

PAYMENT SERVICES DIRECTIVE 2 - PSD2

**FROM DUTY TO
OPPORTUNITY FOR A NEW
OPEN BANKING MODEL**

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EXECUTIVE SUMMARY

On November 25, 2015 the European Parliament and the Council of the European Union issued the PSD2 (Revised Payment Services Directive), legislation aimed at improving Community rules in force regarding electronic payments, taking into consideration emerging and innovative payment services.

The directive sets out a clear and comprehensive set of rules that apply both to traditional financial institutions, and to innovative payment services providers. These rules aim to ensure that such players are able to compete fairly, leading to greater efficiency and transparency of payment services and consequently strengthening consumer confidence in the market.

The PSD2 directive, for example, enables bank customers to use third party services to manage their financial information and to process payments. In other words, with the customer's consent, other players (other than the customer's Bank) will be able to offer services previously only offered by Banks. This means that, in the near future, it will be possible to use Facebook or Google to pay bills, transfer money between friends and analyse expenses, while keeping the money in your current account.

Banks will be required to provide third parties with access to their customers' accounts. This will allow new players to provide services on the basis of the data and infrastructures offered by Banks, acting as: AISPs (Account Information Service Provider) and PSIPs (Payment Initiation Service Provider). The new Directive will revamp the current scenario, leading to competition not only between banks, but also between new players outside the banking sector. PSD2 will substantially change the payments value chain, the use of account related information, the business models considered profitable up until now and consumer expectations.

It is important for Banks to identify the project approach to adopt as part of this framework, right from the outset. Financial institutions have two choices ahead of them: wait for regulatory and market changes to take place or anticipate them, interpreting the directive as an opportunity to develop their business. Reply partners with Banks to help them capitalise on the opportunities offered by the PSD2 and is able to offer several business opportunities that can be integrated as part of sustainable use cases.

MARKET FRAMEWORK

OVERVIEW OF THE DIGITAL PAYMENTS MARKET

The range of products and services offered by the digital payments market is divided into multiple dimensions, subject to constant change. The signals associated with the inevitable development of the market originate from a number of factors including:

- the progressive IT evolution which has made available mass market services enabling technologies, with the rapid spread of mobile devices (smartphones and tablets);
- a range of different payment tools made available to users, which have increased cash alternatives, from cards and current accounts to cryptocurrencies (e.g. Bitcoin);
- different payment use cases that have increased the user's shopping opportunities, from in-store payments to e-commerce and P2P (Person to Person) / P2B (Person to Business) / P2G (Person to Government) payments;
- new international players, positioned as alternatives to traditional financial institutions, which have introduced new business models: telco operators (e.g. Vodafone), web companies (e.g. PayPal), over-the-top providers (e.g. Google, Samsung, Apple), fintech startups, large-scale merchants (e.g. Amazon) and social networks (e.g. Facebook and Twitter).

Faced with such a dynamic context, it has become necessary for legislators to **promote the development of digital payments and, at the same time, to regulate the new use cases and business models** introduced by new international players, **with the arrival of the revised PSD2**. Financial institutions that have long operated in the payments sector must capitalise on the mechanisms of change set in motion in the industry which require the identification of the best ways to exploit new business opportunities.



THE REPLY SURVEY

Reply has conducted a survey to understand how Millennials¹ are reacting to the increase in innovative payment services, typically mobile, offered by fintech companies, OTT (over-the-top) providers and Banks, with the aim of replacing traditional payment cards and cash used by consumers.

In order to provide a rich and comprehensive insight into the current situation, the survey involved three European countries: Italy, the United Kingdom and Germany.

One of the key findings of the analysis concerns business opportunities offered by traditional financial institutions, namely

¹ The generation of individuals born between 1980 and 2000.

Banks, compared to the new market players. According to the survey results, Banks have ample opportunities for growth in terms of in-store and P2P digital payment solutions.

Millennials, in fact, show a strong tendency towards the use of digital payment services offered by Banks², compared to those offered by other players such as OTT providers and fintech startups.

