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The Imminent Arrival of the Age of Open Banking

A shift to the platform business model in banking

pwc

Sharing of personal information will be common practice in the new era

The year is 2049. Citizens are under constant surveillance by the state. All kinds of personal information—including information related to birth, lineage, occupation, family composition, hobbies and preferences, DNA, criminal record, and action history—are subject to control. In addition to the state, government-sponsored private corporations are also gathering and analyzing citizens' personal information for their highly-sophisticated product development. As oppressive as this may sound, the citizens also benefit. At home, androids know all about them and, like family, offer emotional support, understand their feelings and troubles, and even give good advice from time to time to help solve their problems...

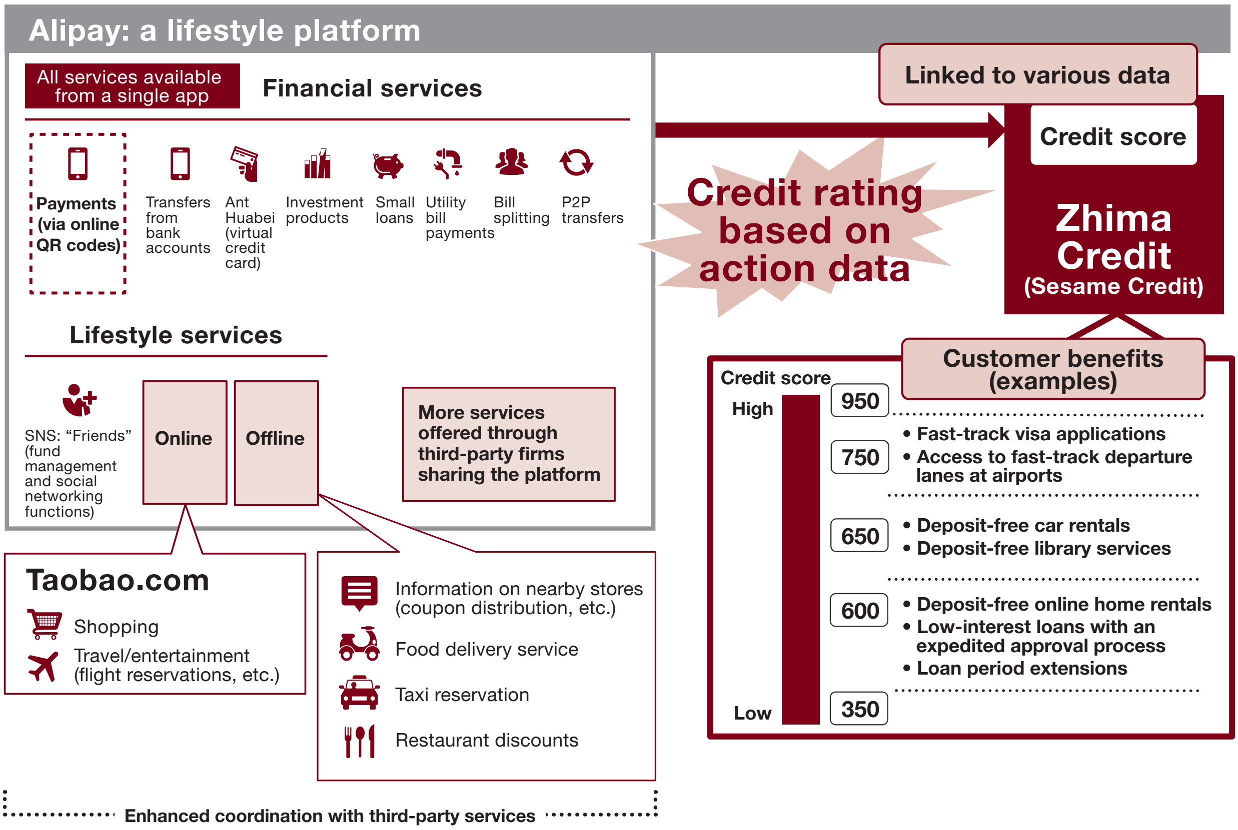
The above describes the near future envisioned in Blade Runner 2049, a 2017 film. The movie may have been an interesting idea and experiment a few decades ago. But the emergence of new corporate giants in internet-related fields over the last decade has quickly narrowed the gap between the film and reality.

From the standpoint of personal data management and application, schemes like these are globally applicable and are already underway. China's Alibaba Group, for example, links the Group's payment platform (Alipay) with services provided by third-party vendors to enable Zhima Credit, a credit rating service, to convert individual users' credit information into scores and supply them to various institutions. This service, associated with as many as 500 million Alipay users, is also used by the Chinese government, and traffic violations and criminal records are also considered in generating credit scores. A higher score brings benefits to consumers too, including fast-track visa applications and deposit-free library and other services. In Japan, an individual's credit information is strictly controlled by specific institutions and consumers do not even have access to their own records. In China, on the other hand, credit scores are shared widely in many aspects of people's daily lives, so much so that those using a matchmaking service are expected to disclose their credit scores (Fig. 1).

