

## Practice papers

# Why are open banking models in Europe underperforming?

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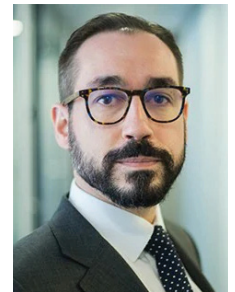
### ABSTRACT

*This study investigates the foundations underpinning open banking models in Europe and identifies levers to improve their performance. Based on a review of the literature, it distinguishes four contexts for open banking: platformisation, data sharing, FinTech and regulation. The users of open banking services are surveyed to determine factors driving adoption and identify those entities that customers trust with their data and funds. The results indicate that the slow adoption of open banking services is in large part due to customers' poor understanding of such services. The results also show the importance of usefulness and trust in driving adoption. These findings highlight the disproportionate attention being given to service provider infrastructure and the ecosystems of new entrants, and indicate that more consideration should be given to the actual users of open banking frameworks. In response to the findings, the study proposes a roadmap to mitigate the main weaknesses in current open banking models. The conclusions of this study are relevant not only to the development of open banking regulations in other territories, such as the USA and Canada, but also to the extension of data-sharing regulations to non-banking sectors.*

*Keywords: open banking, open finance, data sharing, technology acceptance model, trust, Digital Markets Act*

### INTRODUCTION

Open banking was introduced in the UK to transform retail banking. Specifically, it was developed to act as a catalyst to increase competition in the banking sector.<sup>1</sup> The two fundamental constructs of open banking in its European configuration are access to account information and payment initiation. Through the first construct, account information service providers (AISPs) can, with the client's consent, access the transactional information of the client's accounts. Conceptually, an analysis of this information would allow new entrants to offer financial products and services to customers on an equal footing with incumbent financial entities. Through the second construct, payments initiation service providers (PISPs) can initiate (ie order) a payment from the customer's current account. This second construct allows third-party providers (TPPs) to provide transactional services without meeting the capital requirements of a depository institution. With the regulatory requirements even lower than those for electronic money institutions, Europe (ie the European Economic Area (EEA) and the UK) gave approval to 529 TPPs at the end of 2021.<sup>2</sup> Combining both elements will allow new entrants to compete on an equal basis with existing players, thus creating virtual banks that operate on existing infrastructure. Conceptually, this regulatory strategy



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is similar to that adopted in other sectors (eg energy and telecommunications) in that it implies the fragmentation of the value chain to allow the entry of new players in certain parts of it in order to foster competition.

Open banking has now been fully operational for over two years in continental Europe and over four years in the UK; however, despite its potential, adoption has been unimpressive. As of May 2022, open banking counted 6 million users in the UK, with API calls reaching 1 billion/per month. While the EEA does not publish statistics, it is estimated that the aggregated total of API calls/per month would be around 6 billion for the various countries that make up the EEA. Stripped of context, this may sound like a large number, however, the combined number of open banking users in the UK and EEA accounts for around 40 million customers out of a total population of more than 519 million. In other words, open banking users account for less than 10 per cent of the total population.<sup>3</sup>

The low uptake of open banking services is disappointing given the considerable investment that payment service providers have made to implement them. Although there are no official figures in this regard, Tink (one of the leading operators of open banking services in Europe) estimates that the average depository institution has invested around €80m.<sup>4</sup>

Why the low uptake? According to the CEO of Starling, a neo-bank, ‘the implementations of open banking that we have are clunky. You know, you wouldn’t want to use them’.<sup>5</sup> So, is it simply a matter of functionality, or is the answer more complex? To answer this question, it is essential to explore the root of the problem in more detail.

To understand the phenomenon of open banking one must first answer three critical questions.

The first question focuses on the definition of open banking. Although the concept is on the face of it intuitive, its realisation

differs from one territory to the next — simply put, there is no homogeneous vision.

The second question explores the factors driving the adoption of open banking services. As mentioned, while an initiative such as open banking may make sense from a regulatory design perspective, when it comes to understanding the client’s perspective, the research is lacking.

Finally, there is the matter of whether customers are actually prepared to share their financial data with third parties. In the data economy, customers understand that they must allow third parties to access their information in order to avail of certain goods or services. However, in most frequent data-sharing use cases (eg free e-mail, geolocation applications and search engines), applications cannot directly access confidential and sensitive information. This is also the case with open banking (eg the aggregation of data from multiple current accounts).