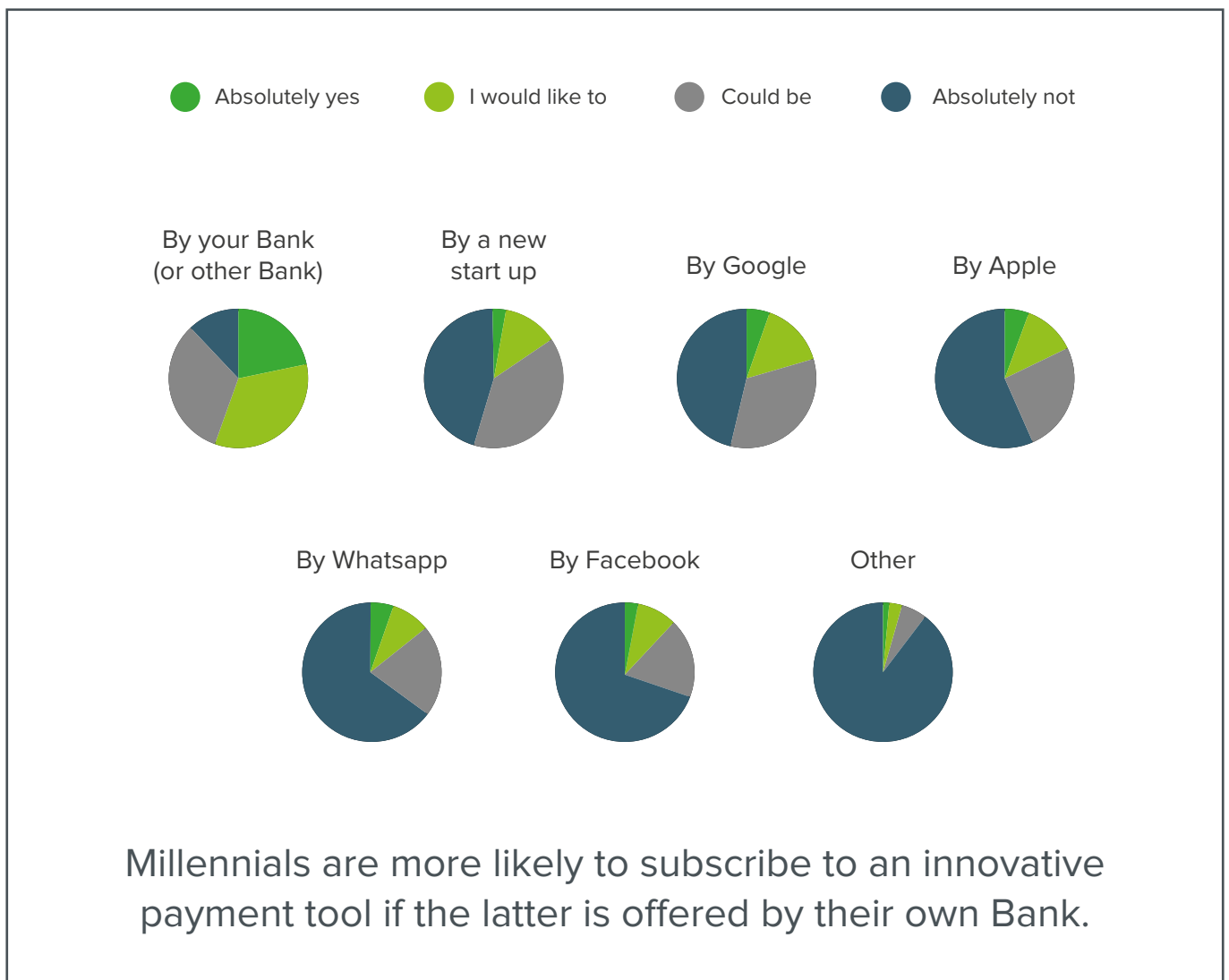


Figure 1: Propensity towards players for the adoption of new payment tools - Source: Reply Survey “European Millennials and payment systems: from cash to the new Apps”

² Source: Reply Survey “European Millennials and payment systems: from cash to the new Apps”.

THE PSD2

PSD2 (Payment Services Directive) is the latest **directive** (no. 2366) issued by the European Parliament and the Council of the European Union, directly **aimed at broadening the competitive space within the European payments market, facilitating the emergence of new tools and new players in the sector**. Competitive dynamics is thus set in motion, which will hopefully result in a better range of products and services available to final consumers in terms of quality and cost.

