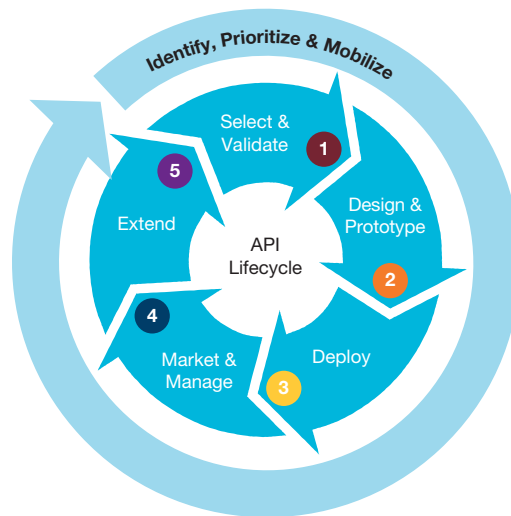
Note: The percentage represents the FinTech and banking executives who have given a rating of 6 or 7 on a scale of 1–7 for each of the monetization model

Question: “What API monetization models do you think are most relevant for banks?”

Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

³⁹ Fidor: Celent Model Bank of the Year 2015, Celent, Mar 2015.

Figure 2.8: Strategic Roadmap for API Monetization



Source: Capgemini Financial Services Analysis, 2017

Best Practices Start with Connectivity as a Strategic Imperative

In recent years, the cheapest and easiest way for banks to deliver new device-driven services and applications has been to build point-to-point connections between their internal systems and the apps that connect to customers. But as the number of endpoints continues to ramp up, this customized approach is reaching its limits, resulting in an unwieldy tangle of connections.

Banks need to take a fresh approach to connectivity, viewing it as a strategic mindset, not something that happens in piecemeal throughout the bank. Cleaning up connectivity will not only create healthier systems, but will position banks to take full advantage of the growing tide of innovative new applications being marketed to their customers. For banks looking to make connectivity a strategic imperative, APIs will play a central role.

APIs, embraced wholeheartedly, have the ability to empower the bank from top to bottom. Banks can get the most out of APIs by deploying them in a layered fashion at three levels of the organization – through governance, industry standards, and best practices.

The long-term success of API adoption will depend on the governance practices employed at every level of the industry. Many forms of governance need to be taken into consideration:⁴⁰

- **Organizational** – Governance begins at the individual institution level and includes a bank's policies, procedures and guidelines for building APIs and making them available, both internally and externally.
- **Community** – At this level, like-minded organizations, such as processors, banks or developers, come together to identify common concerns and the most practical methods of addressing them.
- **Industry** – This level of governance cuts across national boundaries to address industry-related issues on a regional or global scale, and issues standards accordingly. The SWIFT standards are an example of governance in action at an industry level.
- **Universal** – Governance at a universal level occurs when multiple industries around the world agree on common methodologies and standards. The protocols used for communication via the world-wide web are examples of universal governance.

⁴⁰ Understanding the business relevance of Open APIs and Open Banking for banks, EBA Working Group on Electronic Alternative Payments, May 2016.

In addition to governance, industry standards are necessary to prevent a disjointed set of APIs from proliferating. Such standards ensure consistency between APIs, making it easier for banks and FinTechs to work together, and spur greater usage and participation by all institutions. They also boost customer trust in a banking system that is likely to include more apps from non-banks over time.

“

A common standard for APIs in the future is a fantastic opportunity for the industry. It has to be more flexible for customers to switch banks and for third parties to work with banks.

– A senior executive from a leading Swedish bank

”

Numerous entities around the globe are working to create standards for open APIs. Prominent open API standardization initiatives include: ⁴¹

- **Open Banking Working Group (UK)** – This group is seeking to address sensitive customer issues, such as consent, authorization and access rights, as well as technical and infrastructure issues.
- **W3C Web Payments Interest Group (Worldwide)** – This group is pushing for wider use of web payments by identifying ways to increase interoperability between stakeholders through standardization.
- **Open Bank Project (Germany)** – A leading open-source API and app store for banks, the Project seeks to connect banks, software developers and account holders by exposing transaction data in a simple, consistent manner.
- **Banking Industry Architecture Network (Worldwide)** – This group of banks, software companies and service providers is working on a service-oriented architecture standard to ensure IT systems interoperability between banks.

