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American Bankers Association®

FINTECH PLAYBOOK

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Executive Summary

For more than two centuries, banks of all sizes have helped American communities thrive, providing financial convenience, security and capital for economic growth. The digital revolution is the latest wave of change, and it poses a challenge even to banks with deep roots and a long history of providing unmatched levels of personal service.

Today, the banking industry is riding this wave of innovation, contributing to the omni-channel banking experience customers expect. New lending platforms are offering new ways to underwrite loans and provide credit where it's needed. Big data and predictive analytics provide tremendous insights to help bankers better target the needs of their customers and communities. Automation and cloud solutions can dramatically reduce back-office costs and make banks nimbler.

Bank leaders recognize the imperative opportunity to continue their role in financial innovation, injecting ever-new technology into their existing business models to satisfy customer desires and achieve greater efficiencies. But with more than 3,000 recent startups in the financial technology, or fintech, sector, identifying the best partnership opportunities can be a challenge.

The stakes are high. Accenture estimates that community banks could lose up to $15 billion of revenues to fintech companies, digital leaders and other banks going digital—nearly 15 percent of the projected revenue pool for all community banks in 2020. The potential gain is also staggering, with an estimated uplift in operating income of $20 billion by 2020 for those who adopt financial technologies. This amounts to more than a 52 percent increase.

Banks that invest in fintech stand to

GAIN up to $20B

in operating income by 2020

while those that ignore it could

LOSE up to $15B

of revenues to fintech companies, digital leaders and other banks going digital

This playbook will help banks define a strategy and put a plan in place to leverage digital technologies in order to remain relevant, competitive and true to the business models that have established them as a vital part of their communities.

The Changing Face of Banking

More than $50 billion has been invested in almost 3,000 fintech companies since 2010, making financial services one of the fastest-growing areas of the technology sector.[1] Although the headlines often focus on the "disruptors," many new entrants are looking to partner with banks to capitalize on the white space between how things are and how they could be.

Fintech and digital technologies are affecting the banking industry at all levels and in all areas of the business.

Channels: Emerging technologies are making integration and true omni-channel a reality with plug-and-play capabilities that can be implemented in weeks, not months or years.

Lines of Business: Digital technology is rewriting customer expectations for each area of the business. For example, Apple and Android Pay are providing a new payments platform, while technology is changing the online lending application process, and new underwriting platforms are enabling small banks to tap into the power of big data on a local scale.

Bank Platforms and Processes: Fintech and digital technologies like cloud services and robotics are rewiring the back and mid-office, fundamentally reducing costs.

Deciding how to respond to new and external forces that are changing the market is top of mind for many bank executives.

More than
$50 billion
has been invested in almost 3,000 fintech companies since 2010.

Four Drivers of Change

1. Customers' adoption of digital and mobile banking channels
2. High costs of traditional physical distribution
3. Changing frequency and expectations of customer interactions
4. Need to integrate channels to drive a consistent customer experience

1. Accenture, "FinTech and the evolving landscape: Landing points for the financial services industry," 2016.

Capitalizing on Fintech

With a wealth of options, a perpetually changing landscape and an army of motivated innovators reaching out, bank executives face a challenge in deciphering the fintech puzzle. ABA recommends a phased approach that aligns to the unique needs of each bank.

Establish a baseline. Bank executives should start by identifying what areas are most important to profit and near-term growth, and which customer segments are critical for their bank. For some, it might be deposit generation, for others it may be consumer, small business or commercial lending. Initial efforts should focus on what is most important to the bank's strategy and how the bank can distinguish itself.

Close major gaps. With the baseline established, banks should look for the greatest opportunities to differentiate themselves. Products and services exist that can help quickly close the gaps, including off-the-shelf capabilities and services. One example is cloud-based services that have worked with a bank of comparable size or require minimal or no back-end integration.

Focus on the digital-centric customer. Every bank has gaps between how it interacts with customers in the physical (branch) and virtual worlds. A prioritized roadmap focuses attention on closing those gaps. For example, offers sent through the mail could be duplicated in other channels, like mobile, online and ATMs. Technology can help deliver consistent experiences across channels and products.

Drive transformational changes. Based on priorities established in phases 2 and 3, bank executives should identify the four to five transformational changes that align with their strategy and transform their positions. It is important to track technologies—both the core technologies that become a barrier to change and the innovative platforms that will change the game three years from now but are just starting to be developed.

There is tremendous opportunity for banks in the current wave of digital innovation. Fintech can be disruptive, but it can also help banks meet changing customer needs, deliver innovative products, reduce costs and deliver exceptional customer service.

Turning Fintech Risk into a Compelling Opportunity

Across the U.S. banking industry, new technology is opening the way to fundamental change for banks. Of the 316 bankers polled in the 2016 Accenture Technology Vision for Banking, 85 percent anticipate that the pace of technology change will increase rapidly or at an unprecedented rate in the banking industry over the next three years.[2]

The shift to digital banking could pose a risk to the relationship between banks and their customers by reducing the number of face-to-face interactions and persuading customers to switch to other service providers. On the other hand, if banks adopt new technologies wisely, the shift can also be an opportunity for banks to enhance their relationships with customers and find new ones.

Five Main Digital Technologies

New technologies are opening a world of opportunities. They have already enabled transformation of business models across other industries over the past decade—including airlines, telecommunications and music. Now, innovation is having a big impact on banking.

There are five main technology trends creating opportunities for banks.

- **Cloud computing** allows organizations to use internet technologies to access capabilities and resources such as servers, storage, networks, applications and services.
- **Advanced analytics** to help organizations make sense of the growing volume and velocity of information on customers, transactions and market data.
- **Intelligent automation** has the potential to shape a highly productive relationship among people, processes and IT, creating a more empowered workforce and better business outcomes.
- **Artificial intelligence** to drive faster decisions, tailored customer service and capture new revenue by affordably servicing underbanked segments.
- **Open banking** creates new profit opportunities for banks that provide access to data, algorithms, transactions, processes and other business functionality through application programming interfaces (APIs), which allow software components to communicate and exchange information. By adopting APIs, banks can securely pass or access personal account data across entities.