These three questions have been answered through a research project developed over three years. This project combines the academic rigour of a doctoral programme with the expertise of management consulting practice, using various analytical approaches to answer the three questions. The following paragraphs summarise the results of the project; propose some mitigating factors; and open a discussion about the potential extension of practices informed by open banking to non-financial institutions, to provide financial players with access to their clients’ non-financial data, such as *inter alia* data provided by technology companies.

## DEFINITION OF OPEN BANKING

Although there are various partial or idiosyncratic explanations of what open banking entails, there is no single consensus definition. In certain geographies (eg the UK, the EU, India and Australia), it is a regulatory-based phenomenon, while in others (eg Canada and the USA), it is a market

Who is the subject of open banking schemes?

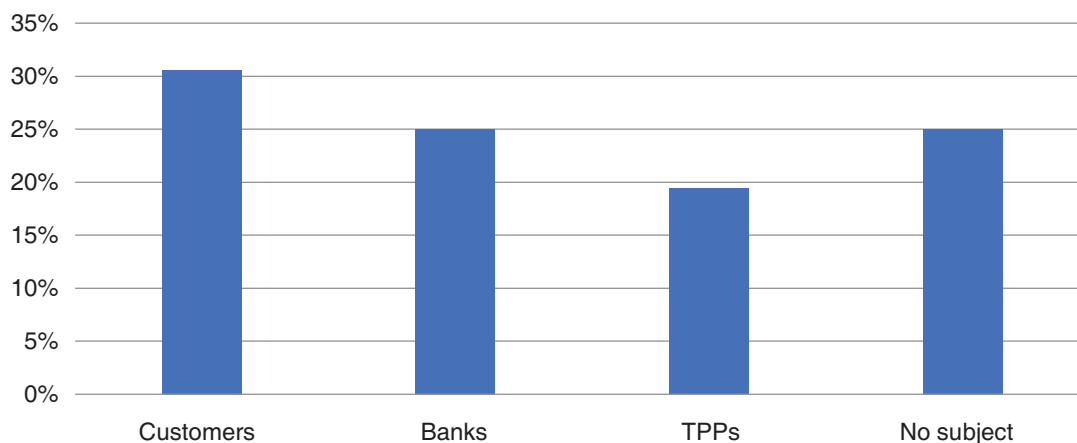


Figure 1: Open banking models: Who is the subject of the definition?

phenomenon supported by general principles on data protection and data sharing. In some geographies (eg India), it is characterised by access to transactional information, the initiation of payments and even electronic identity. In others, like Australia, while it is limited to access to financial data, it has a broad scope, and includes *all* financial data (eg loans, mortgages, mutual funds and pension funds). In short, open banking can refer to phenomena with a shared base but wildly divergent materialisations. This fact, which can be a relatively minor problem in the business world, is a severe problem in the academic field. The lack of a shared definition jeopardises collaboration between researchers, especially if they belong to different geographies or disciplines.

This project commenced with a review of the scientific literature dealing directly or indirectly with open banking.<sup>6</sup> Bibliometric techniques were used to identify four contexts for the use of open banking: platformisation of the banking business model, data sharing, financial technology (FinTech) and regulation. To support dialogue on the phenomenon, any definition of open banking needs to be valid in all four areas.

Nevertheless, this approach does not provide a definition of the phenomenon. To address this, the study team reviewed 282 academic papers on open banking. This analysis identified 47 partial or idiosyncratic definitions. Based on this analysis, the present paper defines open banking as a regulated framework that enables banking customers to share data with third parties through standardised interfaces (eg APIs) and thereby intensify competition in the financial sector.

Beyond the relevance of the definition, the most significant finding is that only 30.6 per cent of the definitions focus on the customer (see Figure 1). This is not a minor matter. Open banking services depend on the willingness of customers to share data or permit third parties to access to their accounts in order to initiate payments. However, open banking is also understood as the right of third parties to access data or the obligation of financial institutions to provide that access. Such understanding relegates the role of the customer in the framework. This misunderstanding of the role of the client can have significant consequences. Irrespective of the infrastructure for data access and the richness of the ecosystem of TPPs, open

banking is not possible unless customers give access to their accounts.