The new directive stems from the need to update and integrate the previous PSD, with the aim of:

- aligning the European regulatory framework, fragmented as a result of differences in implementation between the different Member States;
- regulating a market environment characterised by an increasing complexity in terms of players and digital developments;
- contributing to a more integrated and efficient European payments market, through the standardisation of infrastructure;
- increasing consumer protection.

SCOPE OF THE DIRECTIVE

The PSD2 foresees **the obligation of Banks to provide new services aimed at accessing accounts** (including payment movements and payment cards) **and making payments**. Another aspect

relates to enhancing the safeguards available to payment tool users, both in terms of security (data protection and authentication) and with regard to the new responsibilities of the payer.

These new services can be used by:

- other Banks;
- third parties (“TPP - Third Party Provider”).

TPPs will consist of institutes authorised and supervised by the Central Bank to create dashboards, apps, interfaces and various services aimed at customers of financial institutions.

RTS (REGULATORY TECHNICAL STANDARDS)

Within the scope of the PSD2, the EBA (European Banking Authority) was tasked with the mandate to prepare a set of Guidelines (GL), Implementing Technical Standards (ITS) and Regulatory Technical Standards (RTS).

On **February 23, 2017** the EBA published the **Final Draft of the RTS as relating to the Strong Customer Authentication (SCA) and Secure Communication** aspects, central to the technical issues of the PSD2 directive. This version of the RTS will be submitted to the Commission for adoption and subsequently for review by the European Parliament and the Council of the European Union, before being

published in the Official Journal of the European Union.

Within the RTS, requirements relating to the following aspects are defined:

- **security of the communication** between financial institutions and TPPs;
- **the application of strong customer authentication (SCA) schemes** in payments and for the protection of user credentials;
- **exemptions** identified with regard to the adoption of SCA;
- **protecting the confidentiality and integrity of the security credentials** of customers using the payment service.

The PSD2 introduces strong security requirements for the initiation and processing of electronic payments. Users' identity must be certified through two or more authentication tools categorised as:

- **knowledge**, something that only the user is aware of (e.g. PIN);
- **possession**, something that only the user has (e.g. token);
- **inherence**, something that only the user is (e.g. fingerprint, retinal scan, etc.).

