

Building the bank of the future

Part I: The first steps of Open Banking



In collaboration with:

WAVESTONE

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Introduction

For almost 20 years, new technologies and digital innovation have impacted every business activity, including the financial sector. Although retail banking has not fundamentally changed until now, the way of doing business in this field is facing major changes. In fact, newcomers have recently entered the market bringing new ways to deliver offers and services, as well as a more customer-focused value proposition, to a historically traditional ecosystem. Recently however, a new tendency has emerged: Open Banking is booming in the financial market and could profoundly disrupt the way we think about retail banking activities.

The financial sector first saw the development of online banks associated with the dot-com boom in the early 2000s, more recently followed by mobile banks with the growing use of smartphones. These so-called neobanks (most of them belonging to a traditional actor) appeared as disruptive competitors facing traditional and gigantic actors. Online and mobile banks gain competitive advantage from their ability to develop cheaper offers – although it should be noted that for the moment, these new entrants have yet to reach the critical size to compete properly with traditional banks.

Indeed, the technology is mature enough to offer customers a fluid experience and to do without customer advisors for basic services that make up these new players' offers. Although they did not upset the whole financial sector, online and mobile banks brought novelty to a traditional market, especially the use of new channels and a more customer-focused vision. Taking customers into account when developing an offer has become much more important in such a fast-moving market. In fact, customers' expectations are now higher; they expect to get the best service at the right price, something that is targeted by new entrants. At the same time, another type of actor has also joined the financial game in recent years: fintechs. These startups, pure-players surfing on financial technology expertise, have developed tremendously in the retail banking landscape, bringing technological blocks and new use cases. Contrary to online banks, they do not aim at answering every customer's needs in terms of banking activities; instead they focus on one part of the value chain.

Thus, online banks, fintechs and mobile banks are changing everyday retail banking, making it easier, quicker and cheaper (no account fees, free debit card, P2P money transfer and so on) in order to enhance the customer relationship. Nevertheless, the traditional model has not yet transformed to face this new competition. The main business activities for retail banking are aimed at collecting and lending money, both driven by interest rate fluctuation with the difference resulting in profit or loss for the bank – and for centuries, the trends have been highly favorable for banks. Whatever the distribution channel, traditional, online and mobile banks followed the same model. Innovative services flourished in the market but there were still no real threats hanging over the retail banking model.

Now, as newcomers have integrated into the traditional market, a new tendency is emerging: Open Banking. In this sector, where data security and confidentiality are essential criteria, Open Banking began a transition to open up banks' information systems and facilitate data-sharing among actors. This dynamic is encouraged by regulation and the implementation of Payment Services Directive 2 (PSD2), requiring banks to share their data with third parties.

PSD2's goal is to encourage competition on payment services by separating the roles of the different players, offering a better and more personalized service to customers and closely fitting to their needs and expectations.

By opening banking services, customers become the central piece of the whole process, which implies that traditional banks must rethink their model. As this study will show, we have identified two emerging models:

- Bank as a Platform: the bank maintains the privileged relationship it has with its customers and enriches its value proposition by using services from other players.
- Bank as a Service: the bank offers its value-added services to other players with the aim of increasing the flows and amortizing its IT investments at the risk of losing the relationship with its customers.

Sharing clients' data comes as a boost for newcomers familiar with the use of data, and aims at levelling the playing field with historical actors, promoting further competition. Startups and new banks have already demonstrated their capacity to develop innovative services to respond to, and even anticipate, customers' needs. With the opening up of information systems and associated data-sharing among actors, it will be easier for them to target their offers and create new products and services to increase customer satisfaction.

There is no doubt that for traditional actors, Open Banking will generate higher competition. Fintechs, but also GAFAs and other e-tailers, experts in client satisfaction in their sector, could enter the retail banking market with their best practices and offer banking products. However, while their advantage is decreasing, traditional banks have kept the lead until now thanks to their important customer base, brand recognition, expertise and even the confidence of customers (despite the economic crisis). It seems worthwhile for these big actors to enter the Open Banking game and benefit from this change.

The time is up for traditional retail banking actors to develop the most appropriate business strategy and to revise their business model by conceptualizing products and services as customer-centric rather than product-centric.

A transitioning market conducive to change

The golden age of retail banks seems to be well past. Traditional players have been facing very low interest rates for several successive years, allowing only for low margins and disruption of their basic business model. This comes on top of increasingly stringent regulation in terms of risk and compliance, with which banks must comply. The impact of the last financial crisis has resulted in new regulatory constraints, particularly in terms of quality of equity and risk management. Thus, since 2008, European banks have generally faced a hard point regarding their profitability: it has become very difficult for them to generate return on equity. In order to counterbalance this trend of very low margins and their lack of profitability, banks have sought to boost their sources of income and have tended to increase their account-keeping fees as well as other banking fees. This had the effect of intensifying the tensions around customer satisfaction, which is already particularly low in the sector.

It is in this fertile context that fintechs have found their playground: by bringing new technologies and new uses to a historically traditional sector. The European regulatory environment, favorable to innovation and digital technology, largely contributed to the emergence of these many startups, ready to disrupt the financial field.

