

# Open Banking and Financial Inclusion<sup>54</sup>

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## Abstract

There are different open banking models around the world, some of them market driven, others regulatory driven. All of them offer clients the possibility to share their banking data with third parties, opening up competition and having an impact on the conditions at which financial services are offered. Open finance and open data can be viewed as further developments of open banking, allowing the sharing of a wider range of data with different financial and non-financial entities. In this paper, we concentrate on the conditions for open banking to benefit the financially less served and more vulnerable segments of the population, fostering financial inclusion. We suggest that until now this objective has been somehow overlooked, even where open banking has been driven by regulation, and make concrete proposals for possible improvements.

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## Introduction

Over the past twenty years, digital innovations deeply affected banks' business models, opening up new opportunities and new risks (BIS 2018). Open banking is one of these developments, which took place as a market driven process in some countries and was regulatory driven in others<sup>57</sup>.

We find various definitions of open banking. In what follows, we assume that the core of open banking is an account holder giving permission to a third party – different from the intermediary holding its bank account - to access the data registered on his account. The data can then be processed and used by the third party to offer the bank customer additional services, not encompassed in the contract subscribed with the bank, or similar services at different conditions<sup>58</sup>.

Regulators may want to introduce an open banking regime in their respective countries for two main reasons. First, they may consider fair giving banks' account owners the right to use their data to exploit all possible benefits for themselves. Customers may give third parties access to their banking data even if there is no legal regime for open banking in place, but they do it at their own risk. An open banking regime, on the contrary, allows the sharing of data in a secure and efficient way. Second, regulators might aim to foster competition in the banking sector, favoring the entry in the market of technologically advanced intermediaries, with the objective to push innovation and force traditional banks, which might be reluctant to overcome existing legacies, to adopt innovative business models. This could have positive effects on the market in terms of quality of the service offered, potentially faster, less costly and more tailored to the customers' needs.

When open banking is regulated, the legal framework may cover different areas: the type of authorisation the third party needs to access customer data;

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57. In 2013 Singapore published the Finance-as-a-service API (application programming interface) Playbook. Europe and Hong Kong regulated open banking in 2018, Australia in 2020. In Japan, in 2020, an obligation has been introduced for banks to publish their Open APIs policies. In the USA Open Banking services are offered without any specific regulation. See also: <https://www2.deloitte.com/tw/en/pages/financial-services/articles/open-banking-around-the-world.html>; BIS 2019.

58. The BIS, in the Report on open banking and application programming interfaces (November 2019) uses a similar definition: "Open banking is the sharing and leveraging of customer-permissioned data by banks with third party developers and firms to build applications and services, such as those that provide real-time payments, greater financial transparency for account holders, and marketing and cross selling opportunities."

which data can be shared; the characteristics of the services to be offered by the third party; the platform to be used for data sharing; the applicable security requirements. Another important aspect is whether granting access to third parties is mandatory for intermediaries holding the account or they can refuse access.

Hence, open banking may have an important impact on different features of the bank-client relationship and, more generally, on the way financial services are offered. In this paper we concentrate on a specific aspect: the conditions for open banking to benefit the financially less served and more vulnerable segments of the population, fostering financial inclusion. We will suggest that until now this objective has been somehow overlooked, even where open banking has been driven by regulation.

The first paragraph frames the analysis by discussing opportunities and risks of digital financial inclusion. The second paragraph focuses on the innovative services offered in an open banking regime that may favour inclusion by benefitting specifically the financially less included and identifies the possible constraints for their actual access to these services. Also based on this analysis, the third paragraph attempts an evaluation of the European legislation on open banking, based on the international guidelines on policies to foster financial inclusion, with some suggestions on how to move forward. The last paragraph concludes.

## **1. Digital financial inclusion: opportunities and risks**

Financial inclusion is defined as a condition in which households and firm have access to formal financial services, and are able to use them according to their needs. Financial inclusion has been acknowledged as a means to increase the well-being of households and businesses and their economic empowerment (Allen et al., 2016). Moreover, financial inclusion has been documented as an enabler of financial sector stability and soundness (Khera et al., 2021).