IMPLEMENTATION TIMELINE

The PSD2 must be **implemented into Italian Legislation by January 13, 2018.**

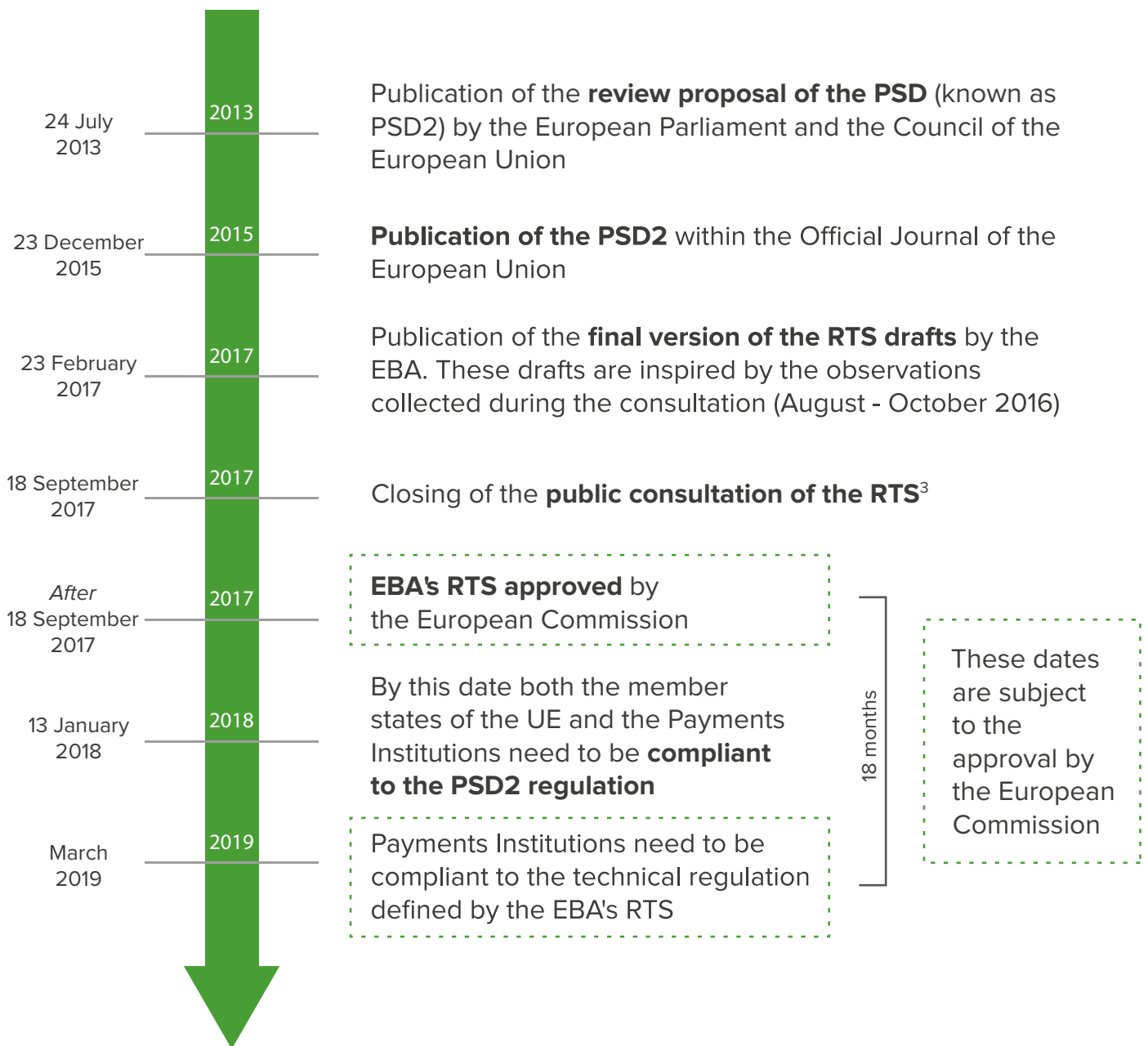


Figure 2: Roadmap for the implementation of the Directive

³ At 2nd October 2017 the final version is not yet approved

The EBA is preparing the guidelines, regulations and technical standards on transparency, data protection, security and authentication. The role of the European Banking Authority is to ensure the consistent, efficient and effective application of the new

EU directive, promoting supervisory convergence, providing opinions to the European Parliament, to the Council and to the Commission and carrying out economic analyses of the markets in order to promote the achievement of the objectives set.

NEW PLAYERS INTRODUCED BY THE DIRECTIVE

The introduction of the PSD2 changes the consolidated paradigm of the European banking market. At the customer's request, information related to transactions and account balances will be available to third parties authorised to operate as payment institutions or EMIs (Electronic Money Institution).

Moreover, the regulation introduces two new services:

- the initiation of a payment transaction (Payment Initiation) through a PISP (Payment Initiation Service Provider);
- the consultation of aggregate information of accounts held by the Bank's customers (Account Information) through an AISP (Account Information Service Provider).



PISP (PAYMENT INITIATION SERVICE PROVIDER)

A PISP is a provider which, by initiating a payment, creates a sort of software “bridge” between the merchant’s website and the customer’s current account, through which the information required to execute the transaction is exchanged. A PISP is therefore a payment initiation provider, on behalf of the customer. The introduction of PISPs enables new, simplified forms of payment resulting in the reduction of the number of players involved (e.g. disintermediation of circuits with P2B transfers from the customer’s bank account vs. traditional card payments).

AISPs (ACCOUNT INFORMATION SERVICE PROVIDER)

AISPs are service providers which can access information relating to customer’s current accounts. These providers may use the transaction data to analyse the customer’s spending behaviour, as well as to aggregate information relating to the customer’s accounts held with multiple banks into a single view. This ability will not only benefit customers, but will certainly also have a strong impact on the current business model of Banks. AISPs cannot use customer data or access their payment accounts for purposes other than those provided for by the service.

THE PSD2 WITHIN THE PAYMENTS MARKET

THE RISK OF DISINTERMEDIATION FOR BANKS

The payment interface, typically handled by the Bank or by the payment card provider, could be superseded by the entrance of third parties authorised to operate in the payments market and by the development of new services. The customer experience would thus be managed end-to-end by the provider/operator selling its products/services.