At the same time, moves to restrict the spread of personal information are emerging worldwide. In reaction to the spate of personal data leaks from internet companies in recent years, states and governments gravely concerned about how corporate giants are

Figure 1

Generating credit scores from personal information by linking Alipay with third-party services: Zhima Credit

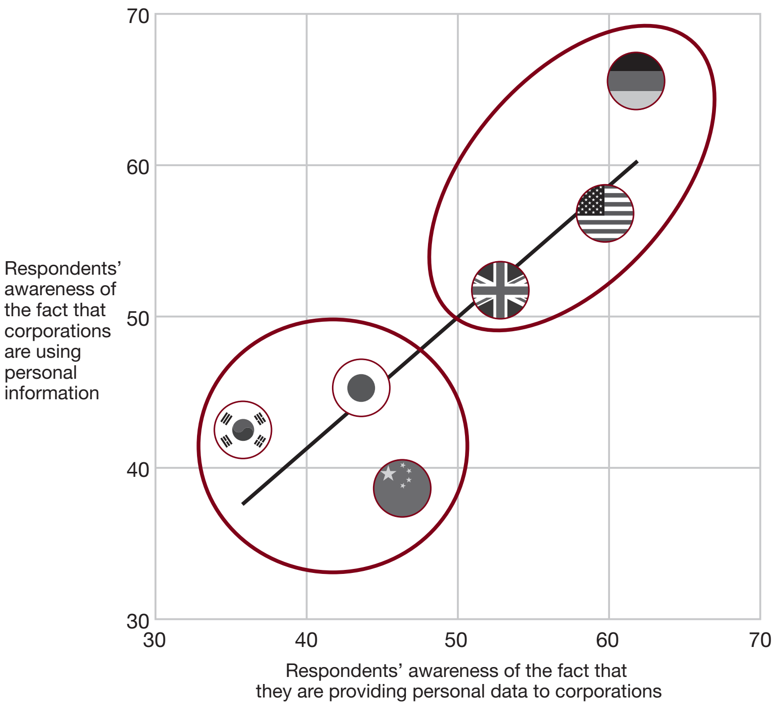


Source: Prepared by Strategy& based on information disclosed by Alipay and the company website

collecting information are moving toward establishing all-encompassing regulations. In the European Union, the General Data Protection Regulation (GDPR) came into effect in May 2018. The law requires all corporations and their employees in the EU in possession of personal information to protect personal data and imposes heavy penalties on corporations committing violations. Controls on information like this will naturally demand that corporations manage personal information properly. Nevertheless, the general trend of sharing personal information will likely continue among many institutions. According to a survey by the Ministry of Internal Affairs and Communications, at least half of consumers in the United States, the United Kingdom, and Germany, and 40% of consumers in Japan, are "aware that they are providing personal data to corporations" and are "aware that corporations are using personal data." In other words, many consumers in the West are aware that personal information is being shared and used (Fig. 2). Customers are also becoming more

Figure 2

Respondents' awareness of the fact that they are providing personal information to corporations and the fact that corporations are using personal information



Examples of personal data (as presented in questions)

- Account information (name, address, email address, etc.)
- Information sent and posted by users (emails, comments, photos, etc.)
- Account information registered for purchasing services, etc.
- Location information (obtained from user devices)
- Service usage history
- Access history for websites and other services
- IP addresses and other information for identifying devices on the network
- Information on personal relationships including family and friends

Source: Survey on Safe and Secure Data Distribution and Usage (2017),「安心・安全なデータ流通・利活用に関する調査研究」(平成29年) by the Ministry of Internal Affairs and Communications (translated by Strategy&)

careful about how they share information. In the future, they will only share information with organizations they trust, so companies must focus on deepening their customer relationships.

The rise of platforms in banking: a trend toward Open Banking

This trend toward information sharing leads to the idea of "open data," that certain data should be available to everyone to use and republish. Open data can be accessed, used, and shared by anyone, and is shared for many industrial, governmental, and other social purposes without restrictions to the format in which it is held. Open data is utilized across individual sectors such as payment services, banking, insurance, and distribution. Data and data platforms that support consumers' overall purchasing activities are defined as open commerce. In the banking sector, collaborations between traditional banks and third-party firms—such as in the area of financial technology (fintech), which has seen rapid growth in the recent years—represent data and data platforms that support customers' overall financial transactions and are defined as "Open Banking" based on their characteristics.

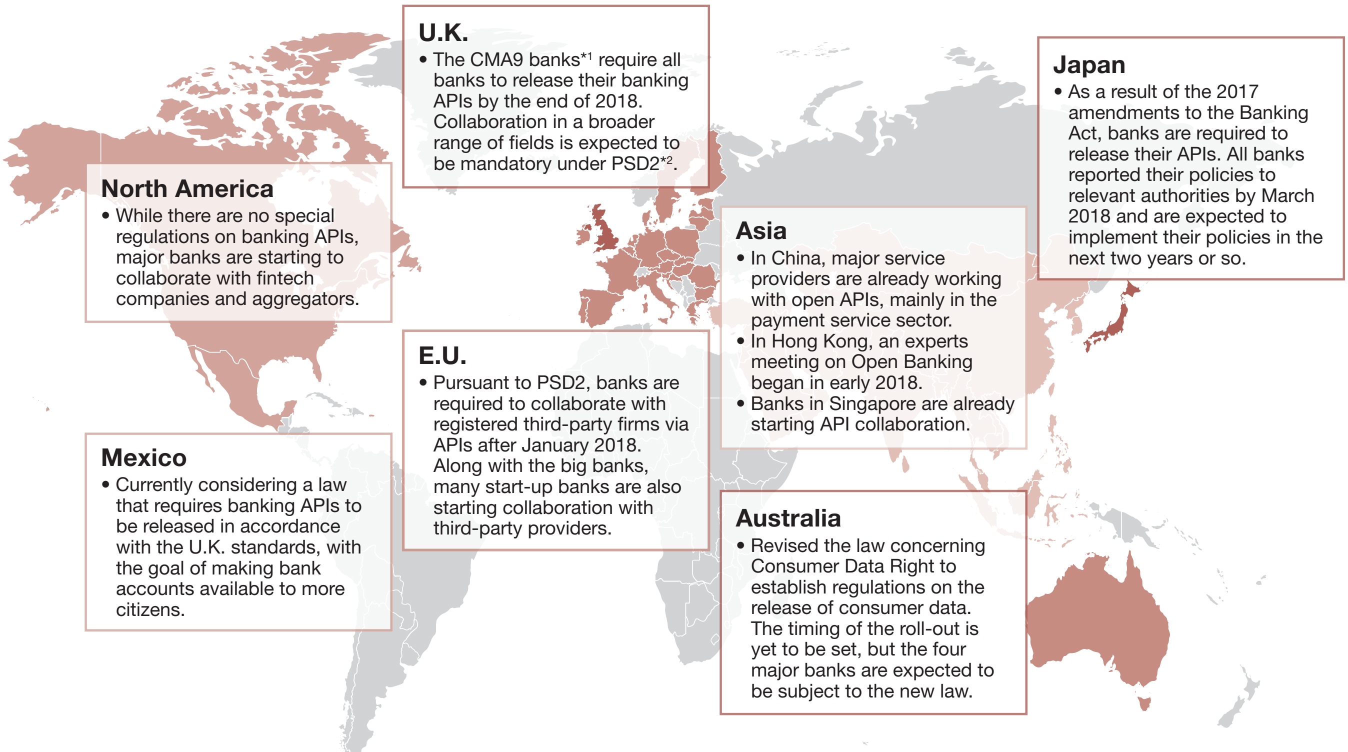
As this trend continues, the following changes are playing a key role in accelerating the shift to Open Banking:

- Changing consumer expectations
  - Share their information only with the company they trust
  - Greater consumer expectation for user-friendliness, convenience, and affordability
  - Easier access to a variety of data via third-party apps
  - Advanced communication between devices such as smart speakers and IoT home appliances
- Changes in the business environment including competition from outside the industry
  - Emergence of new entrants capable of offering fintech and other convenient services at a lower price
  - Banks now offer a development environment that allows app developers to collaborate with banks using application programming interfaces (APIs)

- Regulatory changes that promote Open Banking
  - Easing of regulations to encourage Open Banking (Fig. 3)
  - Consumer organizations and IT vendors requesting that banks share data
- Technology innovation
  - Emergence of new channels and data formats
  - Faster generation of products and services via agile development and 24-hour real-time payment infrastructure

As the trend toward Open Banking further progresses in reaction to these changes, the banking business will evolve into a platform, a business model that creates value by allowing collaboration between banks and third-party vendors, as seen among digital companies. Unlike the conventional value-chain model, the platform continuously evolves through an interactive value-creation cycle, whereby the

Figure 3
Regulatory trends in countries/regions promoting Open Banking



*1 CMA9: The nine largest banks and building societies in Great Britain and Northern Ireland.
*2 PSD2: Revised Payment Service Directive (E.U.)

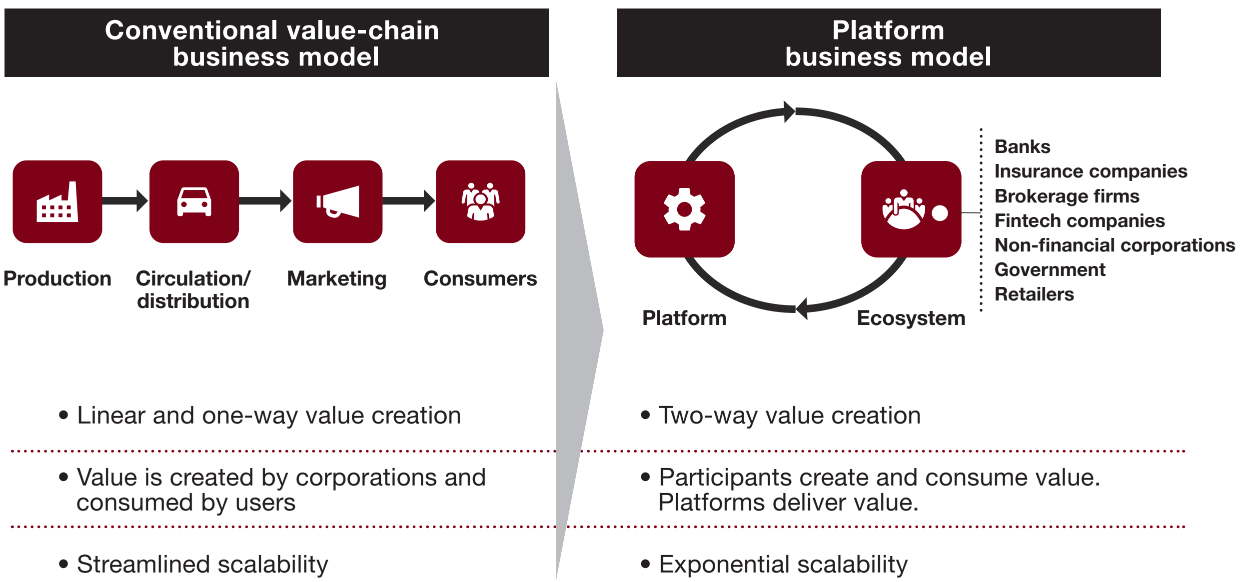
Source: Prepared by Strategy& based on the websites of the relevant government offices participants (users and corporations) create and consume value (Fig. 4).

What, then, are the characteristics of the platform-based banking model? They are summarized below under four major categories:

1. Creation of customer value

The creation of customer value means to offer "new experiences"—akin to those delivered by digital companies such as Apple and Uber, the ridesharing company—centered around finance. So far, banks have aligned their financial products and services with customers' preferences and life events. From the customers' perspective, however, the banks have merely provided a means to achieve their goal, instead of offering them assistance to realize their goal. For example, major life events such as purchasing a house, having a baby, and losing a family member entail not only financial activities, but also a host of additional burdens such as communicating with service providers to receive appropriate support and completing a large amount of paperwork. To differentiate itself, it is crucial for an

Figure 4
In the digital economy, platforms and ecosystems are the foundation of value creation



The emergency of the platform business model is the most significant and disruptive change since the industrial revolution.