- **Open Financial Exchange (US)** – OFX has emerged as the dominant financial data-sharing standard in United States, enabling authentications and access to account holder data.

In addition to taking advantage of available standards, banks deploying open APIs need to keep in mind other aspects of API best practices:

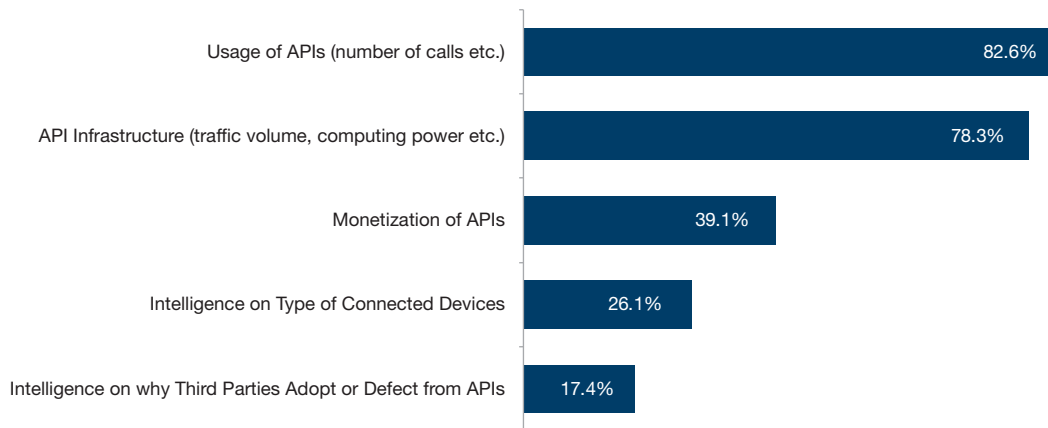
- **Scalability** – Adequate scalability will ensure that unexpectedly high or low volumes of digital traffic can be managed effectively, without incident and optimally utilizing resources.
- **Advanced Security Features** – Security is paramount, given the growth of API solutions centered on outside partnerships, mobile apps, and even the public cloud. A tiered security environment is ideal for allowing appropriate access and control for various user types.
- **Control** – Apart from being secure, the API portfolio needs to be closely monitored and controlled to ensure business processes are consistent and efficiently managed.
- **Revenue Generation** – In addition to addressing business problems or opportunities, APIs ideally will have a revenue-generating aspect, either directly through per-transaction or other fees, or indirectly by leading to new types of businesses, greater market share or cost savings.

Technical delivery of APIs will not be sufficient for banks to achieve their business results. The API strategy needs to be part of the business strategy, with a well-considered operating model aimed at promoting usage of APIs. Having rich, detailed documentation, and an easy-to-use developer environment, along with a reliable service will help drive the effectiveness of the API program.

Banks can increase the value of their APIs by applying data analytics techniques to monitor API usage and performance (Figure 2.9). Banks agree that APIs must be closely watched: 82.6% say they use analytics to monitor things like API usage; which developers are delivering the highest value traffic, and which apps are causing the most issues for back-end servers.

⁴¹ Ibid.

Figure 2.9: Banks Monitoring of APIs through Analytics (%), 2017



Note: The percentage represents the banking executives who have chosen the particular option(s)

Question: "What all areas of the API ecosystem are monitored and measured by API analytics in your bank?"

Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

Analytics are also useful when seeking to optimize the API infrastructure or guide design priorities in user interfaces. More than three-quarters of banks (78.3%) say they are using analytics to pinpoint patterns and identify changes that would bring greater efficiencies to the API infrastructure. Analytics can also be deployed to gather relationship-building intelligence on why third parties adopt or move away from APIs, though most banks have not yet reached this level of sophistication.