The possibility of increasing the range of services offered, improving the shopping experience, managing the end-to-end relationship and collecting behavioural data about customers explains the interest shown by over-the-top players (e.g. Google, Amazon, Facebook, etc.) towards the payments market.

It is critical that this type of activity is managed by Banks based on a structured approach. Banking and payment operators otherwise risk being disintermediated from the customer relationship and nullifying part of the investment in marketing and technology. Their responsiveness to the implementation of the PSD2 will depend on the willingness of institutions to play a key role within the payments market and on the ability to invest in new business and technological solutions.

TOWARDS A NEW OPEN BANKING MODEL

APIS

Banks will be required to open up their systems to enable data sharing and enable new, more advanced methods of payment. The Directive does not explicitly indicate the technology that banks should adopt. Notwithstanding this uncertainty, however, both financial institutions and the Fintech industry share the view that APIs represent the predominant technology to be adopted.



APIs constitute a specific architectural approach that enables Banks to extend their digital offering quickly and securely, whilst ensuring compliance with PSD2 legislation. Third-party applications are already active. These allow users to access their current accounts by logging on to the home banking service to initiate transactions or view details of debits and credits.

APIs help generate profits both by strengthening the company's core business and by identifying new business opportunities. They enable new modes of customer engagement, encouraging the development of partnerships as well as the identification and prediction of customer needs in the financial arena and beyond.

THE OPEN BANKING MODEL

The growing recognition of the monetisation opportunities offered by APIs has led to the rise of what is termed the API Economy, which favours the creation of a services ecosystem. APIs serve as a form of “digital glue” that can connect services, applications and systems – whether provided by the Bank or not – from a customer-centric perspective.

The wide variety of areas in which APIS can be applied collectively make up the Open Banking model:

- **initiation of payments:** directly from the payer’s account to the recipient/beneficiary’s account;
- **product reference data:** the provision of statistics on products and of consumer satisfaction ratings;

- **digital identity:** the customer’s use of the information about their identity held by the financial service providers;
- **payment system access:** opportunities for payment service providers (including Banks) to connect directly to the services offered;
- **data portability:** secure sharing of historic transaction records between the consumer and selected third parties.

Some of the main players in the market have already proactively set up a portal for developers as well as new APIs for creating an open banking platform. (e.g. Deutsche Bank, BBVA and Capital One Bank, etc.).



APPROCCIO PROGETTUALE

Against this background, Banks need to make a key strategic decision: whether to accept customer facing solutions developed by other operators or play a central role as first-movers and innovators. The first option is generally termed the “reactive” approach, while the second is seen as the “proactive” one.

REACTIVE

By taking an approach based on simply adapting to PSD2 requirements, the Bank would await the definitive release of the regulatory technical standards (RTSs) and only then adopt effective solutions as identified by competitors in the market. The **risk** involved with this approach is that those **competitors that have followed the first-mover route might have gained a head start that is difficult to overcome**, while also benefiting from disintermediation in respect of their clientele.

PROACTIVE

The opening up of the banking system as advocated by the Directive is intended to facilitate the creation of new services and products. The technology choices made by Banks should be made in an increasingly coordinated way and oriented towards the strategic objectives of the business. The proactive approach requires institutions to **position themselves as first movers** and innovators and to initiate projects aimed at ensuring that their software systems are truly service-oriented and **ready to support growing business needs** and the streamlining of internal processes.