In 2010, at the G20 Summit in Seoul, the Leaders of the G20 recognised financial inclusion as one of the main pillars of the global development agenda and endorsed a concrete Financial Inclusion Action Plan (FIAP). They

established the Global Partnership for Financial Inclusion (GPFI)<sup>59</sup> - an inclusive platform for all G20 countries, interested non-G20 countries and relevant stakeholders - to carry forward work on financial inclusion, including the implementation of the G20 FIAP.

Innovation is potentially a key driver of financial inclusion. The World Bank measures access to and use of financial services since 2011 through the Global Findex, a comprehensive and nationally representative survey of nearly every country in the world (Demirguc-Kunt et al., 2012). Since then, access to financial services has experienced a substantial growth also thanks to the increased digitalisation.

In 2021, worldwide account ownership reached 76 percent of the global population, with an increase of 26 points over the last ten years (account ownership was 50% in 2011). Holding an account is the first step towards financial inclusion. Usage of financial services also increased in the last years. Receiving digital payments such as a wage payment, a government transfer, or a domestic remittance - via an account - catalyzes the use of other financial services, such as storing, saving, and borrowing money (Demirguc-Kunt et al., 2022). Over the last years the pandemic fostered the use of digital financial services, especially payments (Boakye-Adjei, 2020). The expansion of mobile network connectivity and the affordability of mobile phones and computers contributed to the push towards greater financial inclusion.

In view of the increased digitalisation of financial services, in 2016, under the G20 Chinese Presidency, the GPFI published the “High Level Principles for Digital Financial Inclusion” (HLP). The report (GPFI, 2016) recognises digital financial services<sup>60</sup> as key enablers for financial inclusion because capable of reducing costs, expanding scale, and deepening the reach of financial services through efficient interconnections among participants in economic activities. However, it also acknowledges that digital technology enhances existing risks such as legal and operational risks, due to frauds and malfunctionings, that ultimately lead to mistrust and exclusion. Digital

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59. <https://www.gpfi.org/about-gpfi>.

60. Digital financial services mean financial products - including payments, transfers, savings, credit, insurance, securities, financial planning and account statements - delivered via digital or electronic technology, for example e-money initiated on a mobile phone, payment cards and on-line bank accounts.

technology also enables the generation and analysis of vast amounts of customer data, which introduce a new set of benefits, but also risks that should be managed.

These risks should be addressed first and foremost through regulation, supervisory controls and competition rules, defining a level playing field among different players, allocating clearly responsibilities and introducing specific risk control measures. Secondly, a sound consumer and data protection framework is essential to building trust in the use of digital financial services. Finally, to foster effective use, it is also critical for customers to understand the characteristics of the digital financial services, their rights and obligations, and the possible benefits: financial education programs are therefore essential.

Hence, to specifically benefit also the vulnerable, and increase inclusion, innovation should be governed to ensure that its benefits are widely shared and also accompanied by policies that help in safeguarding clients from the access to non regulated services providers, in avoiding frauds, in acquiring services that suits their needs and understanding how – and to whom – to complain if something goes wrong (Frost et al., 2021).

In order to provide countries with concrete examples of best practices on customer oriented policies to favor digital financial inclusion, the GPMI published under the Italian G20 presidency a “Menu of Policy Options for digital financial literacy and consumer protection” (GPMI 2021). The Menu specifically proposes the following actions: a) favouring “protection by design”, i.e. encouraging providers to design innovative products and services aimed at satisfying the interest of consumers, avoid aggressive and unfair market practices and ensure the legitimate use of customer data<sup>61</sup>; b) embedding financial inclusion objectives in innovation policies, in order to take into account the specific needs of the vulnerable when designing the strategies (and, in doing this, avoid unnecessary risks)<sup>62</sup>; c) addressing risks of online fraud and scams and mismanagement of personal data, that are particularly relevant for less financially and digitally

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61. An effective approach of “protection by design” is product governance (see GPMI, 2021, Technical Annex, pag 16).