The most promising aspect of data analytics lies in the area of predictive technology. As the connected ecosystem evolves, banks will have access to incredibly large and rich sets of data they could use to deliver timely offers or superior services to customers. Being able to pinpoint a customer need and present

just the right solution is the type of capability that will be key to cementing relationships with customers in the future.

Some banks are already getting prepared to meet customers' growing expectations for original offers and customized experiences. National Australia Bank has been working with Quantum, a data analytics and marketing strategy firm, to derive insights about different customer groups. The bank shares (anonymized) files of credit and debit card transactions with Quantum to help identify customer shopping habits and trends. It can contribute to analyses, for example, of how exposure to online ads affects customer purchasing behavior.⁴²

⁴² Woolies and Quantum to launch DSP with "Australian first", AdNews, Feb 2, 2015.

Chapter 3: Going Big in Open Banking Creates Opportunities and Threats



Key Findings

As APIs pave way for digitally-connected ecosystems, banks need to make strategic choices about their future role.

- A sustainable digital business model will center on customer innovation emphasizing simplicity of use, security across all channels, and the ability to quickly consume relevant banking offers.
- Banks need to take the lead in creating an ecosystem that ensures they remain the key player.
- A significant number of banks and FinTechs (56.5% and 55.0%, respectively) foresee banks continuing their function as channels, maintaining control of producing and distributing products as well as customer experience.

A fully open banking model creates unprecedented opportunities as well as challenges.

- As partnering and collaborating becomes the norm in the new model, banks will have the opportunity to create and distribute best-in-class products and services.
- Open banking will give consumers and merchants the opportunity to make direct financial transactions without going through banks.
- If banks fail to take the lead in the Open Banking model, they risk losing some control over the customer experience at first, and ultimately over the rich data from their customers' transactions.
- Banks might fear disintermediation from other players, but doing nothing will more likely lead to that outcome.



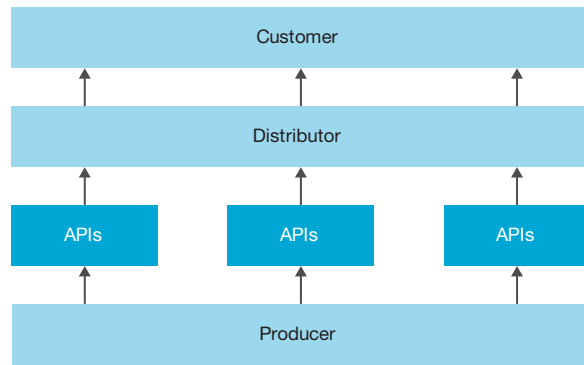
APIs Help Fulfill Strategic Vision of Open Banking

APIs offer plenty of value by acting as a bridge between systems. But banks can gain much more value by viewing them in the big picture. The goal should be less about linking up with a series of independently-operated web pages, and more about taking part in an ecosystem of apps and APIs that support broad synergies between companies and consumers. As noted in the *World Retail Banking Report 2016*, banks can claim a central role in the evolving digitally-connected ecosystem because of the customer data they own as well as the trust they have.

Banks could use APIs to link up with third parties and offer integrated services on a one-off basis. But they could also deploy APIs in a much bigger fashion. Banks that open up their APIs to a global community of web developers can tap into a stunning amount of innovation. Consider the experience of Salesforce, which opened an API library in 2006, spurring an ongoing flurry of app development. In less than 10 years, more than 3 million partner-developed apps had been downloaded by users seeking specific functionality; and the count continues to rise.⁴³

An open banking model similarly presents new opportunities for creating and distributing products (Figure 3.1). Traditionally, banks have owned the process of building and selling products from end to end, and the only entity responsible for adding value to a product has been the bank itself. An open banking model turns this approach on its head by giving untold numbers of partners the ability to insert themselves