### **FACTORS DRIVING END-USER ADOPTION OF OPEN BANKING SERVICES**

The second stream of the project addressed the willingness of customers to use the technology supporting open banking.<sup>7</sup> Regardless of the specific underlying technology (eg API, software development kits, or even non-standardised and unsecured screen-scraping such as was conducted prior to the introduction of modern open banking frameworks), open banking requires customers to give third parties access to their bank accounts both for the provision of account information services and the initiation of payments. Providing such access, however, increases cyber-security risks. For this reason, regulated open banking models require increased security around client identification (reinforced authentication). This authentication requires customers to adopt technologies that drive authentication processes, such as confirming one-time passwords sent via SMS, white-listing trusted third parties, or activating biometric systems on a mobile device.

This phase of the project focused on customers' willingness to use the aforementioned technologies. To this end, a market research company was commissioned to build a representative sample (553 valid responses) of the Spanish population already exposed to digital banking services. Participants in the sample group were provided with written and graphical explanations of open banking. Respondents were then asked two control questions to determine their understanding of the service. Despite the explanation, 26 per cent (143 out of 553) of the total sample were unable to answer these questions correctly.

The survey also obtained insights regarding which open banking services are most

frequently used (see Figure 2). In most jurisdictions, although open banking is limited to accessing account information, the primary use case cited by customers is the initiation of payments, carried out either by their bank or a third party. This phenomenon can be explained by the success of global schemes such as PayPal or the Spanish instant payment app, Bizum. Bizum is not technically a TPP, but it is perceived as such by bank customers.

In this context, it is worth noting that customers consider the aggregation of accounts and the provision of access to financial data when requesting a loan to be minority use cases. This may reflect the average bank customer's limited use of alternative financial service providers. The study found that the participants reported holding, on average, two current accounts, and working with, on average, 1.7 financial entities. This suggests that account information aggregation services may have limited potential to create customer value.

Survey participants were asked a number of questions relating to the different variables driving the adoption of open banking as a technology. The results differ from classic technology adoption studies. Generally, the two main drivers of technology adoption are ease of use and usefulness. In this case, however, ease of use was not found to be strong driver of open banking adoption; rather, usefulness and trust were found to exert the most significant direct impact on adoption. Social influence was also found to play a less significant role in driving adoption.

These findings prompt the following reflections. First, as a general thought, the digital age may require practitioners and scholars to conduct a general review of the technology adoption models. Advancements in user experience and interface platforms along with technological immersion more broadly make ease of use a less relevant element in the adoption of new technologies such as open banking.

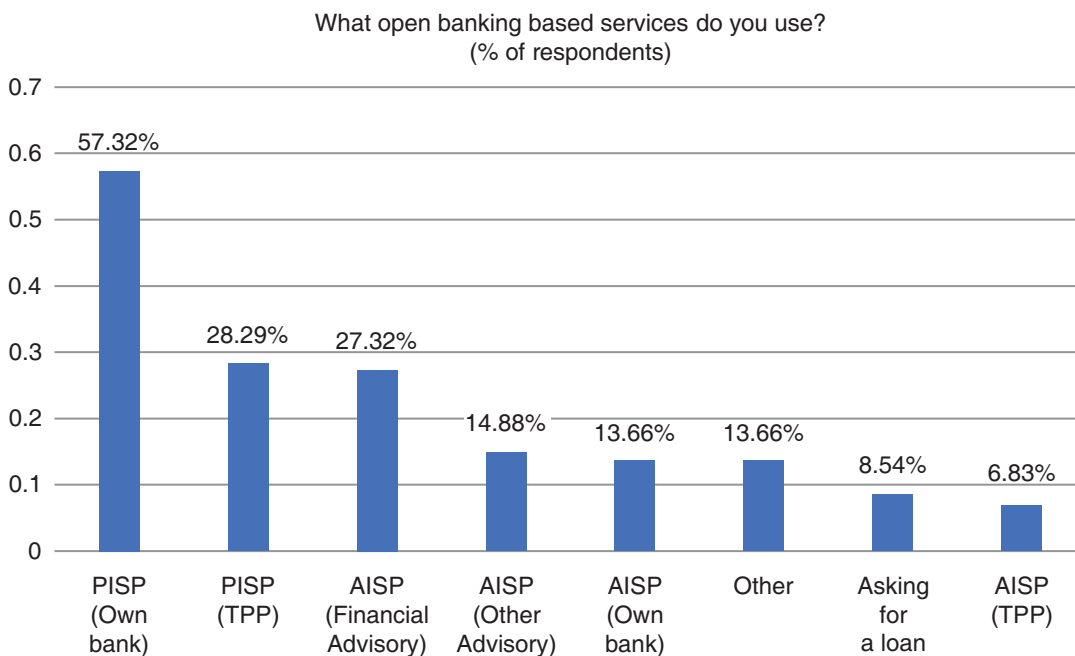


Figure 2: Open banking use cases

Notes: PISP (own bank) and AISP (own bank) refer to payment services rendered by one bank operating over an account held in a different bank.