62. Effective approaches include: the development of regulatory sandboxes and innovation hubs with the specific objective of promoting an inclusive approach in the design of financial products and services; the promotion of boot camps and digital hackathons – also engaging non-financial businesses owned by underserved groups – to improve the design and use of innovative non-debt financing instruments that may improve micro and small firms’ financial structure (see GPMI 2021, Technical Annex, pag 16).

educated people, often having access to poor quality devices<sup>63</sup>; d) introducing effective redress mechanisms, essential to build trust in the financial services<sup>64</sup> and e) designing effective financial education programs, taking advantage of the opportunities offered by the digitalisation<sup>65</sup>.

These suggestions are meant to guide policy makers in introducing inclusive innovations and could serve as a benchmark to analyse gaps also in existing open banking regimes, with respect to the objective of benefitting the excluded and less served.

## 2. Open banking for the underserved

We observe different open banking models around the world (Plaitakis et al., 2020). Here we start our analysis from a “narrow” open banking model, as is the one adopted in Europe, but also in Hong Kong.

Europe is an area where open banking has been introduced by regulation. The Second Payment Services Directive (PSD2) imposed specific security requirements for payments and regulated the sharing of data between banks and third parties. The aim was to regulate two services that were already offered in the market, but with modes that exposed the customer to great risks. The first service disciplined by the PSD2 is the payment initiation service (PIS), that allows a third party to initiate a payment on behalf of a client, using the money deposited in its banking account; the intermediary offering it is called PISP (payment initiation service provider). The service is designed to allow the

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63. Effective approaches include: awareness campaigns, issuing specific warnings (with details about frequent types of new and old forms of scams and how financial consumers and firms can identify them); sharing lists of unauthorised or banned entities; establishing multi-stakeholder task forces, shutting down or blocking access to malicious websites, monitoring and analysing data on unauthorised transactions and strengthening authentication and security obligations for providers of financial and payment services, developing anti-fraud and Artificial Intelligence screening approaches that do not exacerbate financial exclusion (see GPFI, 2021, Technical Annex, pag 17).

64. The strategy may include: online reporting systems, tracking and analysing complaints to identify unfair market conduct (see GPFI 2021, Technical Annex, pag 17).

65. Examples include: targeted digital campaigns, info-graphic guides and consumer awareness sessions. Partnerships with local established stakeholders linked to vulnerable and excluded groups. The production of innovative and customized tools could be encouraged through digital hackathons or competitions for financial education. Digital exclusion could be avoided by: resorting to simple forms of technology, such as instant messaging apps; developing hybrid delivery modes where facilitators and trainers help the end-users to interact with digital tools and transfer their digital skills; complementing digital financial education initiatives with traditional media, such as TV and radio (see GPFI, 2021, Technical Annex, pag 16).

payment of the transactions at the check-out via a credit transfer, instead of using a payment card. The second service is the account information service (AIS) offered by an AISP (account information service provider). The rationale of the service is providing the customer with consolidated information on one or more payment accounts. In disciplining the two services (PIS and AIS), the PSD2 actually “laid the foundations for open banking in Europe”<sup>66</sup>.

In fact, once secure communication standards between the account holder bank and the third parties have been established, intermediaries started offering a whole range of new services, also beyond those provided for by the Directive, such as budgeting tools and categorising spending, credit scoring and advice services on savings, insurance, investments or credit (see also Banca d’Italia, 2021). This evolution was not obvious at the beginning: only in 2019 EBA clarified that the data acquired by the third party via an account information service could be used also to offer other services – to the account owner or to third parties - provided that the account owner agrees and gives its consent according to privacy law<sup>67</sup>.

We aim to focus our attention on which of these services could be beneficial for those financially less included and more vulnerable.

Financially vulnerable people tend to have irregular income. They experience difficulties in accessing credit and obtaining a credit card. Moreover, low level of digital and financial literacy makes them more prone to poor financial management, and to fraud when using digital payments. Open banking services may help them overcome these shortcomings (BIS-WB 2020; Plaitakis et al., 2020). Payment initiation services give them the possibility to buy on-line, and save money by comparing the different offers, even if they do not possess a credit card. Payment initiation services can also be used to settle recurrent payments at due dates, avoiding penalties for late payments, and to top-up prepaid cards or phone money accounts, avoiding extra-charges (Reynolds et al., 2019<sup>68</sup>).

