Bank of the future

Surf on the tsunami of disruption and get ready for the new paradigm

Patrick Laurent
Partner
Technology & Enterprise
Application Leader
Deloitte

Thibault Chollet
Director
Technology & Enterprise
Application
Deloitte

Banks are currently facing major challenges, such as compliance with new regulations, reducing costs, becoming more agile, providing a compelling client experience, and so on. But this is nothing compared to what lies ahead: the threat of disruption, embodied by fintech companies and other specialised service providers. Are banks ready to survive?

Introduction

While banks are still transforming their information systems to cope efficiently with current requirements, new technology-backed entrants are putting even more pressure on incumbent operators to rethink their business model and banking platform to survive in the new disrupted economy.

Banks have always invested significantly in their legacy core systems, either by custom-building them or by buying them from banking software providers. Due to a lack of vision and architecture planning—and also a lack of experience given that software engineering is a new science—it often results in the stacking of software pieces and the creation of monolithic, rigid, and costly banking platforms, preventing changes at reasonable costs, slowing time-to-market, and hindering innovation.

To become more agile, reduce costs, enable new functionalities, or work with new entrants, banks have already started to modernize and rationalize their legacy information systems.

Different approaches are possible:

- Revamping the legacy systems through software reengineering
- Replacing the legacy systems with banking packages
- Replacing the legacy systems with pure cloud solutions, such as Mambu
- Externalizing part of the process to external business process outsourcing (BPO) service providers

One size does not fit all, and banks, especially large ones, realize that replacing their legacy core banking systems with all the satellites around is not a case of a simple switch. Indeed, it is a long journey. It calls for a lot of investment, bears a lot of risk, and is barely manageable without the proper organization. So, is it really reasonably feasible?

Now, the fintech companies are on the radar, threatening to take over the banking business while a lot of banks have not even begun their transformation. But are they really a threat? Or are they simply an opportunity to transform faster and be ready for the future, when fintechs will inevitably be in the business ecosystem anyway?

How can banks transform, not be left behind, and already have a foot in the future all at the same time? One way of doing it is to fragment the information systems and combine the best of what exists internally with what is best on the market. One bank may choose to focus on what it excels at or how it differentiates itself and leave the rest to the specialists, using the threat of new entrants as an opportunity to operate more efficiently and to white label innovative products that will attract new clients—or at the very least, retain the existing client base.

A little food for thought

Does a retail bank really differentiate on payment? Will a client come to a bank to make an international fee payment of US$10 when the blockchain will execute it for almost nothing?

Does a private bank or wealth management institution need investment advisors when robotic investment could have the same results for just a fraction of the costs?

Does a client come to a mainstream bank to get a loan when it can request one directly from online and peer-to-peer lending platforms for low-cost, fast, flexible, and more client-focused alternatives?
Does a young entrepreneur ask his banker for funding if his risk profile prevents him from receiving sufficient funds when he can apply on a crowdsourcing platform first?

Do I need to go to my bank to buy/sell securities on a stock exchange if I can buy them directly through my bitcoin exchange?

Why would a bank perform its own Know Your Customer (KYC) process or credit scoring processes itself when centralized information and credit worthiness platforms are able to give the information and immediately score an individual?

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New entrants will disrupt the banking industry's traditional value chain, forcing banks to reconsider their roles.

A document from the World Economic Forum written collaboratively with Deloitte reports that:

- **Financial products will increasingly be offered on a stand-alone basis limiting incumbents' ability to competitively cross-subsidize.**
- **Financial institutions' ability to collaborate with non-traditional players and other institutions will become essential.**
- **Financial institutions will need to choose where they will specialize and where they will leverage external partners (e.g., product manufacturing vs. creation of client experience).**

It is indeed foreseeable that the banks of the future will mix current models with disruptive ones in creative ways, i.e., product manufacturing vs. creating client experiences.

To enable these creative models, financial institutions need to integrate with numerous:

- Traditional actors of the current banking ecosystems, such as custodian banks, paying agents, central banks, etc.
- New service providers, but from the current banking ecosystems such as BPO service providers or cloud application service providers
- New entrants that disrupt the current banking ecosystem and paradigm

But above all, they shall generate differentiation through the integration of non-financial services in order to offer innovative packages that combine financial products with non-financial ones.
The bank of the future is an aggregator of services. The infrastructure of the bank of the future will hence probably be more an aggregation of services than a single vertical production chain, a virtual hub allowing clients to have access to financial and non-financial services, sourced internally or externally.