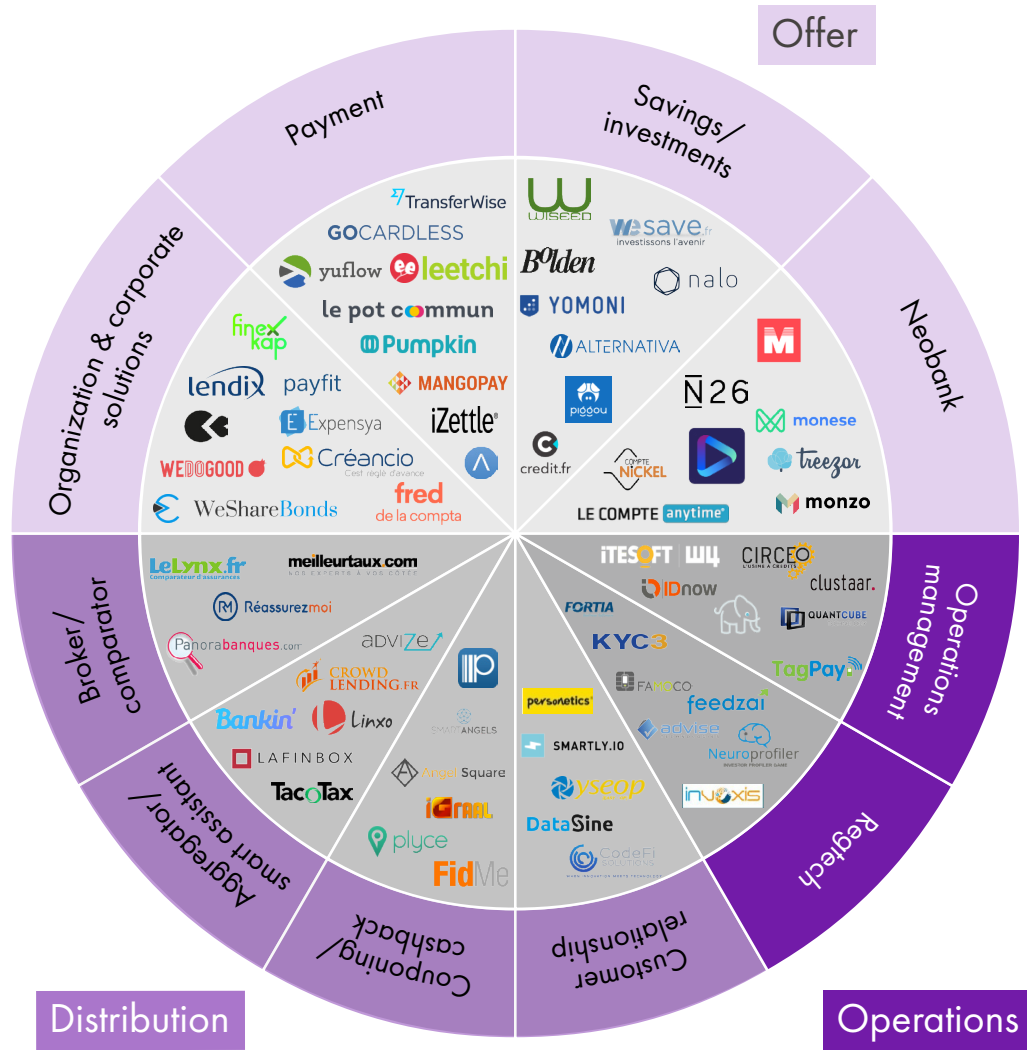
Following various feedbacks in innovation around financial services, Wavestone is convinced that the innovations most likely to succeed are those that:

- exploit customer data: they have the potential to better meet the ever-higher expectations of consumers in terms of product offers and innovative services
- are easy to deploy on multiple platforms and channels: innovation can be used by several actors, including traditional banks that want to improve the customer experience on their mobile application, for example
- do not require too much startup capital.

To address this booming and innovative phenomenon, Wavestone has set up a competitive intelligence through its observation laboratory in order to develop a structured and in-depth vision of the impact of fintechs on the market. A radar created from a 300-fintech database is continually enriched to offer a panorama of the fintech market according to their core value propositions.

Far from aiming to cover all retail bank activities, the essence of fintechs is to rethink customer experience and, in doing so, to bring innovative services on one end of the banking activities value chain. Wavestone’s competitive intelligence maps the 300 players observed around 10 segments related to their value proposition and on which these new players could challenge the services entirely or in part (for example, payment, savings, customer relationship or aggregation).

Radar Fintech – Actors*



*Sample of solutions available in France

Indeed, fintechs tend to focus solely on niches, with the ultimate goal of improving customer experience at the value chain level: either the service brought is tangible and directly visible to the customer (front-end feature), or at the service of an application and IS-implemented (back-end feature). In payments for instance, Lydia and Pumpkin have redesigned peer-to-peer bank transfers by making payment via mobile more accessible (smartphones become credit cards). These two players created their own apps dedicated to their service and used directly by the end customer: it is a front-end service. Conversely, many fintechs offer technological bricks directly to traditional actors to enable them to improve customer experience on their activities. These are mostly unknown by the general public. For example, Personetics offers a predictive interaction solution to financial institutions to provide a personalized customer experience based on artificial intelligence, predictive analysis and automated learning technologies. In the eyes of the final customer, the bank better understands their needs and responds better to their expectations. Since he does not detect the technological brick brought by the fintech, Personetics is a back-end service.

These pioneers in financial market innovation have therefore opted for the improvement of customer relationships, which is one part of banking value chain activities, and focused on customers' new expectations: benefiting from a faster, simpler and cheaper service. Our radars, as well as Wavestone surveys, have enabled us to identify the following engines for a successful customer experience:

- Quick and easy subscription process
- Quick decision making
- Online platform simplicity and ergonomics.

Although the mass arrival of fintechs in the market has been very much followed and almost feared by traditional actors, it has not significantly affected their market share. Because of the singularity of the activities handled by these pure-players, customers encounter a very specific and diversified offer, which in turn generates a more A la carte usage. Depending on their needs or the moment in their life, customers can now find players in the market that meet their expectations perfectly. However, a large majority of these customers will simultaneously keep at least one traditional bank. Historical actors are facing a more volatile clientele, whose usage of fintechs in a more or less intense and regular way will precipitate the abandoning of certain activities initially endorsed by traditional banks.

In order to address these customizable choices of actors, a new development has arisen as a result of the initial growth of fintechs. Thanks to the same growth factors and added to the contribution of recent services, uses and technologies, new mobile banking players are emerging today. Unlike fintechs, these actors offer no more service improvements on parts of the banking value chain, but rather an actual bank offer. Again, these mobile banks do not cover the entire perimeter of historical banks but generally offer simple products for daily banking, savings and credit. The priority is no longer product-based but rather customer-based via customer experience on one hand and user interface on the other. For example, most of these banks have built simplified, fluid and accelerated customer journeys with personalized services, offering very competitive fees.

Historically well-established in their ecosystems, traditional banks have experienced some turmoil in the last 10 years. Hardened regulation, a low-flourishing economy, negatively-impacting interest rates and the rapid and wide appearance of disruptive competitors, are challenging the status quo. Banks are now operating in a complex environment on which they must get a grip in order to maintain their positions. Time for adjustment is already running out because of the ever-greater impact of regulation in encouraging innovation. As a matter of fact, the recent implementation of PSD2, binding banks to share customer data with third parties, is strengthening competition. In addition to new services and new players, Open Banking allows the development of new business models in retail banking.