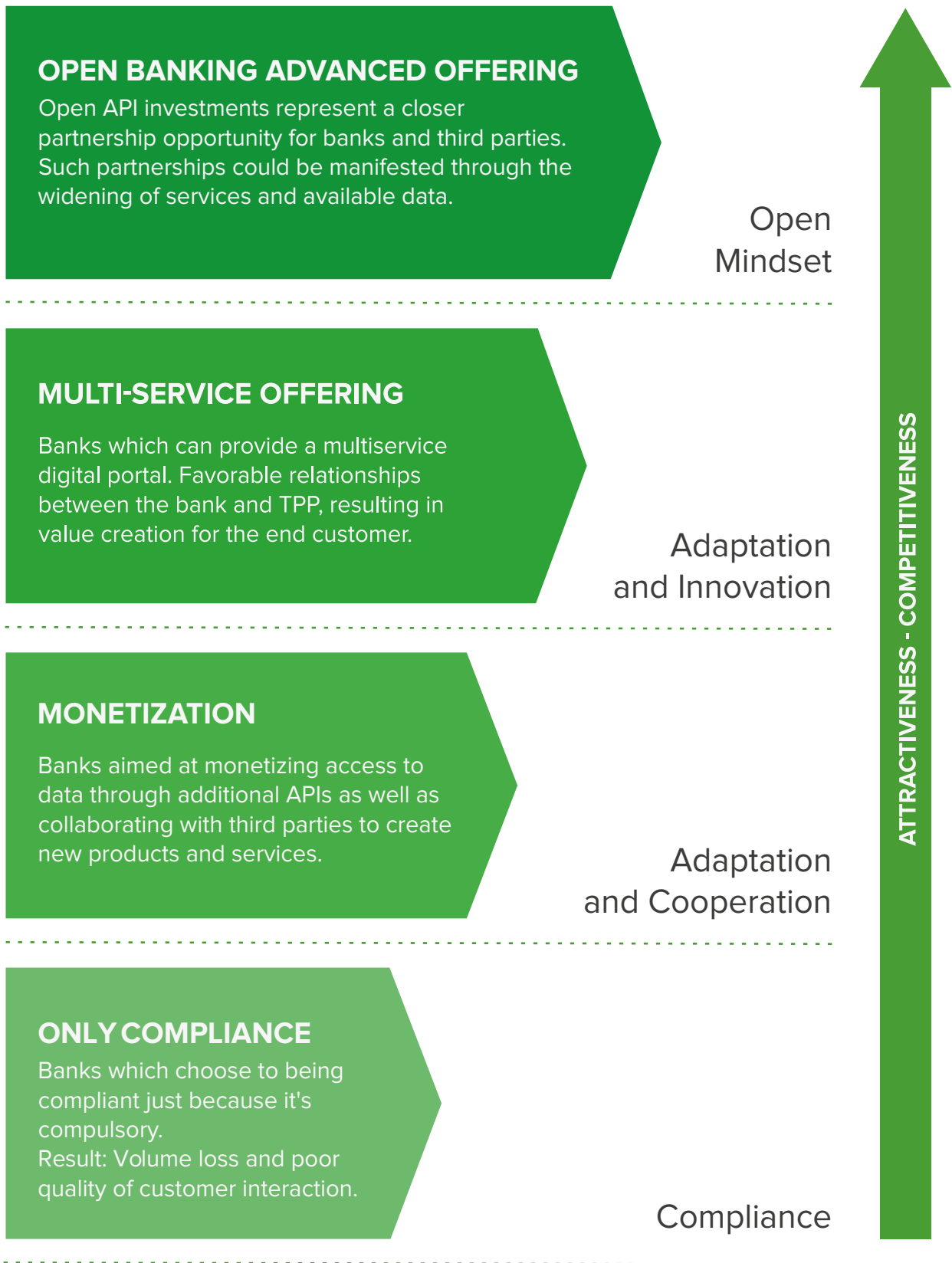


Figure 3: The roles and opportunities of PSD2

THE REPLY MODEL

BUSINESS OPPORTUNITIES

Reply offers a range of business opportunities for Banks based on their chosen target customers (i.e. B2B, B2C) and their openness to enriching their internal data with data derived from external sources:

Data provider : a Bank that only wishes to offer its data externally (in terms of straightforward PSD2 compliance) can **offer its B2B clientele** (such as other banks and merchants, etc.) **premium data**, even on top of what is required under the PSD2.

Data enrichment : **for the B2B clientele**, but drawing on data from external sources, a bank may **provide information that can usefully enhance its knowledge about the client** by exploiting internal (first- and second-party) data more efficiently, or by drawing on external data/open data sources (third-party data).

Data processing : **for the end customer**, a Bank can **offer complete and integrated multi-bank personal financial management services**, utilise its improved customer knowledge to **enhance its credit scoring and personal lending abilities** and – also importantly – to earn profits and gain information from its mobile banking and mobile payment apps.