Figure 3.1: APIs Enable Distribution of Banking Products



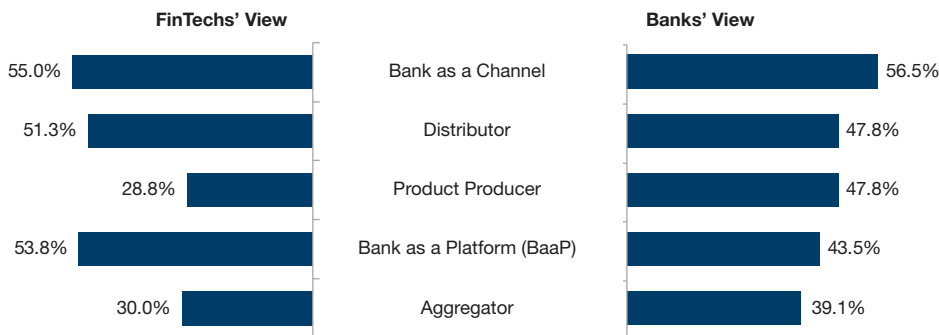
Source: Capgemini Financial Services Analysis, 2017

into the development process. Collectively, these partners would give rise to much more creativity than the bank could muster on its own.

As the new model plays out, banks will have to make strategic choices about the specific roles they would like to take on. Some banks, however, may find it difficult to embrace any type of role with respect to APIs. New age banks understand the need for a clear vision.

Both FinTechs and banks (55.0% and 56.5%, respectively) see banks continuing to be the main channel for all products and services (Figure 3.2). Under this traditional model, banks would continue to maintain control of producing and distributing products, as well as the customer experience. They might, however, struggle to match competitors in terms of innovation and time to market. A significant number of FinTechs (53.8%), and to a lesser extent banks (43.5%),

Figure 3.2: Likelihood of Roles, Bank Will Play in Future (%), 2017



Note: The percentage represents the FinTech and banking executives who have given a rating of 6 or 7 on a scale of 1–7 for each of the bank's future role
 Question: "How do you envision the role of a bank in the shifting industry landscape (with multiple traditional and non-traditional players entering the banking space)?"
 Source: Capgemini Financial Services Analysis, 2017; 2017 Retail Banking Executive Interview Survey, Capgemini Global Financial Services

⁴³ <https://www.salesforce.com/blog/2015/09/salesforce-ecosystem-explained.html>



The business model for Starling is based on PSD2 and Open Banking, knowing that the financial world would become varied with providers creating product overlays. Also being able to leverage the payment capability that Starling has in place. Without APIs this becomes a challenge; the plug-and-play concept is the key thing that makes APIs a key driver. Some of the more traditional banks are shying away from this as it is not within their DNA and they have built systems that don't allow easy exploitation of APIs.

– Ms. Anne Boden CEO, Starling Bank



believe banks are likely to evolve into platforms, which support ecosystems of cross-industry players that tap into core banking systems to create bundled, complementary services that benefit end users.

More banks than FinTechs (47.8% versus 28.8%) see banks becoming producers, focused on creating products and services, but leaving distribution to third parties. While this approach would likely lower acquisition costs for new customers, it could also result in bank disintermediation and raise questions related to branding and customer ownership. FinTechs are also likely to see banks as distributors (51.3% versus 47.8% for banks). In this model, banks bundle products in conjunction with third parties and distribute them via their own channels, enabling them to both extend their digital marketing presence and deliver best-in-class products. While this model will provide banks access to new customers, they will have to share revenues with third party service providers.

Both banks and FinTechs believe banks are least likely to become aggregators, pulling together and offering products made by other third parties. This stance, however, may prove challenging for banks over the long term. Banks already aggregate their own products, and are witnessing the emergence of other aggregators and marketplaces enabled by APIs. As the number of aggregators expands, banks could lose some control over the customer experience at first, and ultimately over the rich data generated by customer transactions. In other words, banks that do not see a role for themselves as aggregators in the future may lose control over one of their richest assets – the customer relationship. Banks seem naturally suited to play the aggregator role in Open Banking. If they decline this role, they risk disintermediation as customers may have several choices, especially from Big Tech or successful FinTech firms.