PSD2: A regulation strengthening security and stimulating competition

Background trends within the payment industry

The payments market, historically governed by credit institutions, has undergone major changes with PSD1 and the opening of the market to new players. Thus, fintechs appeared to rethink banking services and offer the possibility of performing payment services more quickly and at a competitive cost.

European public authorities have confirmed the need to integrate these fintechs deeply in the banking ecosystem in the long run with the emergence of a new regulatory framework: Payment Services Directive 2 (PSD2).

The establishment of a new regulatory framework follows various developments in the banking sector:

- Lack of competition preventing a real enhancement of services offered by traditional banks, due to market dominance by the same historical actors for decades – for example, the big five banks in the UK.
- Licensed banks finding it difficult to offer breakthrough innovations, essentially caused by a silted organization, legacy systems and technical debt.
- The emergence of new players in the banking industry: fintechs and neobanks which, thanks to innovative technology, offer value-added financial services directly to customers.
- Evolving customer behavior and needs (declining cash usage, desire to aggregate services on a single media, security, mobility, instantaneity).
- The emergence of technological developments: mobile, e-wallets, cryptocurrency, AI, biometrics, cybersecurity.
- The rise of e-commerce has fostered the need to regulate the status of payment services (French e-commerce generated €81.7 billion in 2018 according to a French e-commerce Federation study published in 2018) and the need to secure transactions (credit card fraud in France cost €399 million euros in 2016 according to the annual report from *L'observatoire de la sécurité des moyens de paiement*).

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Background: Why a revised payment services directive?

PSD2 follows a European regulation adopted in 2007, the Payment Services Directive 1 (PSD1). It aims at regulating payment services and payment services providers in all member states of the European Union (EU) and the European Economic Area (EEA).

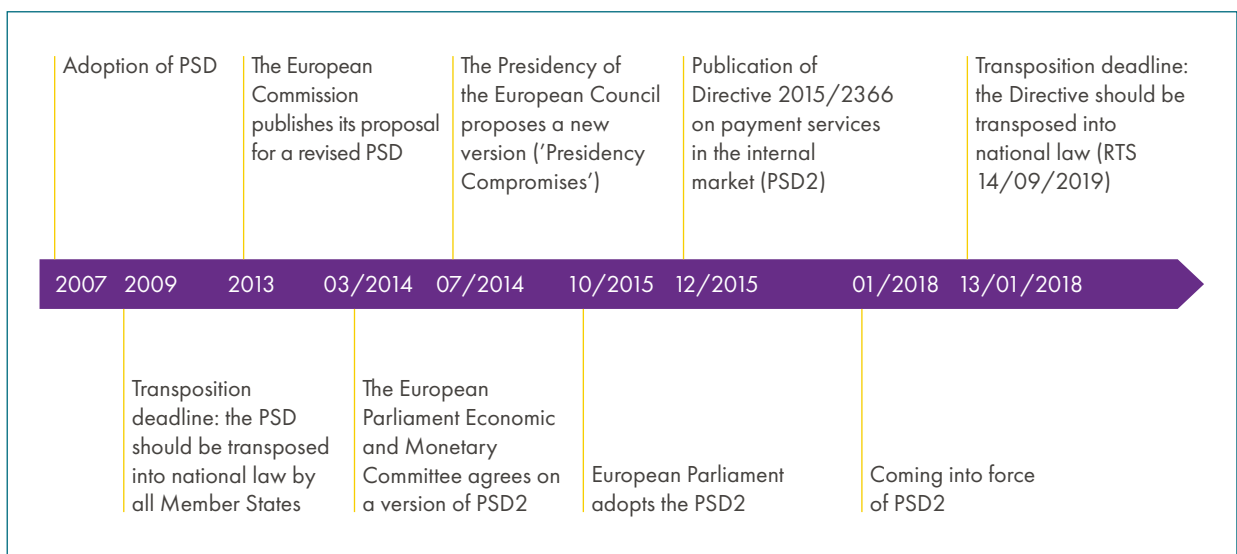
The main contributions of PSD1 are:

- the establishment of a single European market for payments
- acceleration of the development of SEPA as a single euro payment area to facilitate payment execution
- the introduction of payment services provider status allowing non-bank companies to carry out financial transactions.

Since PSD1, the digitalization of the European economy has been progressing steadily. New services provided by new players have emerged in the dematerialized payment market. This generation of companies, called fintechs, is taking advantage of the acceleration of technological developments to offer consumers new services, lower prices and more generally, a better customer experience.

As these new players were outside the scope of PSD1 and therefore not regulated at the EU level, an update of the directive quickly became necessary.

Adopted in 2015, PSD2 entered into force in January 2018. It broadens the scope of PSD1 and paves the way for major changes in the banking market and more specifically in the payments market.