USE CASES IN THE BANKING SECTOR

The business opportunities identified above need to be incorporated within sustainable use cases if they are to be fully exploited by the Banks.

Reply has defined two main use cases, focusing on the two new roles introduced by the Directive: those of PISP and AISP.

BUSINESS CASE: PAYMENT INITIATOR

A Bank that decides to act as a PISP offers a **single front-end from which customers can initiate a payment or other transaction**, allowing users to choose the account from which funds should be taken from among their various payment accounts.

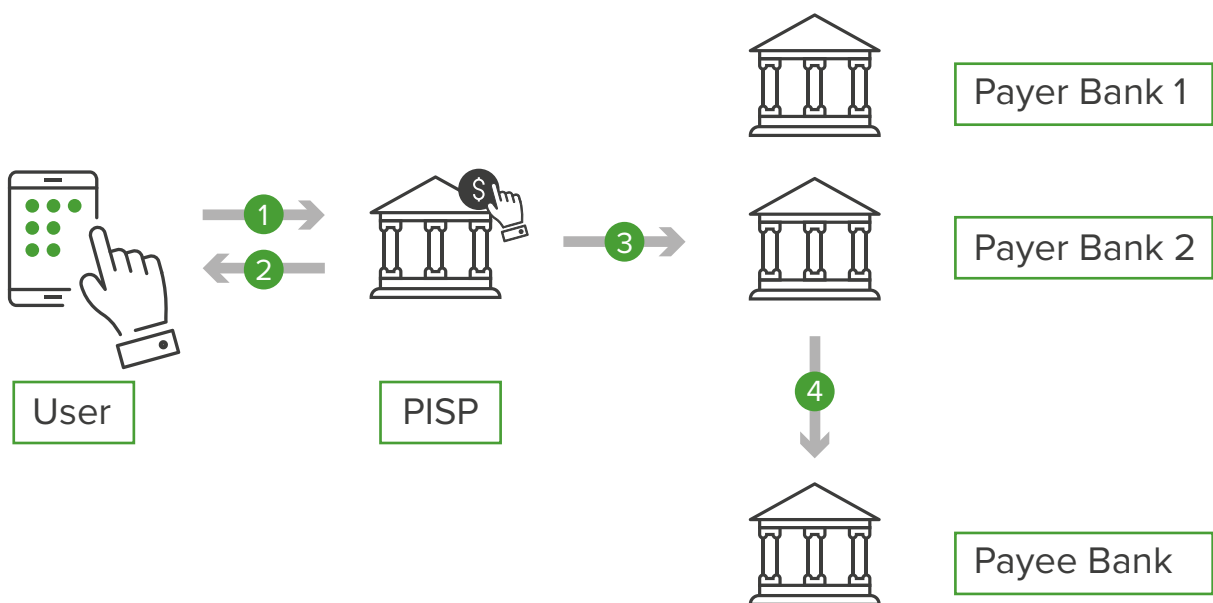


Figure 4: Payment Initiator use case

In this scenario (by way of example):

1. The user requests the payment;
2. The PSIP offers the user the option of choosing the account from which funds should be taken;
3. The PSIP initiates the payment to the Bank chosen by the payer;
4. The payer's Bank transfers the funds to the beneficiary's Bank.

The business case offers benefits for both the Bank and the customer.

On the one hand, **the customer**:

- has access to **payment solutions** that are **faster** and **more cost-effective**;
- and can execute **credits and transfers to accounts in other banks in real time**.

On the other hand, **the Bank**:

- **extends its range of transactional services**;
- **increases its total number of banking transactions** thanks to attractive cashback and interoperable reward mechanisms;
- **enables smart “user onboarding” processes** by means of direct and instantaneous customer identification.

BUSINESS CASE: ACCOUNT AGGREGATOR

The Bank that positions itself as an AISP can equip itself with a **multi-bank platform that aggregates various bank accounts** and offers the customer a new interface and new services.

