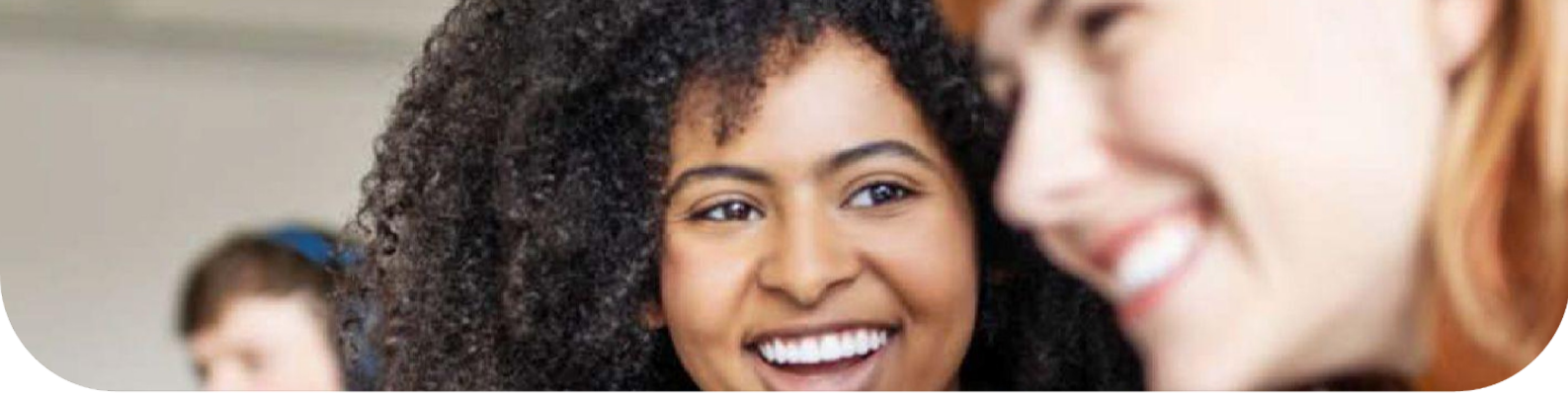
eraneos

Whitepaper

Data Business with Open Finance

23 October 2023



Executive Summary

As the world undergoes a digital transformation, a new financial paradigm, known as Open Finance, the successor to Open Banking, is gaining traction. It signifies a move towards a more interconnected, customer-centric approach to banking, investing, insuring, and other financial affairs, all fueled by technological advancements and data collaboration.

Europe has already pioneered the Open Banking revolution, positioned as the world's best-performing region in terms of the number of Open Banking API Products according to a report by Platformable[1]. Key to its success has been the introduction of groundbreaking regulations, such as PSD2 (Payment Services Directive 2) in 2019, which aims to increase competition and participation in the payments industry from non-banks, fostering innovation and enhancing consumer protection.

With the European Commission’s latest proposal of PSD3/PSR and Financial Data Access (FIDA), the regulatory approach to Open Finance, Europe is laying the foundations for an Open Data Economy in the Financial Services Industry. Up to now, banks have been obliged to give third-party providers access to customers’ transactions, according to PSD2. However, with the rollout of FIDA, banks will have enhanced opportunities to establish themselves as pivotal figures in the financial landscape by accessing data from insurance, investments, mortgages, and beyond.

As a result, banks can pivot their role in the financial ecosystem. Instead of merely holding data, they can now actively utilize it, interfacing with APIs from other financial entities. This development ushers in an array of regulated use cases, benefiting not just banks but also non-banking entities and various financial service providers. We'll delve into some of these in the subsequent sections. With Open Finance, both banks and non-banks have the potential to generate revenue within a data-sharing ecosystem. Furthermore, as Generative AI, such as Chat GPT, becomes more prevalent, Open Finance can capitalize on an array of new use cases.

[1] In June 2022 5564 Open Banking API Products existed around the world. Europe as an Open Banking pioneer offered 2537 API products

Content

Chapter 1

Open Finance – the Gateway to an Open Data World

In late June 2023, the European Commission introduced a proposal for an Open Finance Framework in Europe, termed Financial Data Access (FIDA). Industry experts view this as a game-changer for the financial sector. Banks stand to benefit significantly from this new framework. Instead of merely providing data as mandated by PSD2, they can also access a wide variety of consumer information, including insurance, pension, mortgage, and investment data.

PSD2 Laid Foundations

Let's break it down step by step: PSD2 set the stage for open banking in Europe in 2019. With its enactment, banks were required to offer standardized Application Programming Interfaces (APIs) to Third-Party Providers (TPPs). These TPPs could access consumer transaction data to fuel their digital services, provided consumers consented to data use. Leveraging this data, TPPs introduced services such as Account Aggregation, Payment Initiation, Credit Assessment, and Personal Finance Management (PFM)—all under the purview of PSD2. This enabled consumers to consolidate all their bank accounts on a single platform (account aggregation), offering insights like spending patterns. Additionally, they could directly make payments for goods and services at a TPP's checkout, bypassing traditional bank access (payment initiation). As of the close of the second quarter in 2022, 1160 European banks had introduced over 2500 API products. When viewed on a global scale, Europe holds the leading position in sheer quantity, encompassing both platforms and products. A significant portion, 82%, of these APIs were required to be created, known as mandated APIs.[2]