APIs

Application Program Interfaces contain tools and protocols to build software applications. Operating environments create APIs to help programmers develop applications that need access to that online environment. A popular example is the Google Maps API that allows programmers to embed the geo-service into other web pages.

2. Accenture, "2016 Accenture Technology Vision for Banking."

A New Generation of Customers

Adapting to retain customers is especially important as customers themselves are changing. Today, millennials account for a small portion of banking revenues, but tomorrow they will count for much more. With 92 million people, millennials (born 1980–1999) make up the largest generation in the U.S., followed by 77 million baby boomers (born 1945–1964) and 61 million in generation X (born 1965–1979).[3]

Thirty percent of millennials define themselves as early adopters of new technology.[4] Compared to prior generations, they are delaying the decision to take out a mortgage or buy a car and are more focused on technology that connects and engages them. To appeal to this future market powerhouse, banks will need to develop compelling products that are digital first in design and experience.

30%
of millennials define themselves as early adopters of new technology.

A New Breed of Competitors

The digital technologies that are rewiring our expectations are also easing the path to entry for new players in the banking market. Venture capitalists, private equity firms, technology companies and a wide range of players from other industries are pouring money into startups. They are using technology to find new ways to store, save, borrow, invest, move, pay and protect money.

The current fintech company is likely to be:

- **Consumer Facing** — Focused on building slick user interfaces, while relying on back-end technology and compliance developed by banks for core functions.
- **Originations Based** — Designed to originate assets, but rarely hold them.
- **Monoline** — Narrowly focused on one line of business.

Despite their limited breadth, fintech companies are getting plenty of attention. More than $50 billion has been invested in almost 3,000 companies since 2010, making fintech one of the fastest-growing areas of the technology sector.[5] (Exhibit 1)

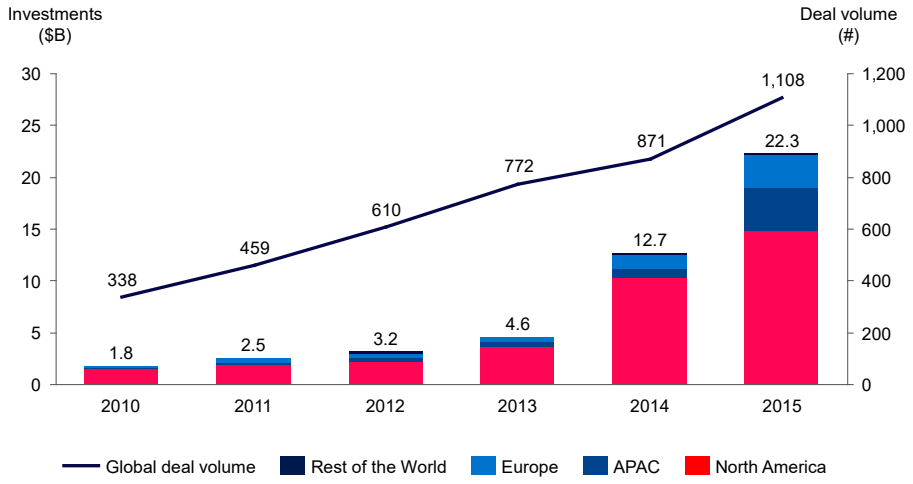
44%
of fintech investment in 2015 went to companies partnering with banks.

There are two main types of fintech companies: disruptive and collaborative. **Disruptive** fintechs compete with banks by offering alternative products and services. **Collaborative** fintechs offer solutions to help banks digitalize their operating models and accelerate their digital transformation journeys.

Many early state fintechs began looking to disrupt banks, then pivoted to a more collaborative model. In 2015, 44 percent of fintech investment funded solutions sought to partner with incumbent banks to reduce costs, manage risks and expand their digital businesses. These accounted for just 29 percent of investments in 2014.[6]

3. U.S. Census Bureau.
4. Accenture, "North America Consumer Digital Payments Survey," 2016.
5. Accenture, "FinTech and the evolving landscape: Landing points for the financial services industry," 2016.
6. Accenture Research analysis on CB Insights data.

Exhibit 1 – Global Fintech Financing Activity 2010 – 2015



Note: Investments value referred to only deals with amount reported by CB Insights and deals volumes referred to all deals
Source: Accenture Research analysis on CB Insights data

Additionally, banks face a potential threat from the technology giants: Google, Apple, Facebook and Amazon (GAFA). The GAFAs are constantly resetting the bar on user experience and are used to dominating any space they enter. For now, the GAFAs seem to be happy to collaborate and build directly on top of existing banking offerings. The key questions are whether their appetites might grow going forward and what that would mean for banks.

Why Banks Should Act

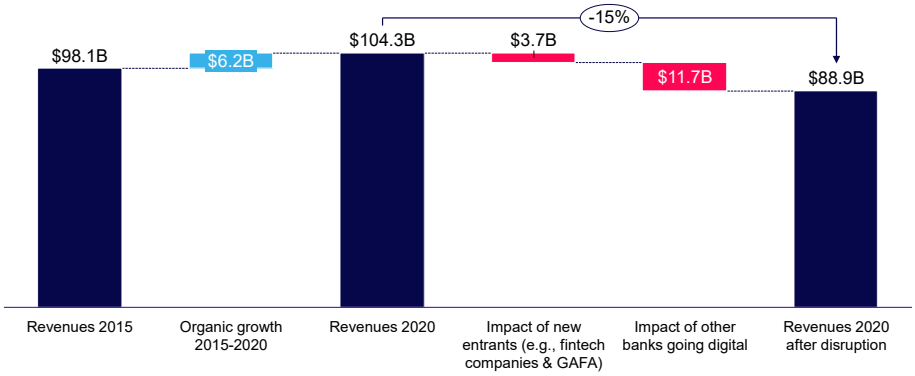
To understand the potential impact of new customers and new competitors, Accenture analyzed the composition of banking revenues of community banks in the United States.[7] Then the Accenture team looked at broad types of digital disruption such as the growing lending for peer-to-peer, consumer, small- to medium-enterprise markets; the growth of alternative payments; and low-cost current account alternatives.