Concerning usefulness, one must question the effort made by governments and financial institutions to explain the potential benefits of open banking to customers. Given that 26 per cent of the sample could not answer fundamental questions about open banking, it would appear that institutions need to invest considerably more effort in improving their customers' understanding of the service. Simply put, if customers fail to understand the meaning of and how to use open banking, they are less likely to adopt the new technology. Hence, efforts to provide an understanding of the technology and social influence, especially in this social media era, are critical to open banking adoption.

Trust in the open banking ecosystem is a critical factor. It is true that, at least in the regulated frameworks of open banking, specific legislations have been developed for data access. However, this framework of supervision has not been sufficiently explained to

users of the open banking ecosystem. Given that trust is critical to open banking adoption, financial institutions need to work harder at informing clients about how they are protected under this new model.

From a conceptual viewpoint, open banking is a powerful tool for inducing competition in the financial sector. However, such competition will materialise only if customers adopt the technology — and this requires customer education. Regrettably, there are as yet too few examples of effective communication for educating customers about the potential of open banking and the protection framework around it.

### CUSTOMERS' PREPAREDNESS TO SHARE FINANCIAL DATA

The concept of trust benefits from a solid theoretical construction. The present research, however, takes an intuitive approach and

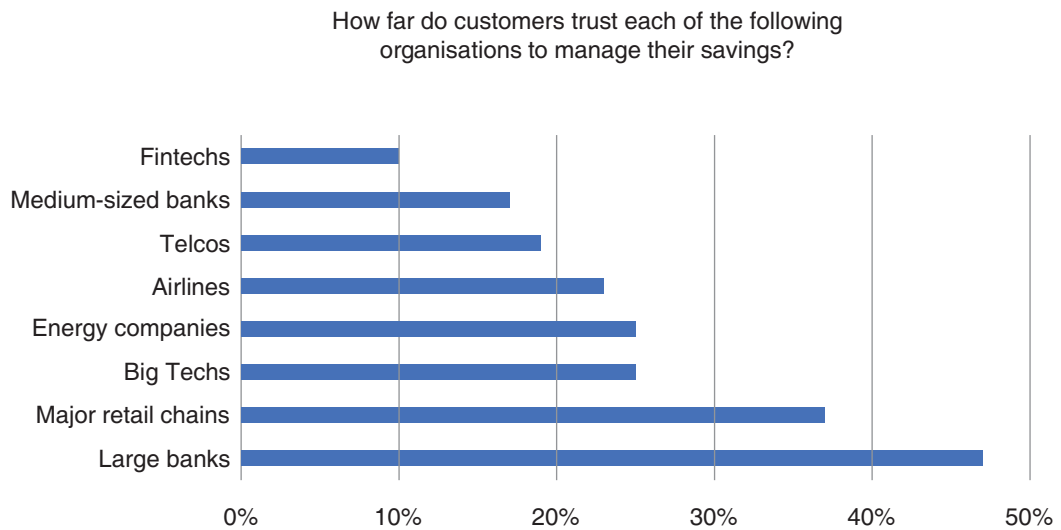


Figure 3: Trust analysis (1/4)

investigates who customers trust to manage their finances and information. To this end, the study team conducted market research in collaboration with an external agency.<sup>8</sup> One thousand bank customers were asked about their trust in the open banking provider ecosystem. A sample of this size was chosen in order to represent the total universe of the population in sociodemographic and financial provider terms.

This study sought to compare trust in financial service providers (ie large and medium sized banks) with new entrants (ie big techs and FinTechs) and other traditional non-banking players with relatively high levels of trustworthiness (ie telecommunications providers, energy companies, retailers and airlines).