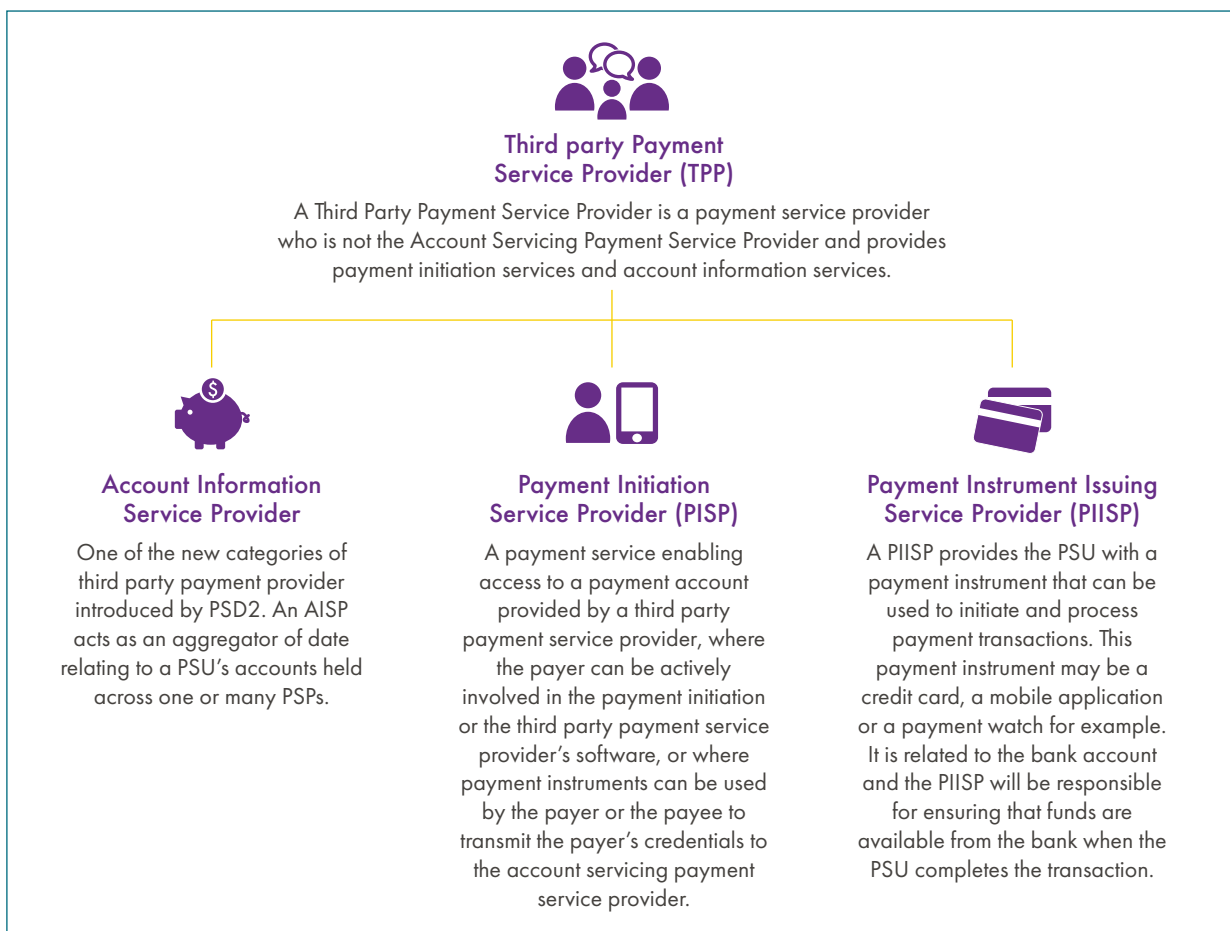
Dual purpose of PSD2

According to the European Commission, the objective of PSD2 is to “foster innovation, competition and efficiency” in the market and more precisely, “modernize payment services in Europe for the benefit of both consumers and businesses, in order to keep pace with the market in fast evolution.”

As expressed by the European Commission, the primary objective of PSD2 is to contribute to a more efficient and integrated European payments market. To this end, it aims at ensuring fair competition between the different payment service providers, including new players.

PSD2 paves the way for new account information and payment initiation services. It innovates by creating the notion of a third party provider (TPP) and three new payment service statuses:




- Account Information Service Provider (AISP)
- Payment Initiation Service Provider (PISP)
- Payment Instrument Issuing Service Provider (PIISP).



The second objective expressed by the European Commission is safety and consumer protection. PSD2 introduces new security requirements for the initiation and processing of electronic payments and the protection of consumers' financial data.

Article 97 of PSD2 requires payment service providers to authenticate a user when he accesses an online payment account, when he initiates an electronic payment transaction, or when he carries out any action through a remote channel that may imply a risk of payment fraud. The security of internet payments is increased by using Strong Customer Authentication (SCA).

SCA means that two or more of the following independent elements are used:

		
Something you know	Something you own	Something you are
Password Passphrase PIN number Sequence Secret facts	Mobile phone Wearable Smart card Token Badge	Fingerprint Facial features Voice patterns Iris format DNA signature

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PSD2: A significant compliance effort for licensed banks

Opening up data to third parties

PSD2 defines a legal and regulatory framework to enable third party providers (TPPs), who have not been regulated until now, to continue their activities, i.e. having access to a customer's payment accounts via APIs.

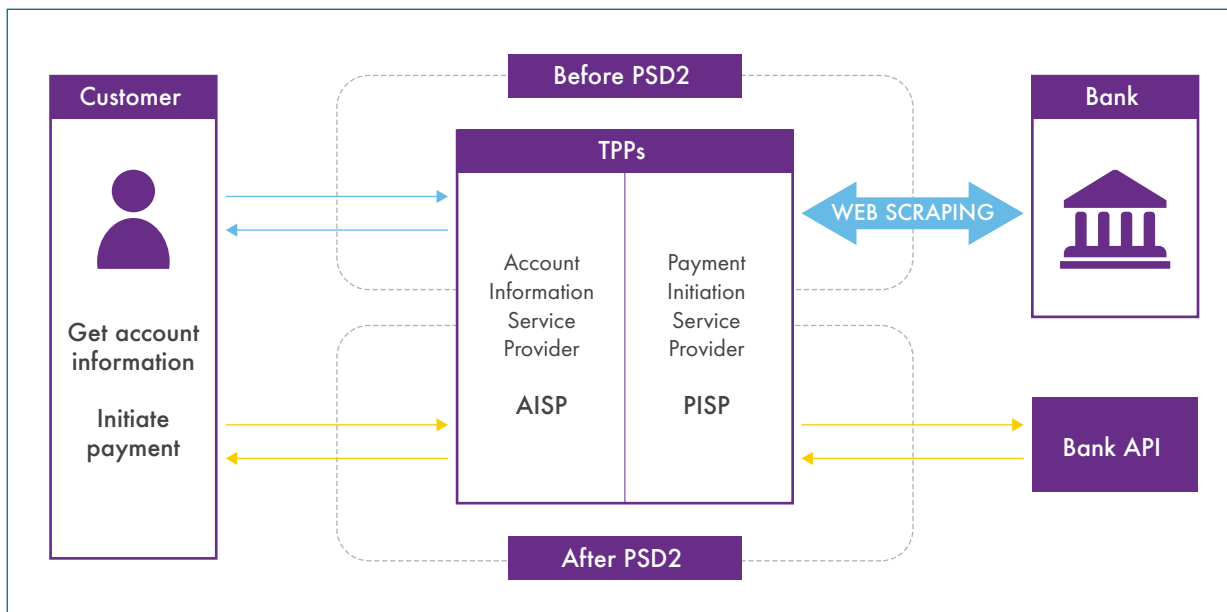
Defining the status, rights and duties of TPPs represent an important part of PSD2. Before the directive, these entities did not have access to bank data. In order to practice their activities, TPPs "requested" bank access codes from users and connected through robots to their bank accounts in order to retrieve adequate information for the execution of their services. This "web scraping" process prevents banks from differentiating between current customers and TPPs.