Different business models would emerge, favored by the disintermediation of services and the dismantlement of traditional value transfer rails to be more global, faster, transparent, and cheaper.

Some banks will choose to specialize and will differentiate on specific activities, leveraging legacy assets to provide financial institutions and new entrants with infrastructure and access to specific services. Some banks may choose to be good at aggregating customers' accounts in different virtual currencies held at different lending platforms for different portfolios, etc. Others would differentiate themselves from other banks by offering their customers loyalty points or vouchers each time they pay with bitcoins. These would be loyalty points or vouchers that they could use to pay at specific online or physical stores or that you could exchange on specialized P2P loyalty marketplaces. Others may be very efficient in the KYC or risk scoring processing and sell them for other banks that want to focus and specialize on other areas.

Banks of the future will have to switch from a traditional self-sufficient closed vertical end-to-end production model to a "bank as a service" paradigm where everything is a service, exposed or consumed, and interconnected

Commodities will most probably be sourced to fintech companies that use technology to provide low-cost yet effective solutions. High value added services would be sourced internally or to other specialized third parties or banks. When even the core banking system may be sourced externally to pure cloud solutions, such as Mambu or Yubora, there are few limits to what can be outsourced or indeed insourced by specialized banks.

Hence, the bank of the future will have to deal with myriad actors that will need to be seamlessly integrated to offer a comprehensive, consolidated, and friendly client experience. But to make all those actors work together and to expose the bank's own services to partners and clients, strong integration technology is required. This is the purpose of Application Programming Interfaces (APIs), which go beyond the simple exchange of information via files exchanged between systems.

APIs are the cornerstone of the exchange of data between systems. Without them, you cannot streamline processes and services that involve different applications in your information systems, let alone different applications spread over different parties' information systems. APIs facilitate a dialogue with an application by describing how to talk to it. The software developer who wants to integrate the functionalities of another system within the software being developed will "name" the functions or services exposed by the other system in line with the API documentation.

Until recently, APIs were proprietary, specific to a certain software application, and accessible only in a specific context, thereby limiting openness, agility, flexibility, and interoperability. For instance, if you were to change your order management system, you would have to adapt the software code of all the applications interfaced with it, which entails great deal of effort, risk, and money.

For several years, the emergence of a standard API has been breaking down those barriers by specifying common and shared protocols on how to dialogue with specialized systems or platforms. For instance, the Financial Information eXchange (FIX®) protocol documents how to talk to order management and trading systems.

In addition to the software companies, Internet companies such as PayPal, Billtrust, Tilt, Facebook, and Netflix have also opened their information and services to the public through so-called open web APIs, i.e., an API accessible through web protocol (REST, SOAP, etc.). Some of them are free; some of them carry costs or are paid for through ads.

In the same spirit, open banking platforms unbundle payment, credit, investment, loyalty, and loan services so that anyone—or anything—can consume them programmatically. The Open Bank Project and Yodlee are open source banking platforms that allow banks and other financial services firms to expose their data and services in a standard way so that third parties can create new applications or services. The security is managed by standards protocols such as the OAuth protocol.

Several banks, such as BBVA and RBS, have already looked at the API, some of them testing their functionalities and robustness in terms of security in the form of a hackathon—a good way to test their openness, potential to develop quickly, and resistance to hacking.

What are the benefits of the banking API for banks?

They are twofold: outwards and inwards.

They have outwards benefits because banks are able to expose their services, transactions, and data, and:

- Open their services to the world and integrate the Internet of Things so that they can be consumed anytime, anywhere, by anyone, and… anything
- Multiply channels and client experience by letting external developers build new creative software applications that consume those services
- Seamlessly integrate into third-party financial institution systems and applications through open standards

They have inwards benefits because banks are now able to:

- Specialize in specific products, services, or processes and seamlessly integrate services and data from specialized providers (including fintech)
- Be more flexible by componentizing the information system into interchangeable bricks
- Be more agile by limiting the use of complex internal information systems
- Sell innovative products and services by aggregating services from different providers, whether financial or non-financial

Banks that want to survive in the future will not only have to be able to aggregate services and seamlessly integrate the processes of specialized providers. They will also have to open their information systems to third parties through open APIs. They will have to switch from a traditional self-sufficient closed vertical end-to-end production model to a "bank as a service" paradigm where everything is a service, exposed or consumed, and interconnected.