Account information services provide customers with a consolidated view of their accounts. Low income individuals may benefit from a professional

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66. Opinion of the European Banking Authority on its technical advice on the review of Directive (EU) 2015/2366 on payment services in the internal market (PSD2), 23 June 2022, p.1.

67. Opinion 4631/2019 published on 13 September 2019 in response to Question ID 2018-4098

68. The Report tries to quantify potential consumer benefits from open banking services, by segmenting consumers according to their resilience to small shocks and to whether they have unsecured borrowing.

monitoring on their accounts. Third parties might be entrusted to give advice on financial management and deadline planning. A wise liquidity management could prove effective to avoid overdrafts, and the related costs. At the same time a reminder on bill payments on due dates could help have a sound financial behavior. Third parties could also increase the access to credit by providing rating services based on the monitoring of the account<sup>69</sup>. They could offer budgeting tools that help planning payments, and in particular the repayment of loans, possibly coupled with payment initiation services; they might favour saving by advising on how much and when to save. General financial advice could also be provided: third parties could propose different credit or investment solutions, offering tools to compare conditions and, thus, induce better informed, and probably less costly, financial decisions. If the customer decides to change provider, also switching costs could be lower, given that information is shared in an efficient and secure manner.

If open banking also allows for online monitoring of payment transactions, third parties could offer vulnerable individuals greater protection from frauds and scams. They may detect transactions that are not coherent with the spending pattern of the client and force the intermediary to double-check them before execution. This kind of service could be useful for all categories of individuals who are vulnerable from a digital point of view, e.g., elderly<sup>70</sup>.

Against the opportunities that open banking may offer for vulnerable individuals, there are at least four points of attention.

First, open banking (in the narrow version described above) requires an on-line account; hence, vulnerable unbanked people are out of reach. They could be included if authorities extend the sharing of data among financial institutions also to include non-financial institutions such as energy, telecom, utility companies. Open data - the portability of nonfinancial data - might have a substantial impact on access to financial services for unbanked populations. However, not many authorities have gone in this direction because of the complexity of setting up a safe and efficient framework encompassing different sectors and, thus, requiring coordination among different authorities. So far,

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69. Credit rating services based on the analysis of payment flows could be beneficial also for small and medium enterprises having difficulties to access credit.

70. Machine learning and artificial intelligence techniques are successfully used by some firms, mostly in the USA and the UK, to analyse financial transactions for signs of vulnerability in the user and the risk to fall victim to scams.



this goal has been explicitly pursued in the UK, with the Smart Data strategy<sup>71</sup>, and Australia, with the Consumer Data Right<sup>72</sup>.

Second, there might be an issue of transparency and trust. On the one hand, excluded or underserved individuals tend to be the less educated and are less able than other customers to understand the characteristics of the services offered and to manage the relationship with the intermediary (Ampudia et al. 2017, Coffinet et al. 2017, Demirgüç-Kunt et al. 2018). On the other, financially underserved people tend to mistrust the financial system. Various studies find that lack of trust in financial institutions is associated with a lower tendency to hold either a bank account (Ampudia et al. 2018) or a savings account (Beckmann et al. 2017). The combination of the two characteristics may result in a reluctance by excluded or underserved people to use open banking services, a quite complex service in itself.

The third point concerns the management of personal data. The common message – delivered by authorities and intermediaries – is “do not share your personal data with third parties”. The objective is to protect banking customers from frauds; to some extent, sharing personal data could be also interpreted as gross negligence by the customer with negative consequences for the possibility to obtain a refund in case of unauthorised transactions. Open banking is based on the sharing of data with trusted counterparties, but for customers it may be difficult to understand who is trustworthy and who is not; which conditions must be satisfied to be on the safe side; which kind of data can be shared; which are the rights and responsibilities of the parties involved.