With an open model, banks could overcome a number of barriers that have long impeded them. Partnering and collaborating with FinTechs would become the norm, creating a richer financial ecosystem and new sets of enhanced product offerings. In addition, distribution would be vastly improved as banks and FinTechs work in tandem to push out multiple products across a wider variety of platforms and devices. *“APIs are providing new ways of channel distribution,” noted Mr. Sanchez Iniesta of BBVA Compass. “New companies are now able to take their offerings to market quickly, which they wouldn’t normally be able to achieve.”* Tapping into the technological know-how and market expertise of FinTechs would also allow banks to preserve their investments in their existing infrastructures. Plus, improved information sharing could be expected to improve decision-making around risk mitigation and fraud prevention.

An open banking model naturally brings challenges as well (Figure 3.3). The need to provide secure links into customer systems and maintain customer privacy is a given. Comprehensive governance models are needed to spell out the responsibilities and obligations of banks and third parties, as well as address issues related to liability in the event of customer breaches. New models of revenue generation and sharing will need to be explored, especially in light of possible disintermediation by third parties and potential risks to the bank’s reputation and brand. Among the more difficult tasks will be breaking down bureaucratic silos and cultural resistance to change.



Sharing banking data is a concept that sets off alarm bells in the minds of most ordinary consumers when they consider security and privacy. Though it's important for consumers to understand that the benefits of pooling this data together - with their consent of course - will increase competitiveness, foster innovation and transparency, all of which fundamentally will benefit our users. Being open is ultimately beneficial to the customer as the consumer is both in control of what will be shared from his data and the consumer has the transparency of what benefits this brings.

– Gé Drossaert, Chief Commercial Officer and Member of the Board, Fidor Group



Because an open banking ecosystem implies cooperation, there is pressure upon every participant to live up to high standards of duty and care.

Figure 3.3: Opportunities and Challenges Arising from Open Banking



Source: Capgemini Financial Services Analysis, 2017

“

If there is one serious trust failure in open banking, it will hurt all players. It is up to everyone to ensure that this market will not crash while it is built.

– Jarkko Turunen, Head of Open Banking, Nordea

”

Perhaps the biggest risk of Open Banking is that it will allow consumers and merchants to execute direct transactions without going through banks, making it more difficult for banks to have a full view of customer transactions and maintain customer relationships. As more third parties become involved in providing financial services, customers will have fewer reasons to go to bank apps or web sites, posing an obstacle to stronger bank/customer connections.

For example, in India, Paytm has more than 200 million users who transacted more than 1 billion times in 2016.⁴⁴ Customers bypassed their banks to carry out these transactions, thereby having an impact on the bank/customer relationship as well as resulting in banks not having the data related to the transactions.

A look at Open Banking as practiced by Brazil's Banco Original may provide a blueprint for the future. When Banco Original began its quest to become a digital-only bank in 2013, it did so wholeheartedly. Its ultimate goal was to move beyond mobile banking into a more advanced iteration it calls “seamless banking,” in which bank data can be accessed via a host of smart devices including cars, refrigerators or coffee mugs. Open APIs are critical to this idea of banking. So rather than build its own internal system, Banco Original tapped a FinTech to provide an API-enabled core banking platform.

The fully open platform allows developers to access APIs (for investments, accounts and payments), experiment in a developer sandbox, and submit their applications for inclusion in the bank's offerings. The bank is unique in its total reliance on outside firms to provide all external apps as well as its backbone technology, an approach that may be common among fast internet companies, but is unheard of in the context of Brazilian banking. The bank plans to continue to add APIs and partners, and make innovation a standard part of the day-to-day experience.⁴⁵

⁴⁴ Moneycontrol, “Paytm records 1 bn transactions in 2016; user base up by 45%”, Jan 02, 2017.

<http://www.moneycontrol.com/news/business/startup/paytm-records-1-bn-transactions2016-user-baseby-45-939966.html>

⁴⁵ Open Banking from Original Bank – Distribution & Marketing Innovation, EFMA, 2017.