The European Commission has considered the criticism of the European Banking Authority, which wanted to prohibit, for security purposes, the use of web scraping to extract customer data. Payment and account aggregation TPPs will no longer be able to use the process of web scraping from September 2019.

Regarding the regulatory technical standards of PSD2, banks will have to set up a communication channel that allows TPPs to access the data they need. From now on, banks have to open their information systems to provide TPPs with a consolidated view of account information services.

Thus, banks will be forced to allow third parties to "connect" to their information systems, thanks to APIs. An API provides access to information or services in a company's information system and makes software applications management possible. While invisible to customers, APIs are crucial to enhance and improve communication between programs. They are the key to an interconnected world where any company can open its business functions to other businesses.

Therefore, new players are now registered, licensed and regulated at EU level. They access the consumers' payment accounts to get an overview of their various payment accounts (AISP) and to make payments on their behalf (PISP). PSD2 gives these new players access to the account (data and payments) through an API.



Since PSD2 defines a regulatory framework to make banks open their information systems through APIs, the challenge for traditional players is to take advantage of regulatory requirements and to remain competitive against fintechs' agility.

Beyond the challenges of the directive, an API strategy promotes internal digital transformation. APIs have become the new distribution channels for banks to open their business and to integrate the new area of Open Banking. Banks have the opportunity to enhance their activities and to take advantage of the collaboration with TPPs in order to find new business models based on innovative technologies. In order to achieve this, banks will have to "ensure secure and standardized communication" by adapting their online banking interface or by creating a specific interface (an API).

Otherwise, aggregators and payment providers will have to continue to access data by web scraping using the customer's access passwords. Not only is this not ideal from an IT security point of view, but also tolerance will be limited in time (until September 2019) and closely monitored by the regulator.

Furthermore, customers will have to consent to the access, use and processing of any data by the TPPs. In fact, PSD2 prohibits TPPs from accessing any data in the absence of explicit authorization through strong authentication from customers.

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Consent management and synergies with GDPR

PSD2 and the General Data Protection Regulation (GDPR) are two major reforms of 2018.

At first sight, the two regulations seem to support conflicting philosophies and objectives:

- PSD2 advocates for the opening of banking information systems to account aggregators and payment initiators: banks hold data whose sharing is essential to stimulate competition. There is a clear desire to open the sector to new players. We are witnessing an opposition between these new players – fintechs – and banks whose main challenge is to keep hold of client banking data.
- GDPR imposes a strict framework on companies processing the personal data of European customers: the customer must have control over what is done with his or her personal data.

How can the two regulations be reconciled? The key notion here is user consent.

Article 6 of GDPR deals with the lawfulness of the processing of personal data. It states that it shall be legal only if, and to the extent that, at least one of the following applies:

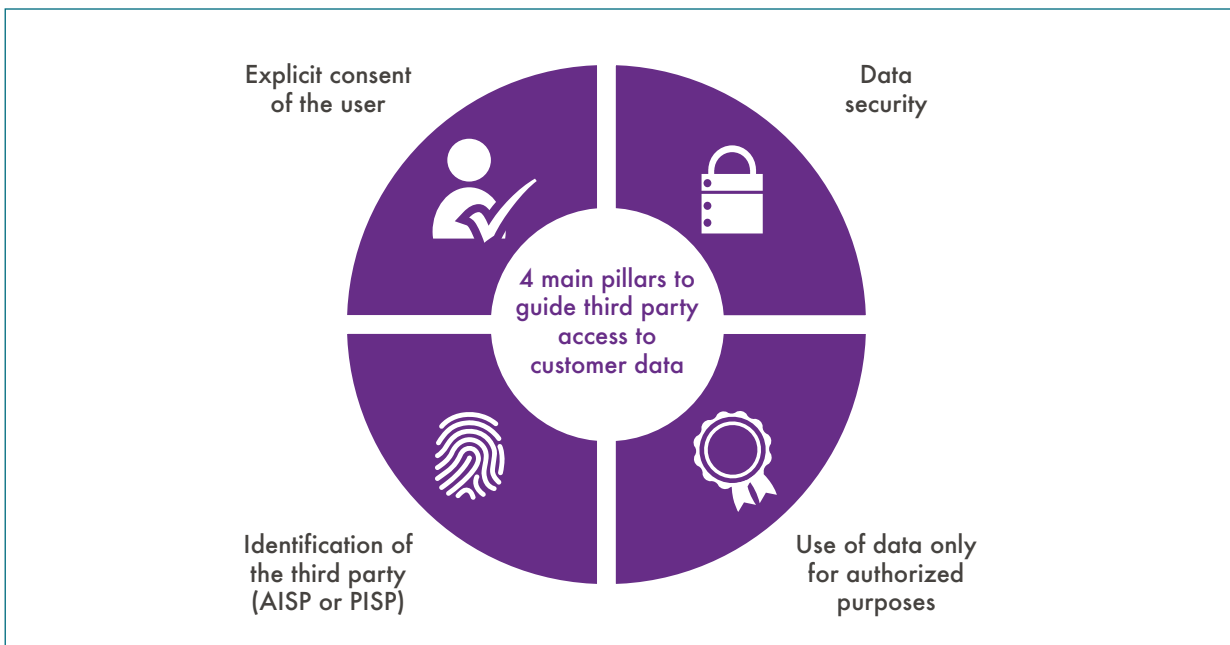
- a. the data subject has given consent to the processing of his or her personal data for one or more specific purposes
- b. processing is necessary for the performance of a contract to which the data subject is party or in order to take steps at the request of the data subject prior to entering into a contract
- c. processing is necessary for compliance with a legal obligation to which the controller is subject
- d. processing is necessary in order to protect the vital interests of the data subject or of another natural person
- e. processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller
- f. processing is necessary for the purposes of the legitimate interests pursued by the controller or by a third party, except where such interests are overridden by the interests or fundamental rights and freedoms of the data subject which require protection of personal data, in particular when the data subject is a child.