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71. This is a regulatory strategy envisaged by the UK Government to extend consumer data sharing across several regulated markets in order to foster consumers bargaining power vis-à-vis service providers through data-enabled innovation. See the UK Department for Business, Energy and Industrial Strategy “Smart Data Working Group” aim and activities at <https://www.gov.uk/government/groups/smart-data-working-group>.

72. The Australian Government envisaged an economy-wide consumer data-sharing framework (the Consumer Data Right - CDR), which allows individuals to share their data with accredited third parties to access better deals on everyday products and services. The banking sector was targeted as the first sector for its implementation, followed by energy and telecommunications. The data transfer is done between providers, but the Australian Government has designed and oversees the system to ensure it is safe and secure for consumers. In particular, the Treasury leads CDR policy, including development of rules and advice to government on which sectors CDR should apply to in the future. Within Treasury, the Data Standards Body develops the standards that prescribe how data is shared under CDR. Treasury works closely with the two regulators, the Australian Competition and Consumer Commission (ACCC) and the Office of the Australian Information Commission (OAIC) to implement and regulate the CDR. The ACCC is responsible for the accreditation process, including managing the Consumer Data Right Register. The ACCC ensures providers are complying with the Rules and takes enforcement action where necessary. The OAIC is responsible for regulating privacy and confidentiality under the CDR. The OAIC also handles complaints and notifications of eligible data breaches relating to CDR data (<https://www.cdr.gov.au/>). See also Buckley et al. 2022.

Less financially equipped people may find it difficult to manage properly their own data, with the risk of falling victim to impulsive or unaware behavior, which one can later regret, as well as of potential data breaches, abuses and frauds (Borgogno et al., 2020).

The last point regards costs. Financially vulnerable people are less wealthy and more concerned about costs than others. They could be discouraged to acquire open banking services, e.g. financial advice, if they are expensive and the benefits not straightforward and clearly understood.

### **3. Open banking in Europe (the PSD2): how effective in addressing inclusion?**

The PSD2 offers a comprehensive legal framework for open banking in Europe. It states which kind of intermediaries can offer the payment initiation and the account information services. If providers are different from banks, according to the law they should ask the competent authority for an ex-ante authorisation before entering the market. When active, ex-post controls ensure that authorized intermediaries observe given requirements. There are specific rules in place for secure data communication and risk controls, that address relevant risks and, specifically, operational risk<sup>73</sup>.

However, in Europe open banking services have not been yet widely used, with substantial differences among countries<sup>74</sup>. Users seem to be mostly individuals with high financial and digital skills.

A survey conducted among 5,500 respondents from 22 European countries showed that open banking has been accessed mainly by people who already use digital finance intensively and are keen about financial innovations. Among them, young adults and other active users of financial services, with a high level of trust in digital finance are the main users. The study finds that the preference for anonymity, the reluctance to share data - as well as the distrust in non-bank providers - negatively impact the propensity of Europeans to use

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73. See EBA Regulatory Technical Standards on strong customer authentication and secure communication under PSD2, issued in 2017 and amended in 2022.

74. In Italy, for example, at the end of 2021, clients accessing open banking services were less than 120,000. This compares with the UK where there are 4.5 million regular open banking services' users, of which 3.9 million consumers and 600,000 small businesses.

open banking. In particular, there is no strong evidence on the usefulness of open banking for underserved and low income people (Polasik et al., 2022). Another study performed on Dutch consumers in 2019 found that individuals tend to trust more their own bank than third parties (Bijlsmaa et al., 2020).

Searching for the reasons of this limited success in favouring inclusion, Table 1 compares the PSD2 open banking regime with the GPFi policy options presented in 2021 to favor inclusion when introducing innovative services (GPFi, 2021). The comparison shows that while the European regulation offers a clear framework for customer protection (addressing risks of frauds and providing redress mechanisms), financial inclusion objectives have not been taken explicitly into account by the European regulator when drafting the Directive.

As a consequence, on the hand, intermediaries did not have strong incentives to pose a specific attention to less financially evolved customer when designing their offer for AIS and PIS; on the other hand, national authorities did not accompany the introduction of the new legislation with communication campaigns to increase the awareness of all stakeholders on the issue. In this sense the Directive has been somehow a missed opportunity to enhance inclusion and access to financial services.