Conclusion

If banks are wary of FinTechs entering onto their turf, then APIs may persuade them to put out the welcome mat. APIs make it easy for banks to take advantage of the collective brainpower of the world's app developers, making it possible to deliver the types of superior experiences that customers have come to expect from the likes of Amazon and Google. There will be challenges along the way, including the need to institute good governance and consistent technology standards. More important, banks must identify the role they intend to play in a digitally-connected world, and begin planning for new types of revenue streams. Customer data, traditionally viewed as a drain on resources because of the need to store it, is gaining new worth as third parties vie for it to drive their own product development. Banks have already taken the first step of embracing FinTechs more warmly. Now they must continue down the path toward openness with greater strategic intent.



About Us



With more than 190,000 people, Capgemini is present in over 40 countries and celebrates its 50th anniversary in 2017. A global leader in consulting, technology and outsourcing services, the Group reported 2016 global revenues of EUR 12.5 billion. Together with its clients, Capgemini creates and delivers business, technology and digital solutions that fit their needs, enabling them to achieve innovation and competitiveness. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

Capgemini's Financial Services Business Unit offers global banks, capital markets firms, and insurers transformative business and IT solutions to help them nimbly respond to industry disruptions, to give their customers differentiated value, and to expand their revenue streams. A team of more than 55,000 professionals collaboratively delivers a holistic framework across technologies and geographies, from infrastructure to applications, to provide tailored solutions to 1000+ clients, representing two-thirds of the world's largest financial institutions. Client engagements are built on bar-setting expertise, fresh market insights and more than a quarter century of global delivery excellence.

Learn more at www.capgemini.com/financialservices

Rightshore® is a trademark belonging to Capgemini



A global non-profit organisation, established in 1971 by banks and insurance companies, Efma facilitates networking between decision-makers. It provides quality insights to help banks and insurance companies make the right decisions to foster innovation and drive their transformation. Over 3,300 brands in 130 countries are Efma members.

Headquarters in Paris. Offices in London, Brussels, Barcelona, Stockholm, Bratislava, Dubai, Mumbai and Singapore.

Visit www.efma.com

©2017 Capgemini

All Rights Reserved. Capgemini and Efma, their services mentioned herein as well as their logos, are trademarks or registered trademarks of their respective companies. All other company, product and service names mentioned are the trademarks of their respective owners and are used herein with no intention of trademark infringement. No part of this document may be reproduced or copied in any form or by any means without written permission from Capgemini.

Disclaimer

The information contained herein is general in nature and is not intended, and should not be construed, as professional advice or opinion provided to the user. This document does not purport to be a complete statement of the approaches or steps, which may vary accordingly to individual factors and circumstances, necessary for a business to accomplish any particular business goal. This document is provided for informational purposes only; it is meant solely to provide helpful information to the user. This document is not a recommendation of any particular approach and should not be relied upon to address or solve any particular matter. The text of this document was originally written in English. Translation to languages other than English is provided as a convenience to our users. Capgemini and Efma disclaim any responsibility for translation inaccuracies. The information provided herein is on an 'as-is' basis. Capgemini and Efma disclaim any and all representations and warranties of any kind concerning any information provided in this report and will not be liable for any direct, indirect, special, incidental, consequential loss or loss of profits arising in any way from the information contained herein.

Acknowledgements

We would like to extend a special thanks to all of the banks, FinTech firms, and individuals who participated in our Banking Executive Interviews and Surveys.

The following firms agreed to be publicly named:

Banks – Albaraka, Turkey; Alior Bank, Poland; Banca Popolare di Sondrio, Italy; BancABC, Zambia; Banco Popular, Spain; Bank of Baroda, India; Bank of Nova Scotia, Canada; BBVA Compass, United States; Cibank, Bulgaria; Credito Emiliano, Italy; Fideuram Intesa Sanpaolo Private Banking, Italy; Fidor Group; Government Savings Bank, Thailand; Greater Bank, Australia; Gruppo Bancario Iccrea, Italy; Holvi Payment Services, Finland; Intesa Sanpaolo, Italy; ME Bank, Australia; National Bank of Greece, Greece; Nordea, Nordic; Poistovna Slovenskej sporitelne, Slovakia; RBL Bank Ltd, India; SEB, Nordic; Siam Commercial Bank, Thailand; Starling Bank, UK; TBC Bank, Georgia; The Bank of Tokyo-Mitsubishi UFJ, Japan; United Bank for Africa, Africa; and Vietinbank, Asia-Pacific.