Source: Analysis by Strategy&

Figure 5

Customer value creation: new experience

New experience: Buying a house for the first time (scenario)

Customer model

Ichiro Watanabe (age 34) and Rie Watanabe (age 30), recently married

1

- Ichiro and Rie return from their honeymoon. When they pay their rent on their smartphone, a message pops up: "Congratulations on your wedding!"
- There is a link at the bottom: "What's your next goal?"
- Clicking the link shows the home ownership rate among couples in Ichiro and Rie's age group. The high rate takes them by surprise.

2

- A few days later, Ichiro and Rie visit the suburbs. While driving through one of the areas, they ask their smart speaker: "What are the general housing prices in this area?"
- The smart speaker replies with the average price and the number of sales in the area in the previous year.

3

- While looking at the list, Ichiro consults the smart speaker: "How much do we need to save for a house like this?"
- The smart speaker suggests Ichiro to contact Bank A, the couple's main bank.
- When Ichiro agrees, Bank A confirms the couple's information and starts a loan simulation.

4

- Bank A's chatbot quickly delivers the result.
- A test calculation based on the couple's current account balance and credit information shows that if they save another ¥1 million for the deposit, they will be ready to buy their dream house.

5

- Bank A then advises which areas of spending to cut to save another ¥1 million.
- Ichiro and Rie also check Bank A's community board on the internet to ask how other couples in the same situation are managing their spending.

6

- Following the advice of Bank A, Ichiro and Rie decide to save ¥1 million in 12 months and set the target amount in the app.
- From then on, a message starts to pop up on their smartphone every month: "Congratulations! You've reached your goal for this month!"
- For their daily shopping, an alert is sent if they are about to go over their daily spending limit.

7

- When Ichiro and Rie reach their goal after ten months, Bank A sends them a message on their smartphone to congratulate them.
- At the same time, the couple receive a coupon for a restaurant they are interested in and learn that a home loan evaluation has been completed under certain conditions.

8

- Bank A gives the couple a list of houses in the areas and price ranges ideal for the couple. Rie clicks the house she wants to view, and an appointment is set.
- After viewing the house, Ichiro and Rie decide to buy the house.
- After they provide Bank A with information about the house/land, the bank immediately sends them a home loan proposal.
- After carefully studying the proposal, Ichiro and Rie agree to the terms.

9

- Knowing how troublesome the home purchase process can be, Bank A suggests various additional services, including grants, property registration application, assistance for signing a contract with a building contractor, and moving and furniture arrangements.

10

- On the first night at the new house, Ichiro and Rie receive a message from Bank A congratulating them on the new home and receive a 1-year 10% discount card for a nearby supermarket, an affiliate of the bank.
- Thinking about making the mortgage payments and starting a family, Ichiro and Rie talk about how much they will need and whether they need to revisit their insurance policies.
- They quickly turn to the smart speaker to ask Bank A…

Source: Prepared by Strategy&

interactive platform business to design services from the standpoint of solving customer problems such as these (Fig. 5). Not only can Open Banking allow banks to collaborate externally with fintech companies, it can also, not surprisingly, connect banks to non-financial services. Big banks may collaborate with large national corporations, while regional financial institutions can choose to work with local vendors. The question is what kind of value such collaborations offer and how the financial institutions can earn appropriate fees. The United Services Automobile Association (USAA), a major U.S. financial institution, offers insurance to military members and their families. Recently, it has launched lifestyle consultation services for property and automobile purchases by collaborating with real estate agents and car dealers.

2. Banks' roles and functions in the ecosystem (provider of services generated through external collaboration)

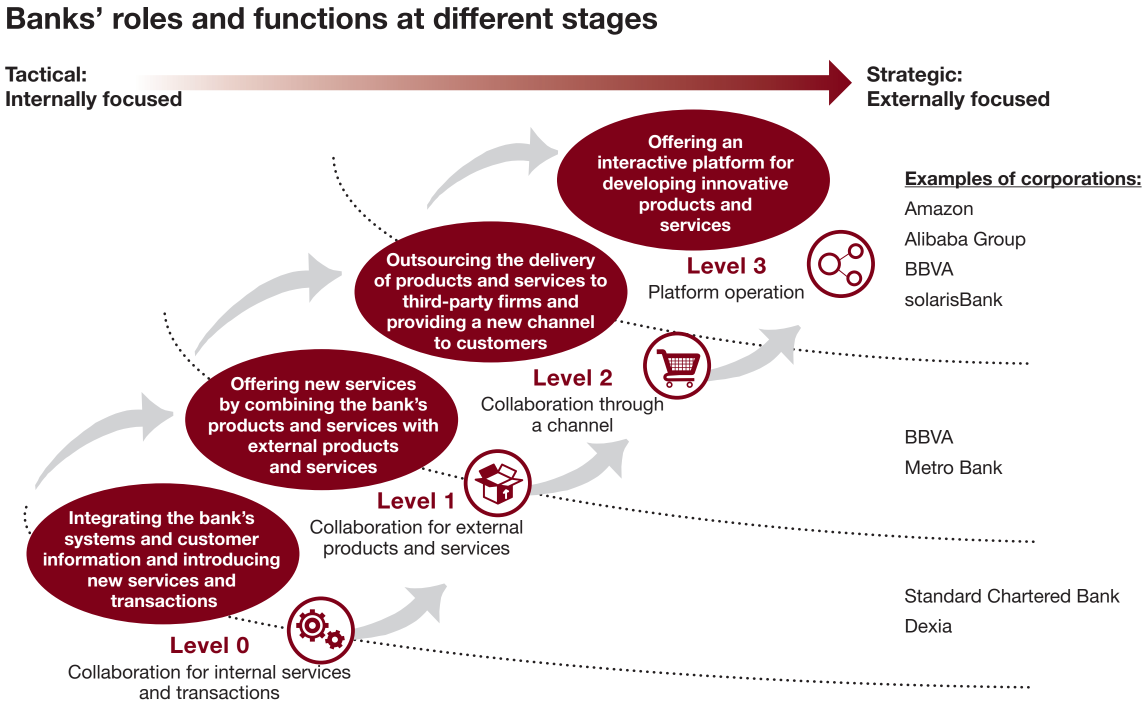
The benefits Open Banking brings to banks include enhanced customer loyalty via the ecosystem, expansion of customer base, acquisition of non-interest income, cost reductions due to increased internet use, and promotion of innovation. The risk, however, is that the points of contact with customers would shift to third-party providers through apps, with the banks merely playing the intermediary role as an information provider. In other words, the very purpose of banks may be called into question as they lose their monopoly over financial services long ensured by regulatory protection. To avoid this outcome, banks need to offer value-added services while keeping in mind their roles in the ecosystem. The banks' roles, ranging from internal- to external-oriented, are roughly divided into four stages. Some banks have already begun working on establishing their position as a platform operator (Fig. 6).