For each type of digital disruption, Accenture used market data and analysis to form hypotheses about the growth of market share and the impacts on volumes and pricing. This fed into a forecast for the level of revenue disruption community banks could face under a range of different scenarios.

Accenture's central projection, given the scenario of a high level of digital competition where community banks were slow to respond, is that 15 percent of revenues could be at risk due to competition from fintech companies, GAFAs (4 percent), and from other banks launching a digital technology-enabled transformation program (11 percent). (Exhibit 2)

7. For the purpose of the analysis banks with total assets lower than $10B are considered community banks.

Exhibit 2 – Community Banks' Revenues at Risk ($B, %)



Source: Accenture Research

The banking industry spent about **$87 billion** on IT in North America in 2015.

The greatest risk from digital complacency is from falling behind other banks, not necessarily disruptive competitors. However, investing in digital technology capabilities could also unlock new sources of value for banks.

The banking industry spent about $87 billion on IT in North America in 2015, so investing in technology is nothing new.[8] What is new is the shift of IT spending to new technologies that enable better customer experiences and drive greater efficiencies in the front, middle and back office.

Five Desired Outcomes

Investments in financial technologies can drive a bottom-line value of **$20.5 billion** from 2015 to 2020 for banks.

Accenture estimates that bank investments in financial technologies can drive a bottom-line value of $20.5 billion from 2015 to 2020. This value is derived by combining digital approaches across channels, lines of business, platform and processes and enabling higher revenues, lower costs and new business opportunities. To help identify areas of focus, ABA and Accenture have framed the analysis around five desired outcomes.

1. **A digitalized customer experience**
2. **A digitized operating model**
3. **An agile IT platform**
4. **Innovative banking services**
5. **An extended ecosystem**

8. Celent: "Global Tech Spending Forecast: Banking Edition," 2016.

Outcome 1 — A Digitalized Customer Experience

Fintech value at stake: $6.4 billion

- **A digitalized customer experience** provides access to banking services through multiple channels including phone, online, mobile and third-party apps.
  - ▷ **Mobile imaging ($2.5B)** allows branch staff and customers to capture documents, customer IDs, photographs and any other paper-based item required for a customer to complete a bank process or transaction.
  - ▷ **Video-based advisors ($1.5B)** provide information and guidance for customers by allowing them to speak and virtually see an expert in a branch or on a mobile device.
  - ▷ **Chatbots ($1B)** perform various tasks via a messaging interface using artificial intelligence. For example, customers could request an account statement summary or transfer money between accounts.
  - ▷ **Voice recognition ($0.7B)** replaces password-based logins for mobile or telephone banking, reducing verification times while increasing security.
  - ▷ **Biometric authentication ($0.7B)** validates identification by measuring some intrinsic characteristic of that user. Biometric samples include fingerprints, retinal scans, face recognition, voice prints and even typing patterns.

"Fintech value at stake" considers new revenue streams, efficiency gains and risk reduction from the adoption of **17** different technologies.

Outcome 2 — A Digitized Operating Model

Fintech value at stake: $5.6 billion

- **A digitized operating model** that tackles the high levels of manual processing in banking by automating repetitive and paper-based processes and migrating toward fully paperless processes and operations to improve efficiency.
  - ▷ **Advanced credit analytics ($2B)** enable financial institutions to improve underwriting decisions using new data sources (both internal and external, social and public) and new techniques to mine data from unconventional and unstructured sources.
  - ▷ **Fintech-as-a-service ($1.3B)** is an emerging model of pay-per-use pricing for services and capabilities in a white label model that is accomplished with less upfront capital costs and much faster implementations through API-enabled integration layer. Examples include mortgage originations and digital account opening, where the fintech company is paid on a per-transaction basis and the bank benefits from increased originations and account openings.
  - ▷ **Customer analytics ($1.2B)** offer banks the opportunity to evolve marketing messages from broadcast to targeted through industrialized digital marketing approaches, which can drive up customer responses and conversion rates.
  - ▷ **Robotics processing automation ($1.1B)** lets organizations automate tasks as if a real person was performing them across applications and systems.

Outcome 3 — An Agile IT Platform

Fintech value at stake: $4.6 billion

- **An agile IT platform** addresses the embedded rigidity of core processing infrastructure and adapts to rapid innovation and sustains competitive advantage in areas like clearing and core banking.
  - ▹ **Cloud computing ($2.1B)** offers unlimited computing resources as a service on a pay-per-use basis. Cloud computing directly translates to less upfront capital expense and reduced IT overheads. It is a cost-effective, simple alternative to accessing enterprise-level IT without the associated costs. Regulatory concerns are abating as security measures are being tested by the larger banks.
  - ▹ **Core payments engine renewal ($1.9B)** consolidates and re-platforms payment systems to avoid the spaghetti architecture of duplicated systems, costly connections, abundance of manual payment processes, and slow and error-prone approvals.
  - ▹ **Blockchain ($0.6B)** is a ledger of transactions that is replicated on multiple servers, or nodes on the internet, in a peer-to-peer mode without a central counterparty. In retail banking, it can be used to complete real-time transactions with cost of settlement up to 60 percent less.[9]

Outcome 4 — Innovative Banking Services

Fintech value at stake: $3.4 billion

- **Innovative banking services** expand digital product offerings from purely transactional services, like paying bills and checking account statements, to value-added services, like peer-to-peer payments, personal financial management tools, loyalty programs and card-linked offers.
  - ▹ **Robo-advisory ($1B)** offers automated investment portfolios through web-based and/or mobile platforms.
  - ▹ **Mobile wallets ($0.9B)** allow users to pay in store and online using their mobile phone as well as collect rewards points and manage their loyalty programs.
  - ▹ **Personal financial management (PFM) ($0.8B)** tools help customers better understand their finances and manage their money by aggregating transactions from multiple accounts.
  - ▹ **Real-time, low-value payments ($0.7B)** allow users to send and receive money with immediately available funds.