First, from an information and funds safekeeping perspective, the big banks serve as the reference points for customers (see Figures 3 and 5). Secondly, large distribution companies build a high level of customer trust by safeguarding information and funds. By contrast, FinTechs fail to gain customer trust, either as custodians of information or of funds (see Figures 4 and 6). This finding is especially relevant given

that the main objective of open banking is to widen the provision of financial services by opening access to new market entrants. The proliferation of TPPs authorised by their respective national authorities will have little influence on market dynamics if customers do not trust TPPs and adopt them as providers. In this context, it is also noteworthy to discuss the case of the big techs (Google, Apple, Facebook and Amazon, and Baidu, Alibaba and Tencent). Customers trust these companies as custodians of funds but not as custodians of information. The latter is an essential caveat for big techs looking to provide financial services based on open banking. Another relevant element is the role of incumbent companies from other sectors as potential providers of financial services in open banking models. For example, players in the large distribution sector can play a more relevant role in open banking ecosystems than in their own sector.

The results show several limitations to the open banking model. However, the most significant gap is seen in the case of consumer trust generated by current financial service providers, relative to alternatives.

How far do customers distrust each of the following organisations to manage their savings?

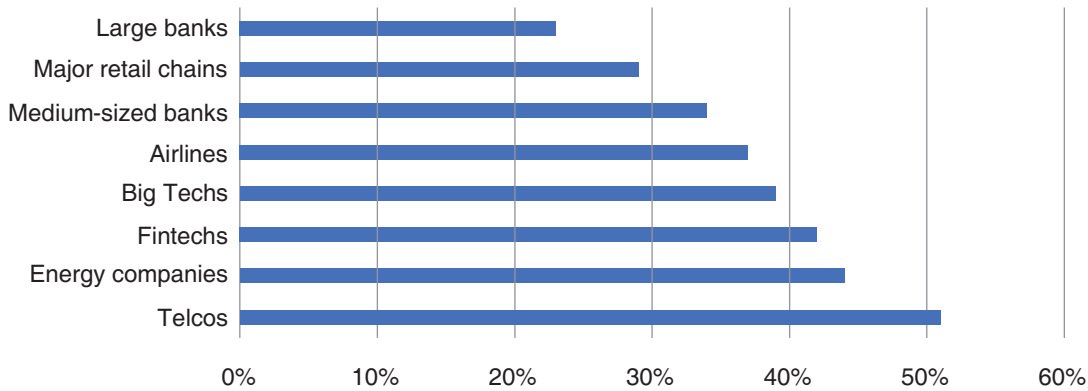


Figure 4: Trust analysis (2/4)

How far do customers trust each of the following organisations to manage their information?

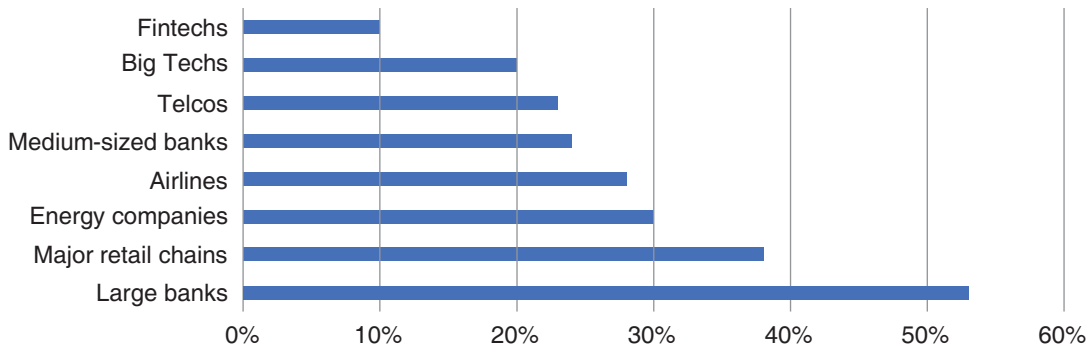


Figure 5: Trust analysis (3/4)

How far do customers distrust each of the following organisations to manage their information?