3. Monetization strategies for generating revenue

As banks transition to Open Banking, their revenue structures are expected to undergo a major transformation. Interest and service fees earned through traditional banking products (e.g., deposits, currency exchange, loans and corporate financing, credit cards) are expected to decrease gradually with the prevalence of alternative services offered by fintech companies and firms from different industrial sectors, while platform usage fees and referral fees, as well as advertising revenue, will increase (Fig. 7). To acquire these new revenue sources, however, it is crucial that banks manage and maintain customer information, the wellspring of value.

For this purpose, banks must analyze customer information and provide the analyzed information to the platform participants in meaningful forms. The problem, however, is that banks are not equipped with this capability. In Japan, many banks experimented with Customer Relationship Management (CRM) for a while, but the approach never took root. While there are several reasons for this,

Figure 6
Roles and functions of banks in Open Banking



Source: Prepared by Strategy& based on information disclosed by the relevant companies and websites of the companies

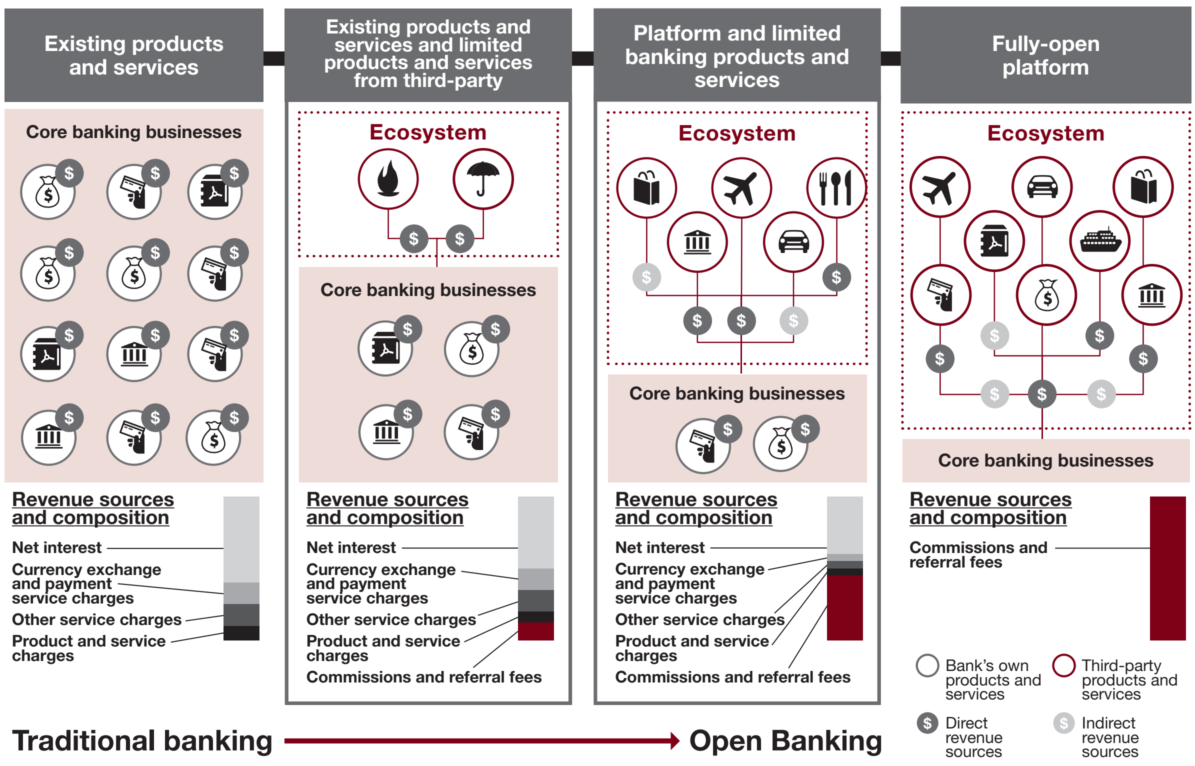
banks need to leap over high hurdles to acquire new functions and capabilities (organizational capabilities). For example, Nedbank, a bank based in South Africa, offers Market Edge, a marketing information app designed for local retailers based on the customer information the bank has accumulated. Using the app, the local retailers acquire information including the geographical distribution of the customer segments they seek and their behavioral patterns. The retailers use the information (not customer information per se, but information processed by segment) to narrow down the location for a new branch or to launch an ad campaign in the area, thus exploring new revenue sources. Also other value driver of open banking and general API usage is that transaction costs come down - it is not a revenue driver but lot of traditional margins are under threat unless banks adapt and work with such providers.