9. https://ripple.com/insights/ripple-and-xrp-can-cut-banks-global-settlement-costs-up-to-60-percent/

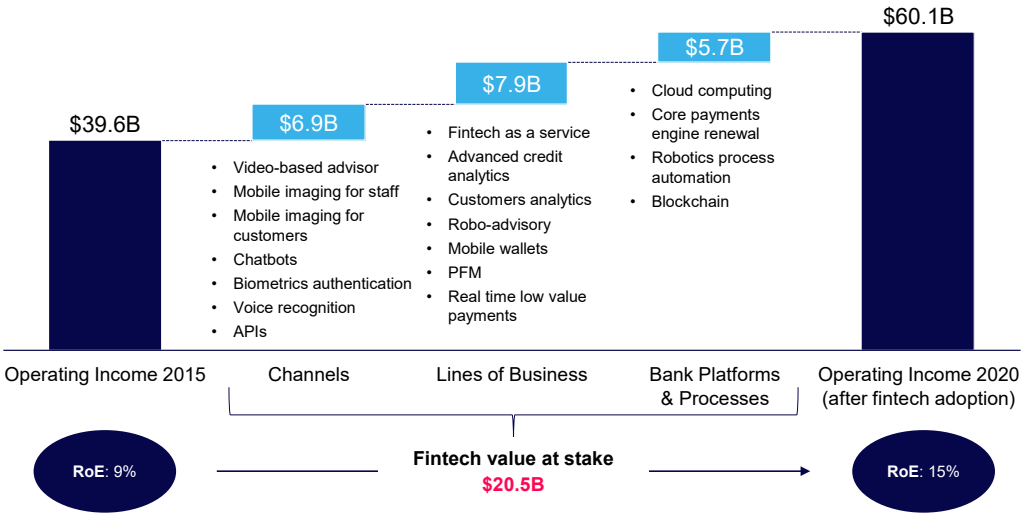
Outcome 5 — Extend Ecosystem

Fintech value at stake: $0.5 billion

- **An extended ecosystem** allows access to a wide array of functions and services beyond enterprise boundaries, co-creating value in open business ecosystems sharing data with other services providers.
  - ▷ **Application programming interfaces (APIs)** allow software components to communicate and exchange information. By adopting APIs, banks can securely pass personal account data to another entity, enabling a number of competitive scenarios (e.g., pre-authorized users for wire transfer services, aggregate miles and rewards points from multiple sources).

Another way to think about these desired outcomes is by channels, lines of business and bank platforms. By combining multiple financial technologies, community banks can improve operating income by more than 50 percent by 2020. (Exhibit 3) In later sections of this paper we will revisit these technologies and create a fintech prioritization matrix to guide investments and actions.

Exhibit 3 – Community Banks have a $20.5B Revenue Opportunity from Fintech ($B, %)



Notes:
- Fintech value at stake considers new revenue streams, efficiency gains and risk reduction from the adoption of 18 different financial technologies
- Impact of organic growth and competition from fintech companies, GAFA and other banks going digital excluded
- Values are pre-tax

Source: Accenture Research

Banks Respond to Fintech

Confronted with the opportunity to innovate, U.S. banks of all sizes are taking action. Some of the most active financial institutions are responding with a range of strategies:

- **Building digital capabilities in-house.** Some banks choose to create products that rival the best fintechs or develop specific digital capabilities, such as mobile wallets aimed at digital payments transactions.
- **Investing in startups through venture capital arms.** Seventy-two global financial institutions have made 488 investments in 183 fintech startups since 2010.[10] These investments are relatively small, composing just 10 percent of all investment and focusing on just six percent of fintech companies.
- **Acquiring fintech startups.** Banks run the gamut on how they bring new companies into the fold, some integrating them and others running them as standalone entities.
- **Incubating through joint research and product development.** Banks are partnering on open ecosystem innovation and connecting via incubators, accelerators and labs.
- **Collaborating with third-party developers in pursuit of a platform model.** One major bank launched a repository for tools and APIs that enabled developers to use the financial institution's software building resources to create better customer experiences. Three APIs are part of the initial offering: one to approve access requests for confidential information, another to get information on the miles, points or cash rewards earned with the bank's accounts, and the last to return a personalized list of credit card offers in less than 60 seconds.
- **Partnering with fintech companies.** A B2B2C partnership model makes it possible to take a fintech's innovation to a bank's wider customer base. The result is often a superior customer experience and more convenient financial products.

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global financial institutions have made 488 investments in 183 fintech startups since 2010.

B2B2C

A transaction where a fintech company offers a solution to a bank that in turn uses that technology to serve a customer.

10. Accenture Research analysis on CB Insights data.

How to Implement New Technologies for a New Market

With a strategic approach to working with fintechs and digital technology, banks can unlock value in all areas of the business. The path to digital technology-enabled transformation will vary depending on the needs of each organization and the maturity of each technology.

Many—but not all—of the more granular technology developments are focused on retail banking. This bias simply reflects the volume and scale of innovation taking place in the retail banking sector. Broader technology developments, such as the emergence of cloud, robotic automation and blockchain technologies, will have significant impact across all sectors of banking.

When adopted thoughtfully—aligned with desired outcomes and integrated with both technology and organizational change—digital use cases unlock key opportunities to capture value across the operating model. Banks can explore a number of specific financial digital use cases. The challenge is understanding how to prioritize and where to start. ***See Worksheet 1.***

Channels

An omni-channel approach—for example, creating anytime, anywhere banking services and experiences—can help banks achieve:

- Greater customer engagement and product utilization.
- Increased product sales and expanded opportunities.
- Reduced cost-to-serve.
- Optimized branch networks.
- Reduced time to market.

Some key technologies that can help power an omni-channel strategy include video-based advisors, mobile imaging, voice recognition and biometrics, chatbots, localized digital marketing platforms and social media management tools and services.