**Table 1: PSD2 and the financial inclusion objective**

GPFi policy options 2021	PSD2 provisions for AIS and PIS
Favouring "protection by design"	There is no mention of the need to evaluate the customer profile in offering AIS and PIS, nor a reference to pose specific attention to vulnerable customers.
Embedding financial inclusion objectives-in innovation policies.	There is no mention in the Directive of financial inclusion objectives.
Addressing risks of online fraud and scams and mismanagement of personal data	In case of unauthorized transaction connected with a payment initiation service, the intermediary holding the account is always obliged to refund the customer. European Data protection rules apply to AIS and PIS.
Introducing effective redress mechanisms	Complaint procedures and alternative Dispute Resolution Mechanisms are provided for in the Directive for AIS and PIS.
Designing effective financial education programs	There is no mention in the Directive of the need to accompany the offer of AIS and PIS with adequate financial education initiatives.

Keeping this lesson into account, in the revision of PSD2 some adjustments might be considered. A first set, relatively simple to implement, concerns making more explicit the inclusion goal and providing more (relevant but simple) information to potential users. A second set has a potentially broader scope, affecting some of the foundational choices of the model adopted in Europe.

The first set includes four possible adjustments.

First, the legislator, when disciplining open banking could, at least in the whereas, mention financial inclusion as an objective, alongside innovation and competition. Intermediaries may be invited to take into account the specific needs of different categories of clients, among which also the excluded and less served, when they offer the new services. Moreover, national authorities could be asked to monitor the evolution of the market and intervene if necessary to steer the development of services suitable for the less vulnerable.

Secondly, given that the data acquired via an AIS can also be shared with other counterparties, it might be provided that clients are made aware through easily accessible and readable tools of who can use the data and for which purpose. The customers should also be able to easily revoke consent at any time, using dashboards that enhance transparency and give customers control over their data, fostering trust.

Thirdly, given that open banking is particularly complex and involves more than one provider, it is important to ensure that the characteristics of the service offered to customers are clear and understandable, even beyond what is provided for by transparency rules on a specific contract. A benchmark could be, at least from a theoretical point of view, the Directive 2014/92/EU (PAD)<sup>75</sup>, which has also explicit financial inclusion purposes: whereas 48-49 require communications to be accessible and adequate, and incentivise intermediaries to support the most vulnerable consumers with guidance and assistance on the products. In particular, art. 106 of the PSD2 required the European Commission (EC) to produce a user friendly electronic leaflet explaining the rights of the consumers, that authorities and intermediaries have to make available on their websites. However, the leaflet “Your rights when making payments in Europe” concentrates on electronic payments and makes only a

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75. DIRECTIVE 2014/92/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 July 2014 on the comparability of fees related to payment accounts, payment account switching and access to payment accounts with basic features.

quick reference to the new services provided for by the Directive. A simple and easy-to-read leaflet specifically dedicated to AIS and PIS - describing the characteristics of the services offered, potential benefits, roles and responsibility of the different parties involved, as well as to whom to complain in case something goes wrong - could enhance trust in the new services also by less digitally and financially skilled people.

Finally, specific financial and digital education initiatives could be envisaged to help customers understand their rights and obligations, and risks and opportunities of the new services offered. Specific campaigns could explain the potential benefits of sharing personal data, also in terms of a greater access to the most useful financial services, without taking undue risks.

A wider set of suggestions comes from the comparison of existing open banking regimes around the world (Plaitakis et al. 2020). Among the components that appear as critical to enhancing inclusion, especially for vulnerable individuals in developing countries, are: a) the extension to different financial services (not just payments, but also credit, insurance...); b) “data reciprocity” among market participants (i.e., between data holders and data users) instead of an obligation only on incumbents to share the data (the symmetry might be extended to redress mechanisms); c) a specific attention to cost distribution across market participants (an excessive burden on incumbents may reduce their incentives to an active participation); d) less clear-cut is the evidence on the benefit of a somehow centralized standardization of API (application programming interfaces to be used for data sharing) vs leaving the industry to determine data sharing standards. Also these elements could be evaluated in the future revision of the PSD2 or in the path towards open finance<sup>76</sup>.