Article 94 of PSD2 on data protection requires that *“Payment service providers shall only access, process and retain personal data necessary for the provision of their payment services, with the explicit consent of the payment service user.”*

This article demands an explicit contractual consent between the user and the payment service provider. By entering into a contract with a payment service provider, the user must be fully aware of the purposes for which his or her personal data will be processed and must expressly accept such a clause.

The concept of explicit consent introduced by PSD2 is an additional condition – of a contractual nature – that differs from the explicit consent of GDPR but is nevertheless compatible.

PSD2 therefore provides only for the case of explicit consent as the legal basis for the lawfulness of the processing of personal data. It therefore excludes the other five conditions listed in GDPR.



PSD2: An opportunity for banks to rethink their business model

Licensed banks' market position questioned

The implementation of PSD2 will inevitably favor the development of TPPs, which are now officially the new players in the market, with clarified status and rights. Whether for payment initiation or account information, TPPs take over a key link in the value chain: client interaction.

Consequently, three major implications stem from this likely disintermediation of licensed banks by TPPs:

1. TPPs become able to control, at least partially, customer acquisition and sales and therefore turnover generation.
2. The historical norm, that most people have a relationship with only one financial institution, taking care of all their needs, will gradually become the exception, fostering competition.
3. Client data, the most valuable asset for licensed banks, because it is essential to know clients, will progressively disappear from the banks' radars, or at least deplete. For proof, on the banks' account statements, the volume of operations labeled "Apple Pay" or "Lydia" continually increases, blinding banks to the final destination of these operations.

Do these implications mean that licensed banks will become useless for clients and/or unable to operate? This disaster scenario is not certain:

1. At the end of the day, a licensed bank's last advantage from the client's point of view is the confidence in its ability to keep their money safe. Security and trust are still a barrier that protects the current business model of licensed banks.
2. The investment capacity and financial knowhow of banks put them in a position of strength to keep innovating and retain clients.
3. Through the required APIs, PSD2 imposes a logic of partnership, data exchange and contractualization between TPPs and licensed banks, for the superior interest of the end customer.

Adaptation strategies for banks in a reshaped industry

In order to redefine their positioning on the market, licensed banks can play on two axes:

- Activities: should licensed banks extend their offering to new activities, with client interaction, such as account aggregation?
- Scope of services: should licensed banks enrich their existing services by upgrading their scope, for example with peer-to-peer payment services?

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Four different strategies can be highlighted:

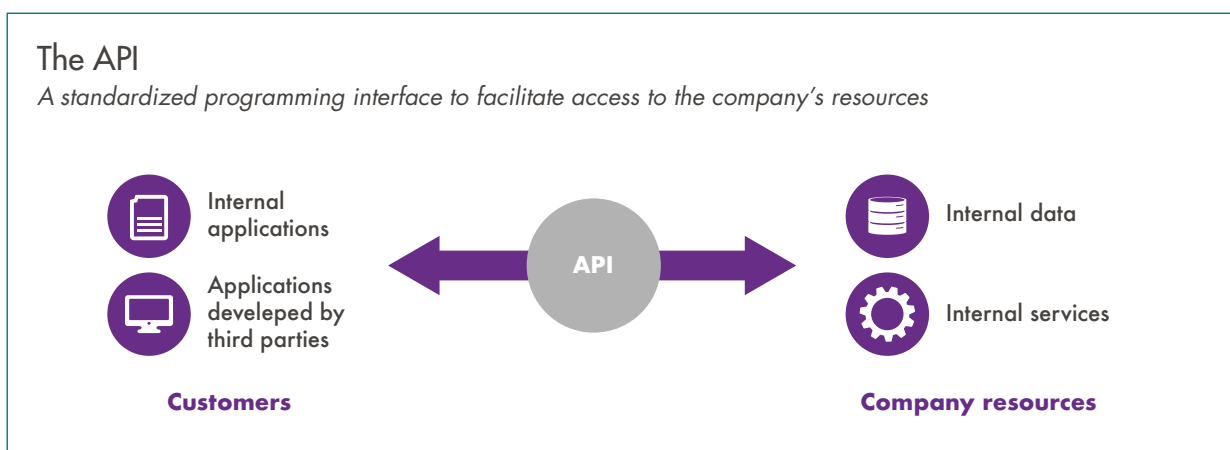
- Compliance: this minimalist approach consists of complying with PSD2 requirements only, implying in the long run a bank operating as a “factory” (or “commodity”) for payments, credit and account services, in turn distributed by TPPs.
- Expansion: licensed banks, in this scenario, focus on innovation for their traditional services to stand out from the competition, but rely on TPPs for client interaction through public and private APIs.
- Competition: licensed banks propose solutions equivalent to those of TPPs in order to stay in touch with clients and keep on collecting data.
- Transformation: in this case, banks broaden both their services to attract clients and their activities to remain master of the value chain.

Taking advantage of PSD2 as a licensed bank means taking the Open Banking pathway, which means collaborative initiatives among financial institutions, and access and transparency for customers. Currently, banks aren’t taking full advantage of Open Banking for fear of becoming commoditized or disintermediated. This failure to incorporate an Open Banking approach, however, may become the exact reason why they are being disintermediated by TPPs.

Issues and development of APIs

As mentioned earlier, in the early 2000s, banks could not foresee growth without offering their customers a website interface. At the beginning of 2010, with the development of smartphone use, banks had to adapt and launch their own mobile applications. Today and in the years to come, the API should be the key to the banks’ development and enable them to gradually open up to all the players in the financial or even non-financial ecosystem.

In this context, we cannot talk about Open Banking without addressing APIs. APIs are interfaces that allow applications developed by third parties to connect to an information system and exchange services or data. Thus, when a bank engages in the “APIzation” of its information system, it rethinks and redesigns it in order to obtain functional or business blocks and increase its agility. It will then be able to propose APIs, allowing third parties to connect to and exploit all or part of its information system.