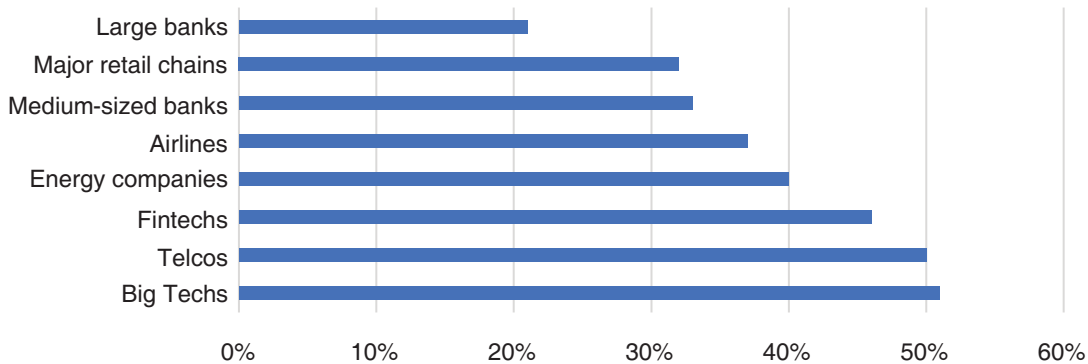


Figure 6: Trust analysis (4/4)



## MAIN CONCLUSIONS

In relation to the main research question, a number of conclusions may be derived.

First, open banking is a complex and hitherto imprecise concept. The lack of specificity regarding the definition of open banking elicits limited interest from academia, which yields shallow and partial analyses of the phenomenon. This implies the lack of a solid theoretical foundation to explain open banking frameworks' underlying mechanisms and dynamics.

Secondly, open banking regulatory frameworks do not focus on the customer. Open banking was born as a theoretical remedy from the UK Competition and Markets Authority in response to a lack of competition in retail banking services. Although the regulation was meant to address some use cases (eg account aggregation and the simplification of supplier switching), the focus was on setting up the infrastructure rather than prompting changes in customers' behaviours. From an industrial policy perspective, open banking should reduce the barriers to entry in the business, increase the number of competitors and, therefore, reduce price levels and improve innovation. However, the customer has not been sufficiently considered in the definition of these models; rather, the main concern has been to regulate structural elements (eg API architecture, service levels of traditional financial entities and TPP regulation). Despite the structural focus, no deep reflection has been undertaken on how these models create better and more efficient banking services. Open banking has the potential to change the dynamics of the retail banking industry by allowing new entrants to create and deliver innovative and efficient financial services. However, for this potential to materialise, customers need to understand the benefits of sharing their financial data and the security inherent to regulated open banking frameworks.

Thirdly, the main drivers of open banking adoption are customer utility, trust and social influence. At present, however, greater attention is being given to factors such as Regulatory Technical Standards on strong customer authentication and secure communication under PSD2. This mismatch between regulatory requirements and customer concerns must be resolved if open banking models are to evolve.

Fourthly, the initiation of payments is a critical construct. Based on the evidence from the UK, payment initiation and the associated value-added services are vital to the adoption of open banking models. Initially, the regulators, at least the European ones, were clear about their importance. In this regard, it must be noted that, in the EU, open banking is regulated by PSD2. In order for these payments to compete with existing services (eg credit and debit cards, direct debits and credit transfers initiated by financial institutions), TPPs must be allowed to initiate instant transfers in an economically competitive manner. Payments initiation has been primarily implemented in Europe through the initiation of i-SCT (instant Single Euro Payments Area Credit Transfers). Theoretically, this is the right approach, as an instant account-to-account payment should be an appealing alternative to traditional card payments. However, although the PISP is not subject to any additional fees from the bank holding the customer current account (the account servicing payment service provider), this type of payment is subject to significant fees for the customer. This has the effect of making PISPs uncompetitive compared with other payment methods, such as traditional cards or bank-owned account-to-account payment schemes.

Finally, the lack of a framework of trust in new entrants significantly limits the possibilities of developing open banking. The new generation of clients (digital natives) may have a greater predisposition to adopt services based on data sharing. However, a



significant part of the client base is made up of builders (>65 years old), baby boomers (45–65 years old) and millennials (20–45 years old), with a much lower propensity to data sharing.

This leads to the question of whether it is possible to redesign open banking models to increase the levels of competition and innovation in retail banking businesses. The answer to this question is not simple. However, the aforementioned conclusions provide a clear roadmap.

The first step is to encourage more academic research into the phenomenon of open banking in order to gain a better understanding of its underlying factors. As with other emerging technologies (eg central bank digital currencies), the development of open banking requires the construction of a solid conceptual, theoretical framework to serve as the foundation for possible regulatory developments.