4. Infrastructure building

At the core of Open Banking infrastructure is APIs (system functions and specifications for connecting with third-party providers). In March 2018, banks in Japan each presented a report on their plans to

Figure 7
Changes to a bank's revenue structure in Open Banking

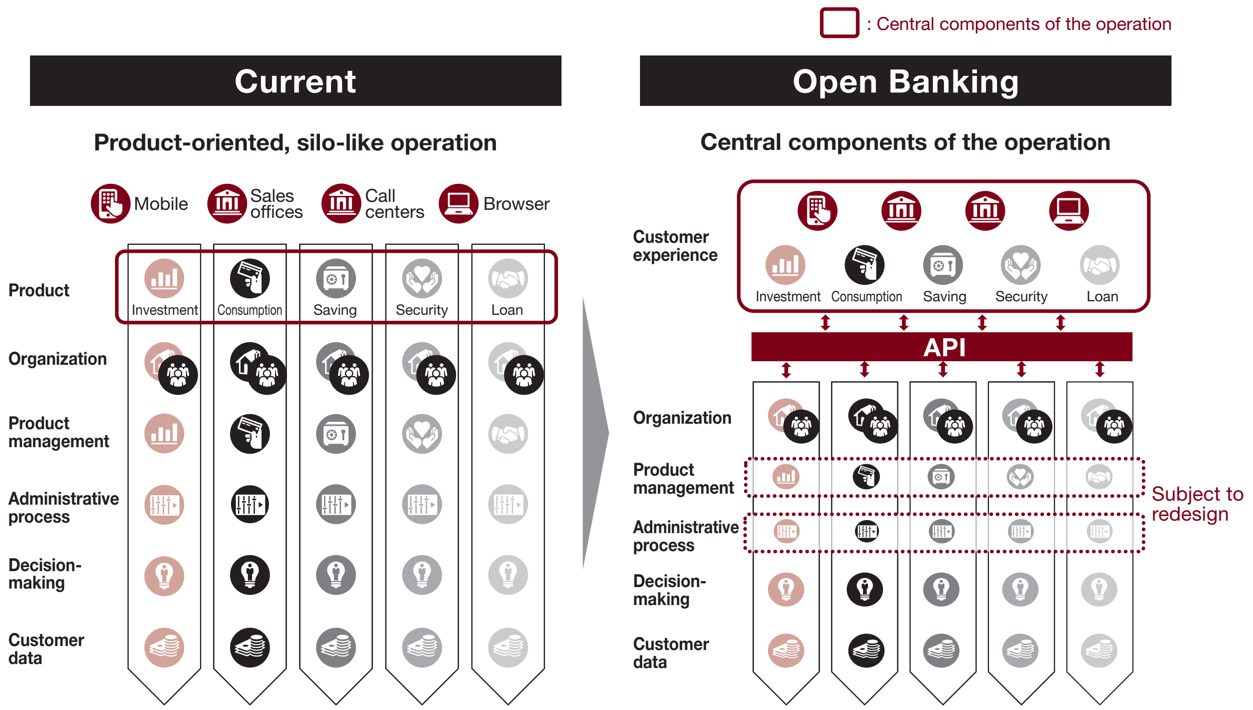
Types of banking business models and revenue structures



Source: Analysis by Strategy&

realize open APIs and are expected to give it concrete shape and implement it in the next two years. The traditional banking system was operated around each product and service. In realizing external collaboration, banks will need an intermediary function that links their traditional system and the systems of third-party firms. As a result, the structure of the banking system must undergo a major change. Specifically, banks need to evolve from a product-oriented, silo-like operation into a customer-oriented, integrated operation (Fig. 8).

Figure 8
API collaboration platform in Open Banking



Source: Analysis by Strategy&

Efforts Toward Open Banking Worldwide

While many banks in Japan are collaborating with fintech companies and providing new services by utilizing customer information, initiatives toward Open Banking are proceeding at full speed elsewhere. Strategies based on Open Banking greatly vary depending on the characteristics of each bank. For example, many big banks put priority on cost reduction and customer interaction and consider collaboration only with those third-party providers that meet their objectives. In addition to seeking low-cost operation, medium-sized and start-up banks aim to position themselves so as to differentiate themselves from major banks by pursuing collaboration with a broader range of third-party firms and devoting their energy to developing innovative products and services. Online banks, which are based on digital technology, are collaborating with third-party providers to develop apps to further enhance customer convenience, with the goal of expanding (scaling up) points of customer contact on the internet. Small-to-medium financial institutions are specializing on local communities and exploring strategies that put priority on giving back to local communities.

Case 1: Initiatives at BBVA (a major Spanish bank)

BBVA began investing in fintech early on and has been working on building the foundation for Open Banking. Currently the bank is engaged in two initiatives:

- **Initiative to augment and strengthen BBVA's traditional products and services**

  Collaborating with third-party providers to be integrated into BBVA's P2P payment infrastructure, launching internal ventures to reinforce BBVP's products and services, etc.

- **Opening platforms to third-party providers (Open Marketplace, Innovation Challenges)**

  Creating a new environment where third-party developers can develop their original products and services on a platform accessible to anyone like Amazon Web Service.

BBVA allows third-party firms to utilize the platform as a Bank as a

Service (BaaS) in an open environment and offers the customer data gathered via the above two channels as Data as a Service (DaaS). As an organization, BBVA assigns more than 3,000 employees from its business and IT departments to its digital banking department. It pushes forward 10 to 12 ideas at the same time. Failure is treated as a learning experience for moving on to the next idea.