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There are currently no standards used by the financial institutions for APIs. Even PSD2, in its promotion of APIs for aggregators and payment services, does not recommend the use of specific technical standards. This implies that some actors can make their APIs available according to the technical standards and characteristics of their own information system. However, some organizations are working on common standards, such as the Open Banking organization in the United Kingdom, which includes account providers such as Barclays, HSBC, Revolut or Santander UK and TPPs such as Budget Insight, Credit Ladder, Digital Moneybox or Ipagoo. This organization requires different standards from third parties or data providers to use APIs: for example, the OAuth2 protocol for authentication.

APIs are not interfaces exclusively used in the banking industry. They have been developed for many years in different fields and industries. Some companies have even based their business model on the use of these interfaces. This is the case with the transport company Uber, which uses an API to connect to the Google Maps location service. The localization of its customers and drivers allows the company to identify drivers close to the address at which the customer request is initiated and therefore to put them in relation. Similarly, in the air transport industry, price comparison sites such as Expedia rely on APIs to connect to the fare schedules of the various airlines operating on a selection of flights. It is only once the data has been collected that the comparators can offer the best prices to their customers.

The different types of APIs

We differentiate several different types of APIs:

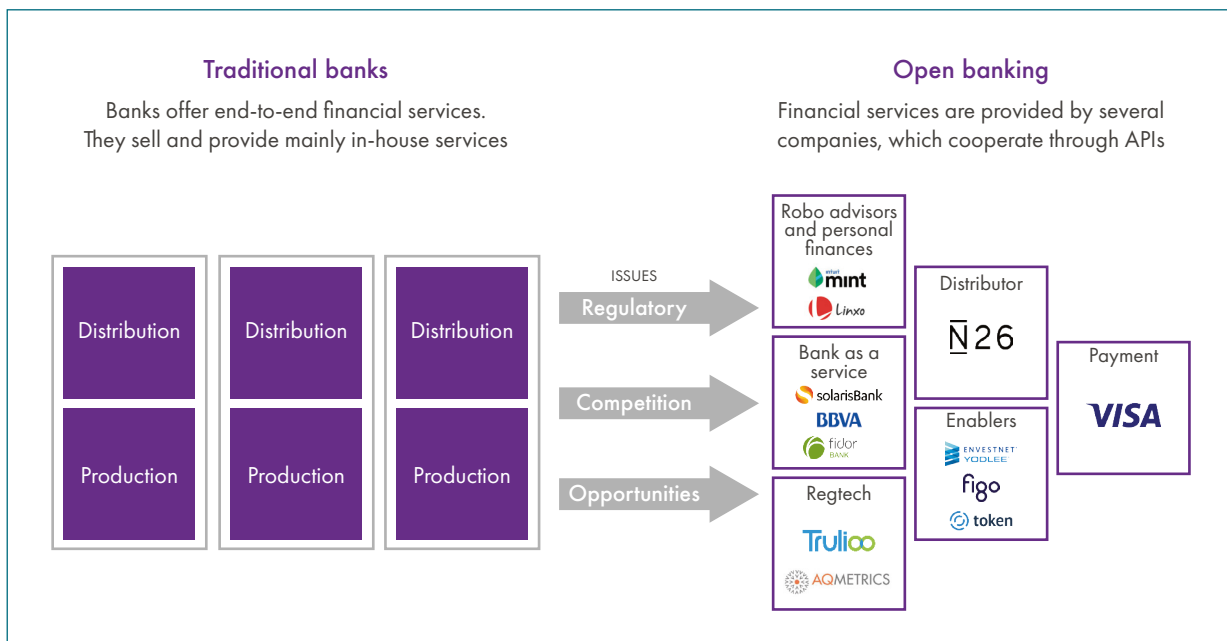
Private APIs: these APIs are only available internally. They allow the various applications of the bank to connect to the central information system to retrieve a set of data. Let's take the example of a mobile application. When a customer connects to access his or her banking information such as account balances, equipment or current credits, the application connects to the bank's central information system using APIs available internally. We refer to private APIs because the exchange of data and the use of APIs is done internally and does not involve the intervention of third parties such as fintechs.

Public APIs: the Google Maps API is the perfect example of a public API which allows the exchange of usually public and not particularly sensitive data. Any third party can use a public API without first validating access to the API portal. In France, some institutions provide public APIs to developers. This is the case with the French government, which has launched a portal allowing the use of APIs for data sets such as real-time indicators.

Open APIs: open APIs are made available to third parties via specific portals developed by banks with access guaranteed under certain conditions. Third parties wishing to access these APIs must comply with a set of IT, security or regulatory standards imposed by banking institutions. Only then can third parties work on developing their solutions with the bank's APIs.

Information system APIzation, a way to achieve Open Banking

In the banking sector, considering the value of APIs and their potential impact on revenues and the information system, they should not only be the property of the IT system department, but should rather be thought of in a more global way by the various banking businesses. The APIzation of the bank's information system is not a subject backed by Open Banking, it must be defined as part of the bank's strategic approach to distribution models and is a means of integrating into an Open Banking philosophy. Before addressing the different models associated with Open Banking, it is important to reclarify certain principles. Open Banking is the transformation from a model where the bank is the sole owner of its data, products, services and distribution, to a model where data can be shared, production and distribution delegated to third parties.



Traditionally, banks have a highly vertically integrated organization and a business model focused on the products and services they develop. They create their own savings or credit solutions in order to distribute them using their branch network or digital channels. With Open Banking we are witnessing a real paradigm shift as business becomes customer-centric and distribution and production are increasingly outsourced.

Besides, banks are nowadays facing real profitability problems, prompting them to find new sources of income and reduce their costs. They must therefore redesign part of their business model to take into account the evolution of customer needs and expectations.

At the same time, a race to modernization with the various players in the banking ecosystem, such as fintechs, GAFAs, neobanks and other startups, is underway. We notice that these players are often more flexible and agile, allowing them to quickly deliver highly personalized products and services with an improved user experience. The impact can therefore be significant for traditional banks, which see the risk of disintermediation increasing every day.

To address these threats, banks have already undertaken major projects to modernize and open up their information systems. For European banks, the first projects related to Open Banking have already begun as part of efforts to comply with the PSD2 regulations. Nevertheless, the development of APIs is not limited to the regulatory aspect since they are continuing their efforts to invest in APIs in other businesses. Banks need to consider their API and Open Banking approaches based on factors such as the IT legacy, the current level of IT openness, internal IT skills, the company's ability to ensure an adequate level of security for exchanges, the company's culture, or even possible organizational impacts.