This should be followed by stress-testing existing open banking models from the client perspective. This will provide a better understanding of the various models' strengths and weaknesses, helping creators to iterate on their designs as well as develop new ones. Banks that focus on establishing an excellent infrastructure for open banking while neglecting the customer perspective are likely to end up with adoption rates that do not meet expectations. The current supply-driven perspective must be completed with a demand-driven understanding of adoption dynamics. It is thus necessary to shift the current focus from the provider ecosystem to the user.

For open banking to evolve, it is essential to increase consumers' perceived utility of open banking services. In this regard, it must be noted that, while considerable investments have been made in constructing the infrastructure, insufficient efforts have been made to explain to the average customer how they might benefit from these new services. This indicates a mismatch

between investments and needs. Traditional financial institutions have no incentive to explain to customers the possibilities offered by the new open banking framework. The new entrants also lack the financial muscle to conduct financial education campaigns for clients. Additionally, the endorsement of supervisors and regulators of this new family of services, which is essential for its widespread adoption by customers, has been limited.

Finally, it is critical to work on the trust front. Despite the effort to create a regulatory regime for TPPs, the nature of TPPs and how they compare with current providers have not been clearly communicated. In this context, as in the case of financial advisory providers, it is essential that the supervisory bodies proactively communicate the protection regime to open banking clients. This is crucial for clarifying the nature of TPPs.

## **IMPLICATIONS FOR THE EVOLUTION TOWARD OPEN FINANCE MODELS**

The results highlight the evolution of open payments or open banking models toward open finance. From a theoretical perspective, the transition of data-sharing frameworks from transactional information to non-transactional financial information seems like a logical step. For this reason, the scope of PSD2 also encompasses an extensive range of information on the financial particulars of bank customers (eg investments, credit ratings and insurance).

However, given the limited impact of current open banking models, it seems prudent to reconsider this evolution. Indeed, based on the results of the present study, the very foundations of open banking need addressing before any evolution toward open finance models is considered. Articulating access to customer information is costly and increases cyber-security risks. An evolution in this direction will make sense

if there is customer demand — current or potential — for these services. However, extending the open banking framework without underlying demand could lead to stakeholder dissatisfaction. The disappointment of banking regulators may stem from their inability to increase the levels of competition and innovation. The frustration of traditional incumbent financial entities stems from their investments into services that are not used by their clients or monetised. Suppliers, meanwhile, are dissatisfied due to their inability to reach critical masses of customers through a viable business model. Finally, customers are frustrated by the new cyber-security requirements inherent to the open banking/open finance models, which impact negatively on service level and efficiency.

### REGULATORY INITIATIVES TO LEVEL THE PLAYING FIELD

Since the beginning of the development of open banking regulatory frameworks, the incumbent financial entities have vigorously protested the lack of a level playing field.<sup>9</sup> Given that the obligation to make customer data accessible is asymmetric, from the perspective of the incumbents, the PSD2 regulations are of greater benefit to new entrants.

In this context, the unique position that depository institutions hold in the financial system could justify their being subject to unique regulations. Simply put, as they are the only companies that can hold customer deposits and offer current account services, it is natural that they be subject to a particular regulatory regime. Furthermore, considering their crucial role in driving monetary policy, it is natural for them to have a unique regulatory regime. Despite this argument, industry supervisors have responded to the cries of the banking sector. To this end, the EU has been debating the Digital Services Act and Digital Markets Act.<sup>10</sup> Among other

provisions, both regulatory pieces would create a more balanced data-sharing framework, especially for large digital platforms, and would impose certain data-sharing obligations in line with the open banking philosophy.

The introduction of data-sharing regulatory frameworks for large platforms also raises challenging questions. First, the factors inhibiting the development of open banking services could lead to the failure of data-sharing models imposed on large digital platforms. Secondly, these frameworks neglect customer drivers, under a narrow industrial policy perspective. These frameworks ignore the fact that it is the banks' customers, not the banks, that own the customer data, and that data sharing is impossible without explicit and informed consent from those customers. Extending data-sharing models (eg open banking) to other sectors without a better understanding of their underlying dynamics could exponentially increase both investment and cyber-security risks. This will be justified to the extent that value is created for the customer and the economy.

### AUTHORS' NOTE

The views expressed herein do not engage or represent those of any of the organisations with which the author is associated.

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