Key technologies to power an omni-channel strategy: video advisors, mobile imaging, voice recognition and biometrics, chatbots, digital marketing and social media.

Lines of Business

Banks can leverage technology to offer an array of profitable new services and customer experiences on a scale never before possible. For example, they can reach customer segments such as the underbanked, people who have found it difficult to obtain quality financial advice and other high-value services. In addition, technology can drive efficiency and new results within existing services.

- **Deposits** can be enhanced through business intelligence and customer analytics. Personal financial management (PFM) tools and services provide a consolidated view of a customer's full portfolio to encourage successful behaviors and habits. Digital marketing services can help in the quest to acquire deposits and educate existing customers using retargeting techniques, which place ads on different sites in an effort to stay in front of customers with relevant offers.
- **Lending** requires a balance between a positive digital customer experience and minimal credit risk. Advanced credit analytics can mitigate risk, and banks can tap into fintech-as-a-service offerings to help create and maintain an optimal customer experience. Mature fintechs exist today that can help banks fully digitalize nearly every lending application—mortgages, cards, commercial loans, auto lending—all offered as fintech as-a-service. This requires lower upfront expenses or maintenance costs.
- **Payments** are the most mature segment of the fintech market, which means banks can generate a quick and wide impact with faster, low-value payments and mobile wallets. There are also a number of bank-centric payment platforms emerging, including digital person-to-person payments systems (now) and blockchain-based (future). Banks should pay special attention to the convergence of the digital wallet and mobile banking, for example, the ability to get balances and transfer money in mobile wallets.
- **Investments** can simultaneously become more personalized and less human-dependent. Robo-advisors can help augment advisors and re-adjust portfolios according to market conditions and tax-harvesting with minimal human involvement.

Bank Platforms and Processes

Many banks today have grown to have multiple systems to manage different channels and product requirements. These different systems have been built organically over many years, through mergers and acquisitions and to meet evolving customer needs. The result is a complex web of processes, data stores, systems and infrastructure. This complexity has resulted in business and systems architectures that are costly to run and difficult to change.

Today, cycle times for new products and offerings in all industries cannot afford to lag for months and years. Banks face demands from their customers and markets that are often more than their legacy systems can support, while cost and complexity makes it nearly impossible to keep up with the pace of change.

There are several areas where banks can apply innovation to their existing platforms. The technologies discussed here are explained above, but each has a potential impact on a bank's central system.

Cloud—whether private, public or a hybrid—can improve banks' operating margins by unlocking digital value in areas like:

Cloud can improve banks' operating margins by unlocking digital value.

- Customer analytics and customer relationship management.
- Browser-based technologies, such as enterprise content management.
- IT development and application infrastructure. Since these functions are highly outsourced, banks can achieve cost savings through the cloud.
- Collaboration that enables employees across distributed branches to access banking systems through a security-rich cloud infrastructure.
- A private cloud to centralize management of desktops for greater remote flexibility without sacrificing control, while enabling banking employees to access the applications and data they need.
- Enforcing active security and endpoint management to ensure corporate governance and banking IT policies are maintained.

Banks' IT simplification agendas often target rationalization, consolidation and re-platforming of payment systems. As they pursue these goals, many banks find their legacy systems are unable to cope with the volume and nature of electronic payments. Even if payment platforms are not strong revenue generators in their own right, they enable banks to generate revenue through products such as current accounts and cross-border payments. Therefore, renewal of the core payments engine is an opportunity to unlock value by lowering the cost of operations and allowing new payment services.

Robotic process automation (RPA) lets organizations automate front office, back office and support tasks. An Accenture study surveyed more than 240 leading bank executives and found that more than three-quarters believe that the new workforce will be made up of employees as well as intelligent machines. Collaboration between the two will be critical, and training will be essential.[11] Robotic process automation operates by recording or mapping a task for the software robot, which follows computer pathways between screens and various data repositories. The tool mimics the same path through applications that a human worker takes using a combination of user interface or descriptor technologies.

Robotic process automation (RPA) lets organizations automate front office, back office and support tasks.

11. Accenture Technology Vision for Banking 2015.

Robotic Process Automation has evolved from theory to practical application:

- **In finance and accounting,** RPA is used to calculate asset depreciation for fixed-assets accounting or manage incoming vendor invoices, process vendor payments for procure-to-pay processes, or validate sales orders for order-to-cash processes.
- **In financial risk management functions,** RPA can be used to evaluate credit limits as well as identify changes in risk and exposure.

Distributed consensus ledgers (blockchains) can be used to complete real-time, peer-to-peer transactions without a central counterparty. Blockchains provide instant transaction verification and settlement certainty and may comply with a bank's risk and privacy needs. Cross-border payments are one of the best use cases for blockchain in banking. Banks do not have to hold capital in their accounts for all global currencies. Blockchain reduces settlement risk, eliminates delays and lowers the total cost of settlement up to 60 percent.[12]

Blockchains provide instant transaction verification and settlement certainty.

12. https://ripple.com/insights/ripple-and-xrp-can-cut-banks-global-settlement-costs-up-to-60-percent/

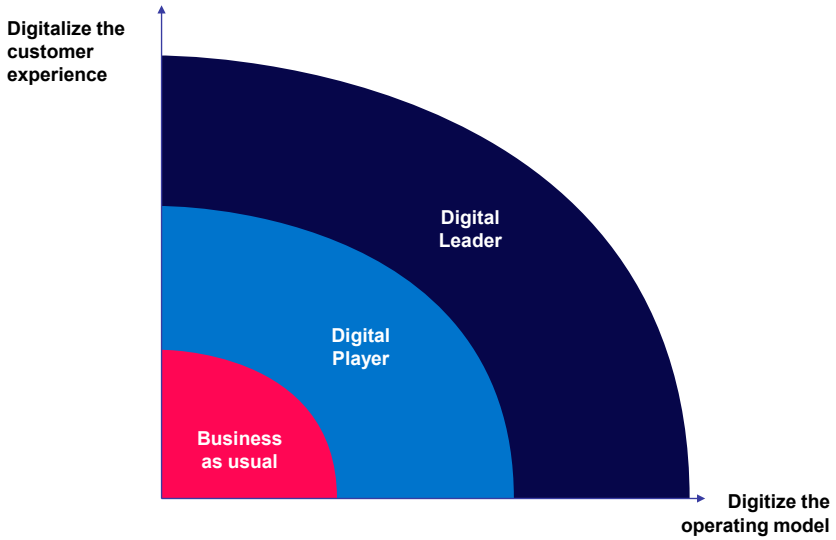
How to Capitalize on Fintech

Given the unprecedented changes underway in banks' commercial, retail and technology environments—and their rapid adoption of new technologies—banks must decide how to respond to these shifts while still remaining true to the model that has fueled their past success.