We are now seeing several Open Banking models emerging, two of which seem to have a significant impact on the bank's business model. The first model, Bank as a Service, sees the bank monetizing access to its information system via APIs and accepting the risk of losing its privileged relationship with its customers. The second model is Bank as a Platform, in which the bank uses APIs from third parties to enrich its offer and continue to develop the customer relationship.

The Bank as a Service Model

In a Bank as a Service approach, banks opt to expose their information system through APIs accessible to third-party companies in the financial and non-financial sectors. These companies, or third parties, may be fintechs, developers, competitors or even other startups wishing to access the bank's data, products, business or IT services in order to develop their own solutions.

In this model, the bank would rather take the role of a back office or a production plant, delegating a large part of customer relations and distribution to third parties. Indeed, as mentioned above, we are now seeing a trend where fintech players are attracting part of the customer base by offering a more complete customer experience in line with heterogeneous needs. In this context, the bank could then focus on its core business and other areas such as the opening of its information system, the management and creation of value based on the data it holds, the security of exchanges or the issues of strong authentication and compliance with new regulations.

Banks most often provide an API portal for third parties. In order to be able to use its APIs, third parties must comply with specific technical and regulatory standards required by the banks.

Some banks have already embarked on Bank as a Service. This is the case of the Spanish bank BBVA which, after offering a first open API portal on the Spanish market as part of PSD2, has developed a new portal on the American market. In this portal, the Spanish bank makes APIs available to third parties so that they can benefit from the data, products and services available and in line with their needs. Nevertheless, in order to access this open platform, and to use the open APIs, third parties must comply with BBVA's compliance, security and authentication standards. It is only once these requirements have been validated that third parties will be able to connect to the core banking system and collect the data necessary for the development of their solutions. BBVA has also integrated a test environment directly into its portal to allow developers to design and test the functionality of their solutions before they go into production. In providing these services, the bank seems to accept the risk of disintermediation, assuming that customer disintermediation should not be a long-term problem for the bank as it allows it to find new sources of revenue and improve its profitability.

In the French market, BNP Paribas has created its Open Bank Project platform to enable third parties to connect and test their application with its APIs. This portal is now a testing environment and the objective seems to be to attract profiles that know how to innovate and to see what these profiles can develop. The APIs made available cover payments, banking equipment and other less confidential data such as the location of ATMs, branch schedules and the products and services offered by BNP Paribas.

Société Générale recently embraced the Bank as a Service model with the acquisition of Treezor, a French fintech which proposes a Bank as a Service platform. This fintech has developed a banking and payment services platform which it provides to its customers (merchants, collaborative platforms, credit institutions and neobanks) under a white-label system through APIs.

Finally, the British bank Barclays has also started experimenting with the Bank as a Service model. On the same principle as BNP Paribas, Barclays offers third parties access to the Barclays API Labs where they can find APIs under development.

The Bank as a Platform model

In the Bank as a Platform approach, the bank decides to place itself at the heart of an ecosystem of financial and non-financial players, thus maintaining its central role and wishing to remain the key point of contact for its clients. Unlike a Bank as a Service model, the bank seems to reject the disintermediation of customer relations and rather chooses to enrich its offer by using the APIs of fintechs and other players from financial

and non-financial sectors. Rather than focusing on the distribution of its own products and services, the bank will aggregate complementary offers from the manufacturing plants of selected suppliers. It could thus offer the most competitive offer and the most adapted to the heterogeneous needs of its customers. This model would allow banks to complete their offer at a lower cost and with a reduced time to market. To do so, the bank must rely on the APIs of its partners, subsidiaries or other companies in which it has made investments.

Let's take the example of real estate credit, a profitable product for the bank and a very important step in the client's life. In a Bank as a Platform model, the bank does not limit itself to the distribution of the real estate credit offer. It will position itself upstream by using the API of its partner specialized in real estate and property search. Once the property has been acquired through the loan granted by the bank, it will be able to continue its accompaniment by offering services related to the client's moving in and installation. This orientation towards non-financial services allows banks to offer a complete experience to their customers where they position themselves upstream and downstream of the banking offer, even beyond their basic financial service. This is what is known as "Beyond Banking."

As mentioned above, the implementation of this model seems to be most often based on investment in or creation of partnerships with fintechs and startups. This is a real paradigm shift for banks which have culturally evolve in closed models and now must adopt an approach of openness and alliances at an accelerated pace. Whether through the acquisition of fintechs, investment through the creation of venture capital funds or by promoting the creation of startups internally, banks are gradually integrating partners with innovative and complementary solutions. They even create startup incubators that enable them to facilitate the identification of potential partners with innovative solutions.

Some banks have already tried the Bank as a Platform model. This is the case of the neobank N26, which now has a banking license and has joined forces with other partners specialized in financial services on which it is not positioned. Thus, N26 operates with other companies: Vaamo for its investment products, Clark for its insurance products and Raisin for its savings products.

In France, Société Générale has also adopted a Bank as a Platform approach. Indeed, it recently announced an agreement with the fintech Smartkarma, an online investment research platform focused on the Asian markets. Under this agreement, the French bank will provide its institutional clients with access to a new form of equity research that complies with the new MiFID II requirements.

The profitability of these models has not yet been proven

Currently, no single model really stands out in terms of economic profitability. As the trend in Open Banking is still recent, we note that although investments in this area are significant, the promotion of APIs by banks is still limited. There is not yet a real traffic monetization strategy or direct revenue related to APIs. Moreover, banks offering API portals do so rather according to a logic of attracting innovative profiles in a testing environment, and not in a production environment. The stake is more to make APIs available and to examine what developers can produce. However, European banks, motivated by the need to follow the Open Banking trend and fearing being cut out of the emerging ecosystem, remain particularly active.

When we analyze the different initiatives of these banks, we notice that they do not choose an exclusive model. Indeed, although the Bank as a Service system may lead to new sources of revenue and lower costs, it seems unlikely that banks will accept full disintermediation with their customers. We can therefore expect that in a mid- to long-term vision, banks will continue the shift towards a Bank as a Service approach while maintaining control over distribution and increasing investments and partnerships. We then talk about mixed-model or mixed-strategy. This approach should allow them to continue to enrich their offers and provide highly personalized services to all their customer segments: private individuals, businesses, corporations and institutions.

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