Case 2: Initiatives at Metro Bank (a U.K. start-up bank)

Founded in 2010, Metro Bank is the first new mid-size bank to emerge in London in more than a century, where big banks have dominated. Leveraging the high-quality services and convenience it offers, Metro Bank has opened 56 branches as of today. The bank primarily conducts face-to-face transactions and is open for business until 8:00 p.m., 362 days a year. Its distinguishing features include consolidated management of online accounts for small-to-mid-sized firms.

Case 3: Initiatives at solarisBank (a German online digital bank)

Established in 2016, solarisBank is a Berlin-based technology company with a banking license and less than 200 employees. solarisBank releases its banking API to other companies, and acts as a Bank as a Platform (BaaP) to help companies without a banking license provide actual banking services. Services offered include deposit services, debit cards, prepaid cards, various payment services including person-to-person transfers, individual and corporate loans, and development of tailor-made products by third-party providers.

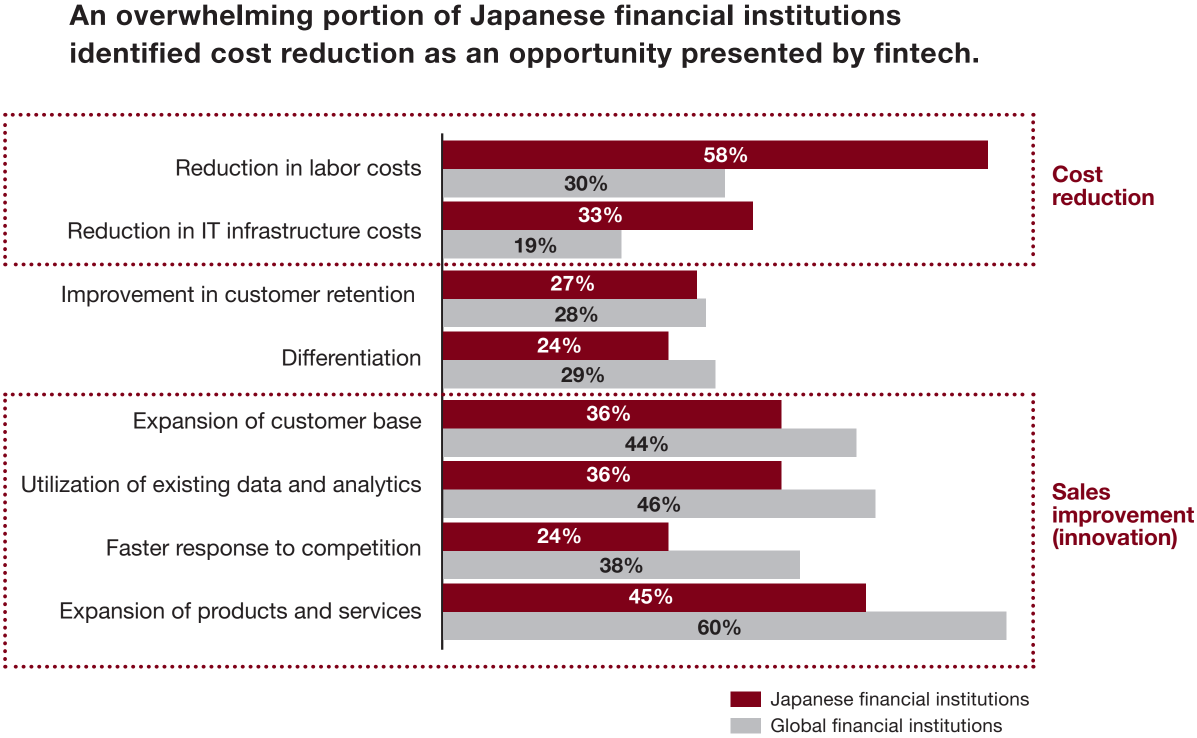
Important questions to be answered before Japanese banks transition to Open Banking

As the world moves toward Open Banking, Japanese banks have barely taken their first steps. Fintech has yet to gain popularity in Japan due to various factors including the high costs of investment in IT, human resources, and office space, which arise from strict regulatory requirements, and are putting pressure on the banks' management base. As new players from different industrial sectors are entering the banking business at a faster pace, Japanese banks finally need to make a serious effort at following the trend toward Open Banking. Compared with financial institutions worldwide, the Japanese counterparts tend to view fintech as an opportunity to achieve cost reduction (Fig. 9). In addition, Japanese banks believe they have poor innovation-related skills (Fig. 10).

In particular, the business environment surrounding regional financial institutions is deteriorating, as indicated by the negative interest rates, the stagnation and contraction of regional economies resulting from the declining birth rate and the aging population, and the declining profit margins caused by intensifying competition. Before Japanese banks follow the global trend toward Open Banking, they must answer some important questions.

- First and foremost:
  - Do Japanese banks really need to support Open Banking? Aren't there other ways to survive?
  - How big is the threat of non-banks (e.g. retailers, Facebook) embracing open banking and starting to threaten bank margins?
  - For example, perhaps banks just need to offer the same level of services as their competitors by intensifying their collaboration with local communities?
- "What?"
  - Since there is a possibility that points of customer contact will shift to third-party providers mainly via the internet, what value-added services can banks offer?

Figure 9
Opportunities presented by fintech as seen by Japanese financial institutions



Question: Please tell us about the opportunities presented by the emergence of fintech in your industry.

Source: Global FinTech Survey 2017 - Japan Results (PwC), with additional notes by Strategy&

– What are the prerequisites (minimum requirements)?

• "How?"

– What are the requirements for realizing Open Banking?