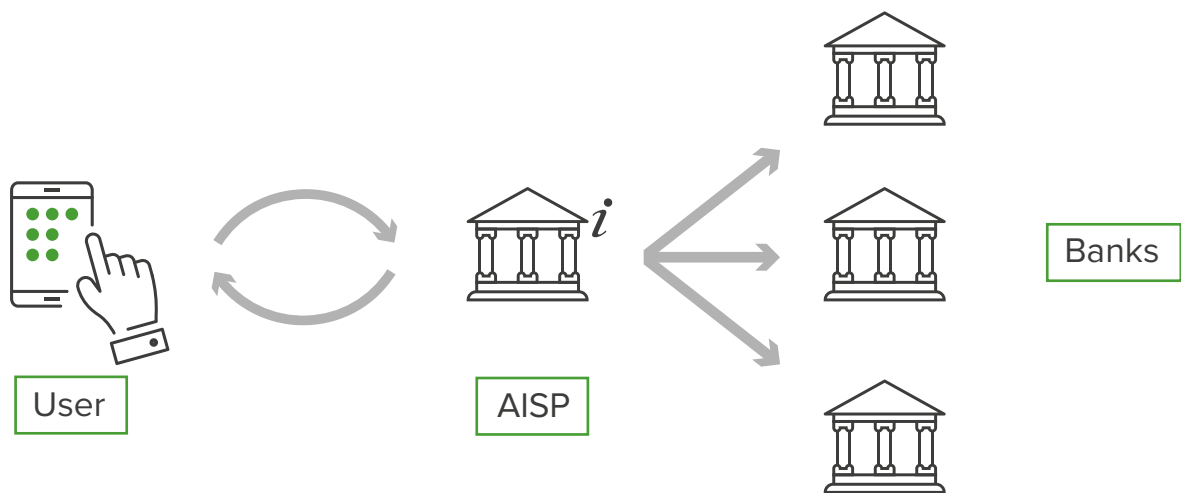


Figure 5: Account Aggregator use case

In this scenario (by way of example):

1. All Banks with which the customer holds accounts or cards share that customer's financial information;
2. The user logs into his or her account online and requests information from the AISP;
3. The AISP requests the information from the Banks, consolidates that information, and makes it available to the customer.

On the one hand, **the customer:**

- has access to a **single overview of balances and transactions;**
- benefits from a **personal financial management service that can also utilise third-party data;**
- and enjoys **cutting-edge alert**

services, including the ability to receive notifications associated with multiple payment accounts in respect of balances, credits, debits and direct debits, both in app and by email.

On the other hand, **the Bank:**

- by acting as an AISP, **increases the opportunities for customers to access its front-end;**
- **has access to a detailed overview of the customer's financial position** and gains the ability to offer additional services in terms of account switching and aggregation and optimisation of the customer's credit and investment requirements;
- **and benefits from increased customer loyalty.**

VALUE ADDED BY REPLY

The Reply Group has always collaborated with the leading banking and insurance groups and with major providers of specialised financial services (e.g. asset management, private banking and consumer credit, etc.) to offer and implement total solutions for enhancing their performance. These incorporate components related to business consulting, organisational issues, process development, design, and technology implementation. **Reply helps its customers to anticipate change**, defining strategies based on new technologies that are designed to bring real innovation to critical areas.

Reply supports Banks in seizing the opportunities offered by PSD2, ranging from definition of their strategic positioning to implementing technological solutions that comply with the Directive. Reply's consulting services fall into the areas of:

- **management consulting:** assisting Banks with idea generation, benchmarking, business planning and functional implementation;
- **software development and system integration:** supporting Banks with API development, system integration and application development activities.

Through its network of business units that specialise both in particular sectors and in highly innovative technologies and platforms (such as SOA, SaaS, cloud computing, social networking platforms, web agencies, semantic engines and mobile devices, etc.), the Reply Group is able to provide the Italian financial sector with high-level, realistic and proactive capabilities that can be documented in relation to ICT components, solutions and systems. These allow its customers to incorporate changes in legacy software architectures, thereby permitting the interoperability and re-use of existing IT assets.

REPLY specialises in the design and implementation of solutions based on new communication channels and digital media. Through its network of specialist companies, Reply supports some of Europe's leading industrial groups in Telco & Media, Industry & Services, Banks & Insurance, and Public Administration to define and develop business models, suited to the new paradigms of Big Data, Cloud Computing, Digital Media and the Internet of Things. Reply services include: Consulting, System Integration and Digital Services.

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