While each bank's journey is unique, all must determine where they are heading next. There are three key horizons for banks to consider as they use technology to shift their business models (Exhibit 4):

- **Business as usual.** Working with the current state of technology capabilities will cause stagnation in customer service, which means customers will quickly shift toward more digitally-equipped competitors.
- **Digital player.** Digital transformation techniques can fuel a smarter and more efficient model of traditional banking, improving revenue generation, operational efficiency and risk management of existing business models. By adding new technology capabilities to the existing core IT infrastructure, banks can make incremental changes to the existing customer experience.
- **Digital leader.** New approaches to distribution and operations can extend business models to new markets and customers. This expansion is enabled by technology capable of transforming the economics of—and access to—financial services, leveraging a new IT core infrastructure.

Exhibit 4 — Banks' Fintech Evolution



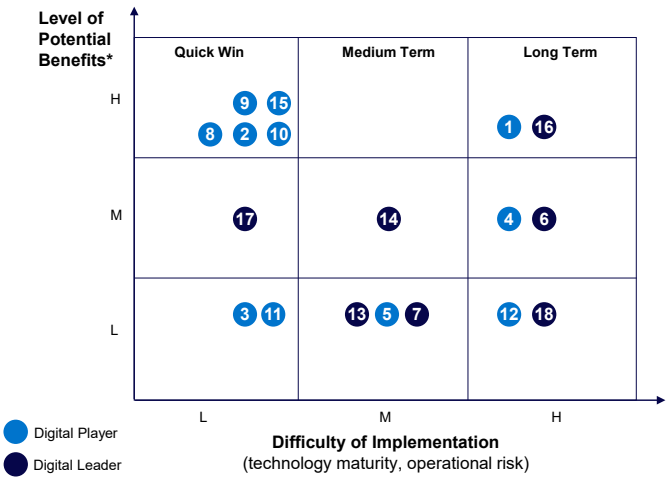
The Journey Toward Fintech Begins by Choosing a Destination

Becoming fintech-savvy requires banks to define the right horizon for transformation as well as an ideal timeline for change. Factors such as the urgency of the planned transformation, targeted business outcomes, scope of change and optimal delivery approach will make each bank's journey unique.

Once a bank has identified its destination and path, executives can start to prioritize financial technologies as part of a planned evolution to a target end-state.

Remembering back to the five desired outcomes, Exhibit 5 provides a prioritization matrix, which takes an industry-wide perspective and should be viewed as a directional and relative indicator. Each bank's current state, business strategy and target customer segment could have great influences and create individual results that could vary from what is shown.

Exhibit 5 — Fintech Prioritization Matrix



Financial Technologies

Channels:

1. Video-based advisor
2. Mobile imaging for staff
3. Voice recognition
4. Mobile imaging for consumers
5. Biometrics authentication
6. Chatbots
7. APIs

Lines of Business:

8. Advanced credit analytics
9. Customer analytics
10. Fintech as a service
11. PFM
12. Mobile wallets
13. Real time low value payments
14. Robo-advisory

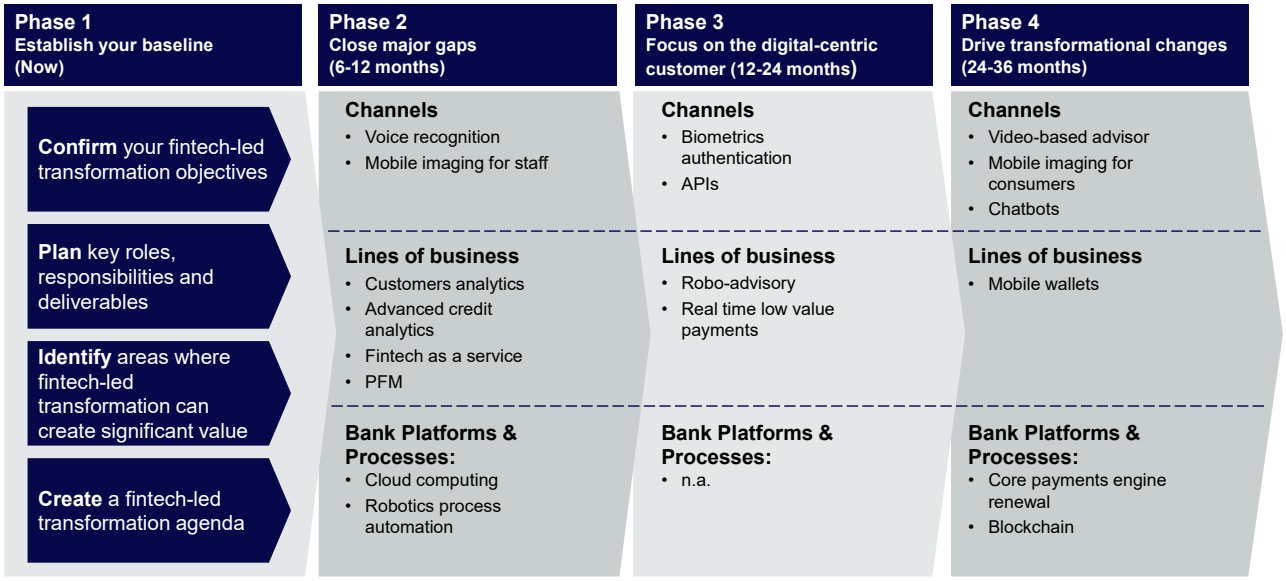
Bank Platforms & Processes:

15. Cloud computing
16. Core payments engine renewal
17. Robotics process automation
18. Blockchain

* Assessed as percentage of addressable cost base (e.g., % of distribution costs, % of processing costs) and/or the addressable revenues pool (e.g., % of net interest income, % of non interest income) each financial technology can target
Source: Accenture Research

Starting with technologies like cloud computing and fintech-as-a-service can yield some quick wins. Generating some early success in moving toward digital capabilities can also help build momentum and support for more complex implementations. Given the pace and scope of change, ABA's fintech roadmap for banks involves four phases over three years. (Exhibit 6)

Exhibit 6 — Banks' Fintech Roadmap



The Fintech Playbook for Banks

With a flood of new technology and new competitors into financial services, banks can be easily overwhelmed and not know where to start. This playbook provides bank executives a user-friendly and practical approach to driving financial technology innovation.

Establish a Baseline. Banks that have yet to start or are just starting their fintech journey will want to cover a few basics:

- **Identify strategic priorities.** Executives should review their business strategies and establish clear goals to guide decision making and focus. They should also explicitly decide where they are *not* going to focus.
- **Align the leadership team** and gain commitment from the board and C-suite.
- **Identify key resources**, including assigning responsibilities and a governance model. It is very helpful to have a least one C-Suite level champion to drive the process.
- **Agree on three to four areas of focus** that align to business priorities and represent the greatest opportunity or threat to the business. For some, this might be deposit generation, for others it might be lending digitization. ***See Worksheet 2.***

Close Major Gaps. Phase 2 is all about building momentum, learning and establishing a culture that constantly evaluates new and potentially better options. Banks should launch projects that they can complete within a year. While executing the first projects and selecting fintech partners, bankers should keep these points in mind:

- **Survey the fintech market** against the bank's priorities (from Phase 1) and quickly identify two or three potential partners whose offerings align with the bank's needs.
- **Understand how to select fintech companies.** (See *How to Select a Fintech Company* below.)
- **Focus on proofs of concept** (POCs) that can quickly be delivered. POCs will focus the team on concepts that can be quickly implemented with bank-ready fintech partners.
- **Fail fast.** Teams should not be afraid to pause or change course; the landscape is constantly changing.
- **Measure progress against business objectives** and avoid the temptation to try something just because it is "cool."
- **Identify gaps** between how the business interacts with customers in the physical (branch) and virtual worlds. This will serve as input to Phase 3.

Establish a culture that constantly evaluates new and potentially better options.

How to Select a Fintech Company

The most critical part of a digital innovation program is the selection of fintech companies to work with. The number of companies and diversity of their solutions makes it difficult to identify those that could generate the largest impact on the business. Also, bankers working with early-stage fintech companies are often frustrated by their regulatory maturity and their understanding of the banking complexities with which their solutions interact. Education and awareness are a necessary step in the partnering process.

While there are several methods to evaluate a company, selecting a fintech partner requires focus on four dimensions:

1. Risk
2. Scope
3. Relevance
4. Value proposition

*See **Worksheet 3** for more details.*

Focus on the Digital-Centric Customer. Phase 3 focuses on finding technologies that help deliver consistent experiences across channels and products.

- **Identify gaps** between physical and virtual channels. Bank associates can help identify processes and procedures where people have created "hacks" to bridge disconnects. One goal might be for a customer to start an application in one channel and finish it in another.
- **Think digital first.** An effective approach can be to start with a best-in-class digital experience and explore how it might work in a branch.
- **Establish a watch list of technologies** across channels, lines of business, and bank platforms and processes. These technologies should be able to deliver the best-in-class digital experiences for customers and staff. (See examples on page 14 of this report.)
- **Track advancements** of technologies over time.
- **Select technologies** at the right maturity level and that have a value proposition aligned with the experience gaps banks need to close.
- **Focus on people.** Banks can fall short if they underestimate the impact of change on their associates. Training and inspiring the front, middle and back office teams is a vital part of the process. The most effective banks will bring employees into the innovation process and reward them for finding new ways to delight customers and become more efficient.

Drive Transformational Changes. In this phase, banks should identify the four or five transformational changes that align with their strategies and transform their positions. The lessons learned from Phases 2 and 3 will be instructive. As fintech is likely to advance dramatically over the next two to three years, there is no rush for this phase. Products and services will only become more advanced and competitive.

Key considerations:

- **Be vigilant about core technologies** that have become a barrier to change.
- **Monitor the market for innovation.** The platforms available three years from now are just starting to be developed.
- **Look for platforms and capabilities to simplify** on the inside and differentiate on the outside.
- **Create a strategy for processing**, both real-time and near real-time.

Conclusion: Solving the Innovator's Dilemma

Scholar and author Clayton Christensen has an innovator's dilemma theory, which holds for banking as well as other industries.[13] The pace and scale of the benefits of technology in financial services will be slower through disruption by new entrants than through innovation led by banks.

It is clear that fintech innovation is pushing the banking industry to an inflection point. Innovation in banking is always difficult, and, while fintech companies are pushing the boundaries of customer experience and digitalization, they are unlikely to take over the industry as a whole. Therefore, banks and fintech companies must collaborate to advance the industry.

There is plenty of precedence in banking to show collaboration has worked and is working now. Innovations like ATMs and credit cards are examples of successful past collaborations, and banks are currently working together on blockchain processing and the Faster Payments Initiative.

Banks have a long history of making connections and bringing individual interests together to strengthen the larger whole. They now have the opportunity to be the voice of collaboration and connection that closes the gap between fintech companies and established banks to the benefit of both.

As with every wave of innovation, the rise of the digital world and the emergence of fintech is calling upon executives to react, respond or lead. The opportunity is there for those ready to take it.

The pace and scale of the benefits of technology in financial services will be slower through disruption by new entrants than through innovation led by banks.