FinTech Firms – 2Gears S.A.; 2getherbank; 8 Securities; Advizr; AIDA Technologies; Aixigo; AlphaPoint; AMP Credit Technologies; Anivo 360 AG; Apply Financial; Assiteca Crowd; AU10TIX; AUTHADA; Bankable; Betalo AB; Bidra AS; Bitso; Blocko; Borrowell; BorsadelCredito; Bridg; BUD; CardLab Innovation ApS; Cashare AG; Choice Financial Solutions; CloudWell Limited; Conodata; Continuum Security; Coseer; Dateio; DemystData; Dinube; Dorsum Software Development and Services; Emric; Ensibuuko; Ensygnia; eToro; Eurobits Technologies; Even Financial; EyeVerify; Famoco; Finnvest; Finovera; Gastrofix GmbH; Huddlestock Limited; Indifi Technologies; InstaReM; Jirnexu; Loanatik; MeaWallet AS; Mesitis; Minalea; Mobile Money Americas Corp; Modo; Moneytree KK; Moven Enterprise; Neosurance; Netki; NexChange; North Side; Nova Credit; Omnyway; OnPlan Holdings; Perfiqt; Personetics; Qumram; RevolutionCredit; SalaryFits; Saylent Technologies; Seed; Sezzle; ShoCard; Signicat AS; Six Park; TagPay; Timelio; Touché; Trunomi; WiseBanyan; and Zensurance.

We would also like to thank the following teams and individuals for helping to compile this report:

William Sullivan, Anuj Agarwal, and Amit Kumar for their overall leadership for this year's report; Avinash Saxena, Amith Chandrashekar, and Chris Costanzo for researching, compiling, and writing the findings, as well as providing in-depth market analysis.

Capgemini's Global Retail Banking network for providing their insights, industry expertise and overall guidance: Alvi Abuaf, Ame Stuart, Anis Chenchah, Annette Maxwell, Ashish Devalekar, Cliff Evans, Dion Lisle, Erik van Druten, Haeky Park, Jeroen Holscher, Jessica Ingrami, Kartik Ramakrishnan, Kishen Kumar, Klas Rutberg, Lauri Ilomaki, Magnus af Petersens, Manish Grover, Manoj Hota, Marcos Alonso Garcia, Marga Garcia Aguila, Michael Leyva, Monia Ferrari, Phil Gomm, Philippa Ekstedt, Sudhir Pai, and Vikrant Karnik.

Ken Kundis, Vanessa Baille, Mary-Ellen Harn, Revanth Jatala, Jyoti Goyal, Martine Maître, Tamara Berry, Erin Riemer, and Sai Bobba for their overall marketing leadership for the report and Creative Shared Services Team for producing the report: Kalidas Chitambar, Suresh Chedarada, Suresh Sambandhan, Kanaka Donkina, and Sourav Mookherjee.

Vincent Bastid, Karine Coutinho, and the Efma team for their collaborative sponsorship, marketing, and continued support.

Please visit:

www.worldretailbankingreport.com



Please contact:

Capgemini

banking@capgemini.com

Efma

info@efma.com

For press inquiries:

Benjamin Pfeffer (North America and Rest of the World)
bpfeffer@webershandwick.com or +1 212 445 8137

Gemma Coleman (EMEA)
gemma.coleman@webershandwick.com or
+44 (0) 207 067 0512 or +1 212 445 8110

Mary-Ellen Harn (Capgemini)
mary-ellen.harn@capgemini.com or +1 704 490 4146

Boris Plantier (Efma)
boris@efma.com or +33 1 47 42 67 69