Specifically (points a) and b)) how and to what extent data sharing could include also other entities, directly or indirectly involved in the payment business, could be considered. A specific evaluation could be conducted on the costs and benefits of such enlargement, also having financial inclusion objectives in mind. An effective way to ensure data reciprocity – also for the benefit of the underserved - could be assessed, levelling the playing field among different

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76. See the European consultation on Open Finance ([https://finance.ec.europa.eu/regulation-and-supervision/consultations/finance-2022-open-finance\\_en](https://finance.ec.europa.eu/regulation-and-supervision/consultations/finance-2022-open-finance_en)) and the proposal included in the 2023 Commission Work Program ([https://commission.europa.eu/strategy-documents/commission-work-programme/commission-work-programme-2023\\_en](https://commission.europa.eu/strategy-documents/commission-work-programme/commission-work-programme-2023_en)).

actors, and taking into account that some of the new entrants are also Big-tech having a competitive advantage in the collection and management of data; this market evolution was not fully foreseen in 2015, when the expectation was more of small fintechs entering the market, as opposed to incumbent banks<sup>77</sup>.

Regarding the last two points (costs and API standardisation), when drafting the PSD2 the European legislator decided to place the burden of developing the infrastructure for the sharing of the data on the data holder intermediaries, essentially banks, without imposing a unique standard. Banks are also responsible in the first place for compensating the client in case something goes wrong, even if it is someone else's fault. However, avoiding to focus on one side to handle and compensate the customer, and instead fostering a mutual understanding of the respective rights and obligations might to be key to foster the development of open banking services (Carr et al. ,2018).

In this regard, the UK's experience can be analysed as an interesting best practice going beyond PSD2. From the beginning, also due to the role played by the Competition and Markets Authority (CMA), the data sharing between banks and third-party service providers has been standardized mandating the eight major British banks to develop jointly a single, open, standardised API freely available for the whole industry. In addition, the Open Banking Implementation Entity (OBIE) has created a the Dispute Management System, a mechanism to handle requests, complaints or disputes arisen from an open banking originated transaction to which all intermediaries are invited to join. The mechanism itself cannot solve the customer issue but it does provide a tool by which members can share information and provide an outcome for the benefit of their shared customer. Based on the recognition that eliminating barriers to cooperation is essential to achieve the goal of the open banking regime, UK finance proposed to set up a governance body, with the participation of all involved intermediaries, in charge of all strategic decisions regarding the offer of open banking services with a view to "enable consumers, small businesses and corporates to benefit from a highly efficient, safe and reliable Open Data and Payments market, as well as continuing to provide a platform for UK financial institutions to meet their regulatory requirements"<sup>78</sup>.

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77. On this topic see also Pozzolo 2021. On the rationale underpinning reciprocity in customer data sharing frameworks, see: de la Mano et al. 2018; Di Porto et al. 2020; Borgogno et al. 2020.

78. <https://www.gov.uk/government/consultations/future-oversight-of-the-cmas-open-banking-remedies/the-future-oversight-of-the-cmas-open-banking-remedies>.

## Conclusions

Granting third parties access to customers' on-line accounts may give them effective new tools to manage their finances and, thus, new opportunities. In this regard, the promise of open finance is even greater than open banking. If financial inclusion is taken into account from the beginning as one of the objectives of open banking, alongside competition and innovation, the benefits of data sharing could also be more easily available to less evolved customers, which otherwise risk to be excluded.

What is needed? Greater attention to the needs of the most vulnerable, in terms of product design and communication, awareness campaigns and financial education initiatives that inform the public on the benefits of open banking in terms of new services offered, avoiding that customer take undue risks or fall victims of fraud and scams. In this regard, digital education and data protection are essential. It might be worthwhile to consider mechanisms where incumbents and new intermediaries are encouraged to cooperate for the benefit of the shared customer, e.g., through a governance body with wide market representation, capable of agreeing on the basic technological, operational and organisational features of the open banking implementation, such as technical standards for data sharing, liability and dispute resolution.

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