– Clayton Christensen

13. Harvard Business Review - December 2015 (https://hbr.org/2015/12/what-is-disruptive-innovation)

Appendix

Worksheet 1

Identify Strategic Priorities for Bank and Fintech Investment

Strategic Priorities *Mortgages, commercial lending, PFM, student loans, payments, security, operating efficiency*	**Gaps in Existing Technology**	**Opportunities for Fintech Investment**	**Key Leaders** *C-Suite* *Staff*
1.			
2.			
3.			
4.			
5.			

Banks should review their own strengths and weaknesses to determine how to best spend their resources to support their broad strategic priorities. If a bank's strategy is to be dominant in commercial lending, then that is where it should focus its attention when it comes to applying fintech solutions, especially if a new technology would improve its current level of service.

Banks should designate specific staff members to lead its fintech implementation efforts. Staff must be supported by C-Suite officers in their efforts.

Determining broad strategy objectives first will assist banks in narrowing their focus in later exercises.

Worksheet 2

Identify Top Technology Investment Priorities

This worksheet is designed to help you prioritize technologies in ***each*** channel, line of business, and platform and process for ***each*** phase of your roadmap. Score each technology by high, medium or low based on impact, feasibility, level of effort, risk, time, cost and return on investment. Calculate the total to determine the overall score. Identify each technology's highlights, success criteria, benefits, challenges, areas impacted, next steps for completion and key leaders. Use this information along with the overall score to complete an overall evaluation of each technology. ***Below is an example. For ease of use, click here for this worksheet as a word document. There are 18 worksheets that include each technology in each phase.***

Phase 2: Close Major Gaps

6 – 12 Months

Channel: Voice Recognition *Can replace password-based logins for mobile or telephone banking, reducing verification times while increasing security.*		
Customers Targeted:	This is targeted towards segment: <Millennials, Youth, mid-life, older, young, poor, rich, average people>	**H=3; M=2; L=1**
Overall Score:	High = Total is 17-21 Medium = Total is 12-16 Low = Total is 7-11	Impact: H,M,L Feasibility: H,M,L Level of Effort: H,M,L Risk: H,M,L Time: H,M,L Cost: H,M,L ROI: H,M,L **Total:**
Overall Evaluation:	*Ex. Overall impact is extremely High and Feasible, this is a quick win.*	
Pros:		
Cons:		

Worksheet 2 (cont.)

Key Results - Success Criteria
1. How do we know we've been successful – when these happen? 2. Metrics where possible
Benefits & Outcomes
1. List benefits to bank 2. Why should we do this? *(Examples include: efficiency, revenue generation, expense reduction, risk mitigation, staying competitive, customer service, gain new customers, etc.)*
Challenges/Risks
1. Is success dependent on anything? 2. Potential for X mitigated by doing Y
Areas Impacted
1. 2.
Next Steps
1. What are we going to do next? 2.
Key Leaders
1. Name 2. Name

Click here for all 18 worksheets.

Worksheet 3

How to Select a Fintech Company

While there are several methods to evaluate a company, the following set of questions can be useful when choosing a fintech company. The questionnaire is split into four categories—Risk, Scope, Relevance and Value Proposition. Each bank should add additional questions to match on its own business tolerances.

Key Questions	Yes/ No	Notes
Risk		
Is the fintech company well-funded to be a credible partner for the future? • Ask to see a complete set of its most recent financials, including any audited financials.	____	
Does the fintech company have existing banking clients? • Ask for references.	____	
Is the solution proposed compliant with banking regulations? • Find out if the company has regulatory and/or compliance experts on staff. • Ask if the company has met with regulators. • Ask for a list of all pending, resolved, and threatened material litigation including regulatory proceedings during the past ten years.	____	
Does the solution need to interface with the core systems of the bank? • Ask the company to describe the technology and operating systems used. • Ask if the company has integrated its solution with the same core systems the bank is using.	____	
Does the fintech company have policies in place relating to confidential customer information? • Ask for a copy of their Information Security Policy and any related policies. • Find out who is liable in the event of a breach and who is responsible for customer notification if the company holds customer information. • Ask for the most recent copy of applicable reports or certifications from independent auditors related to data security.	____	
Find out if the company works with any third party providers in order to offer the product. If yes, get a copy of their Vendor Risk Management Policy and Vendor Due Diligence Policies.	____	

Worksheet 3 (cont.)

Key Questions	Yes/ No	Notes
Scope Has the solution been adopted by other banks in the U.S.? • Ask about the company's current U.S. market share for banks. How easily can the solution be customized? • Find out how the bank is charged for any changes/upgrades to the solution once the system is in place? How easily can the solution be deployed? • Ask about costs regarding training for bank personnel.	____ ____ ____	
Relevance Is the fintech company's solution solving an urgent need for customers and/or bank staff? • Ask for sales projections for the next one to five years and what phase the product is in its lifecycle. How much does the solution cost? • Ask for details on all pricing structures, including what is and is not included in the initial price. Find out about charges for any changes/upgrades to the solution once the system is in place?	____ ____ ____	
Value Proposition Does the fintech company have a distinctive value proposition? Are there other competitors with a similar value proposition? • Identify a list of companies that have a product that competes with the fintech solution. Can the value proposition be easily replicated? Is the company willing to engage in a proof of concept to start small to prove value potential?	____ ____ ____ ____	

Methodology

The analysis of the evolution of community banks revenues and the potential uplift from the adoption of financial technologies referred to in this paper has been developed by Accenture Research based on an analysis of the key technology trends impacting the banking market in the United States. The analysis includes assessment of market characteristics including technology maturity, banking product features, pricing, competitive dynamics, and the presence of network effects as well as barriers to entry. Baseline figures were developed from multiple sources including the Federal Deposit Insurance Corporation.

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About American Bankers Association

The American Bankers Association is the voice of the nation's $16 trillion banking industry, which is composed of small, regional and large banks that together employ more than 2 million people, safeguard $12 trillion in deposits and extend more than $8 trillion in loans.

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