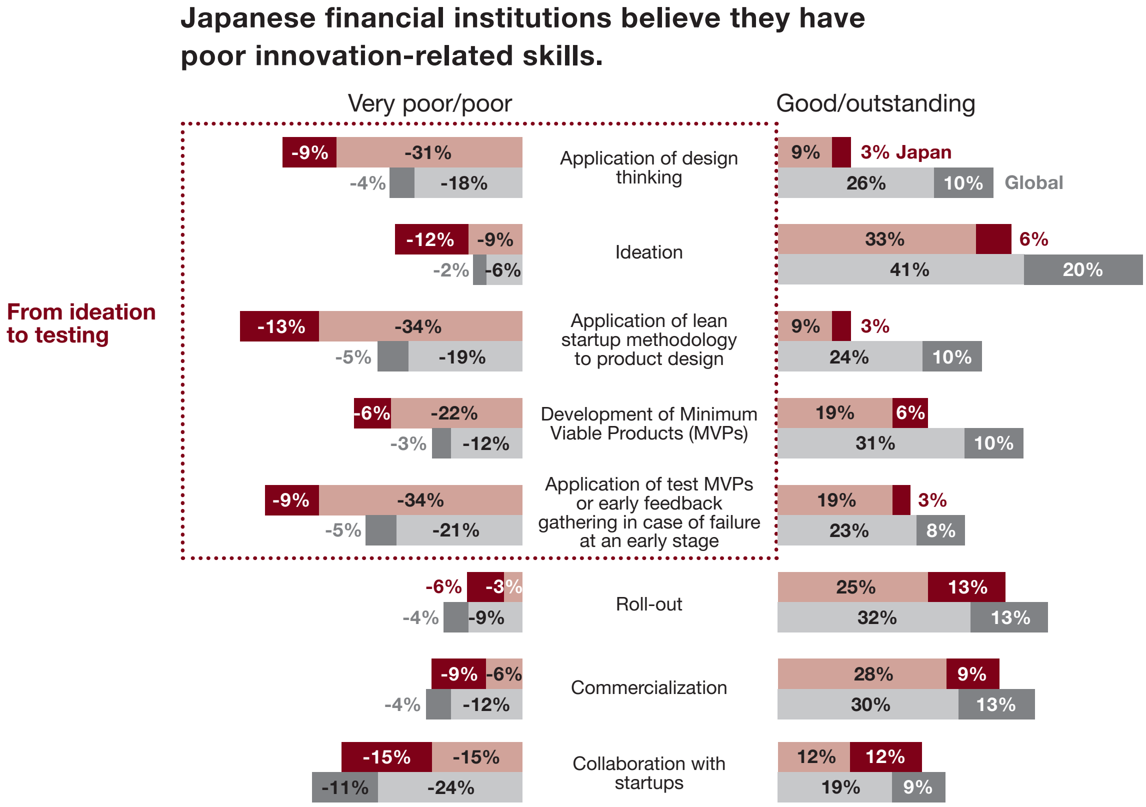
– How can banks meet the requirements?

While the answers will vary from one bank to another, the following three points can be made at a minimum based on the case studies mentioned earlier.

• While banks each work toward different models, at a bare minimum they need to identify what they need to do and what action to take and when, and incorporate their plan into their management policy based on a clear vision for the future.

• Banks are trying to create new value by acting as a hub for the wide variety of solutions provided by third-party providers. Scalability is essential for this purpose. Small- and medium-sized banks in

Figure 10
Innovation culture



Question: How would you rate your innovation skills?

Source: Global FinTech Survey 2017 - Japan Results (PwC), with additional notes by Strategy&

particular need to assume they will be collaborating with other banks unless they depend solely on certain clients and regions, and it is crucial that they examine the pros and cons of both operating the platform and paying the user fee.

- Other minimum requirements include the API collaboration platform and R&D functions, along with the business environment, corporate culture, and rules of using customer data that ensure that they operate smoothly.

In Open Banking, products and technologies do not necessarily give the banks a competitive edge. (This is not to deny the hope or the possibility that ground-breaking products or services will emerge out of collaboration with third parties.) It is essential, therefore, that banks develop a plan on how they can share a special experience with customers. To do this, banks should conduct the following step-by-step study once they have established a direction for answering the questions above.

1. Know your customers well: Which customer segments are generating profit? What are their prospects for future growth? Who should be the target customers? What are the interests of the target customers? Do their interests connect to financial services?

2. Design a solution for each user's interest/concern: What problems do customers face? What kind of user interface (UI)/user experience (UX) do they need? What is the optimum combination of online and brick-and-mortar services? Would you personally use them (particularly important)?

3. Collaborate with third-party partners: Aside from fintech companies, decide on the businesses, vendors, and financial planners you want to collaborate with. Who? Where? How (API)?

4. Establish an operating organization and platform: Consider what kind of system platform to build and what innovation and development framework to develop. Study how to secure human resources and establish the Key Performance Indicators (concurrently with 1 to 3 and 5 to 7).

5. Launch a beta version in the market in a timely manner: How did the customers react? What improvements should be made?

6. Measure its effectiveness and decide whether to continue: Was the target number of users (NOT profit!) attained in a defined period? Who should make the call and at what point should you move on?

7. Design a solution for another user interest.

These initiatives represent a challenge to the traditional banking culture that is rooted in safety and soundness and that leaves very little room for failure. In some cases, the key challenge is forming a new organization or company and cultivating the culture and talents needed to survive in the digital era. It is up to the top management to decide how much risk to take.

About the author

Daisuke Yabuki is a partner with Strategy&, PwC's strategy consulting business, based in Tokyo. He has over 15 years of experience in company-wide growth strategy, marketing strategy, digital transformation, M&A, global strategy, and operational, organizational, and functional design, mainly in the financial sector. In recent years, he has been involved in many large-scale reform efforts in management strategy, operations, and organizations introduced in anticipation of changes in industrial structures.

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