[2] Platformable, Open Banking/Open Finance Trends Q3 2022

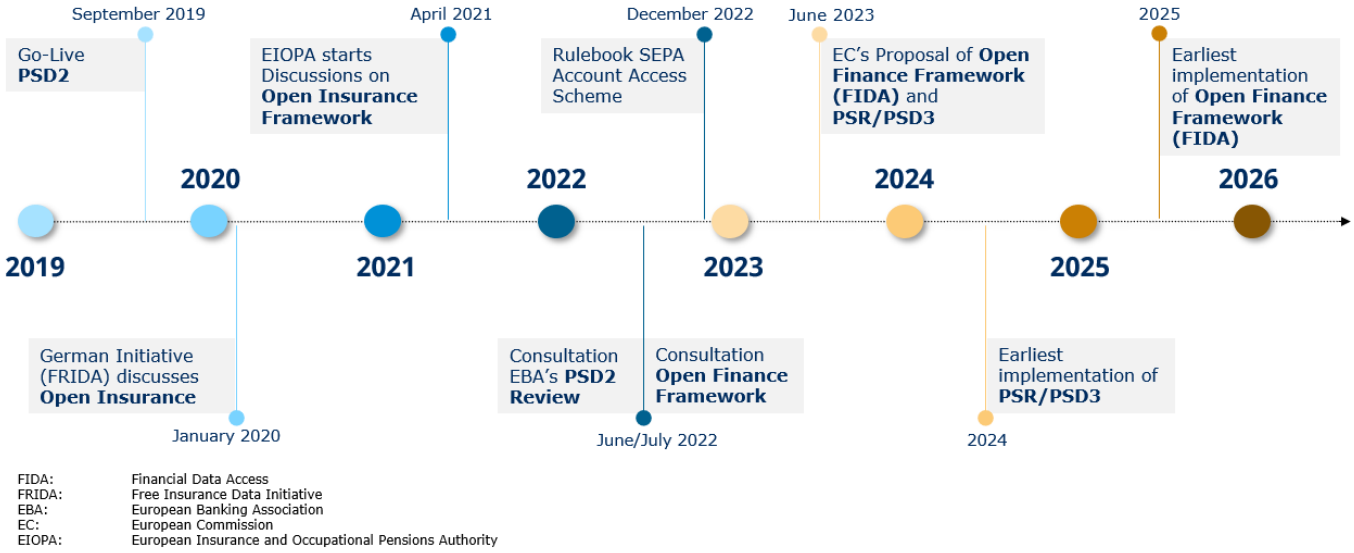


Figure 1: Timeline of relevant regulatory frameworks concerning Open Banking and Open Finance

As FIDA is not limited to Banks – a new opportunity for Banks

Yet, from its inception, PSD2 wasn't exactly a level playing field for banks. While they were mandated to share their data, entities like fintechs, asset managers, and insurance companies weren't under the same obligation.

That is now being enhanced. The European Commission is proposing a series of standards and frameworks intended to accelerate the Open Finance movement. The proposal for Financial Data Access (FIDA), which can be regarded as a synonym for 'open finance' will revolutionize the financial industry. As the term 'open finance' already says, FIDA is not limited to banks. It encompasses a broader range of financial institutions including insurance providers, investment firms, and fintech entities. These institutions will also need to grant access to their customer data, covering areas like investments, pensions, insurance, and more, all through standardized APIs.

What is the aim of FIDA?

FIDA is set to evolve the landscape of PSD2's Open Banking, laying down foundational principles, uniform standards, and the infrastructure for an Open Finance Data sharing ecosystem. The objective of FIDA is to promote digital transformation and speed up the adoption of data-driven business models in the EU financial sector. This will empower both consumers and businesses to access personalized, data-driven products and services that better fit their specific needs, regardless of the type of financial institution they are dealing with.
The market expects the effective date of ***FIDA in 2026, at the earliest in 2025****. The proposal will take the form of a regulation that is* ***directly applicable to all Member States of the EU****. This is to ensure that common rules apply across all Member States regarding the conditions for access to and handling of financial services customer data.*

FIDA Will Put Banks Back in the Driver’s Seat

With the adoption of PSD2, banks primarily assumed the role of API providers, though there are notable exceptions (see 3. Use Cases). Initially, Third-Party Providers, predominantly fintechs, dominated the customer interface, leveraging customers' transaction data in their capacity as API Consumers. However, with the rollout of FIDA, banks have the opportunity to reclaim this interface, stepping into the API Consumer role. It's not just banks that can access this financial data with customer's consent. Both financial and non-financial institutions can now craft digital solutions centered around customer data held by entities such as insurance companies, asset managers, fintechs, etc. as long as they satisfy the criteria for being an API Consumer.

Banks benefit from their experience and hands-on expertise in establishing technical interfaces for third-party providers in context of PSD2, setting a robust groundwork for future endeavors. Utilizing this wealth of experience allows them not only to refine their services but also to prioritize developing actionable use cases over navigating technical implementation issues. This proactive approach also opens avenues to regain pivotal customer touchpoints, fostering greater engagement and interaction in the time to come. Moreover, it encourages enhanced security measures and nurtures the potential to lead in innovative financial technology projects, ensuring a competitive edge in the dynamic marketplace.

Premium APIs Form the Monetizable Standard Uunder FIDA

Using Open Finance, banks and other financial companies can offer paid premium APIs. The compensation for data sharing is an explicit part of FIDA. The proposal says that data providers should be able to request reasonable compensation from data users for putting in place APIs in accordance with a financial data-sharing scheme.

According to the EC’s proposal, the scheme itself will determine the uniform technical and data transfer standards. This means API providers will not provide APIs with different technical standards unlike the challenges seen with PSD2. Under FIDA, individual sectors like payments, insurance, and pensions are instructed to roll out their specific schemes, and consequently, their distinct technical standards.

Each of these schemes will encompass frameworks for API compensation. Unlike the PSD2 era where banks had to offer their APIs at no cost, they can now capitalize on these APIs, effectively monetizing their data. Beyond that, it paves the way for banks to develop a multitude of new use cases. Numerous other nations have already initiated regulatory steps towards establishing an Open Finance Ecosystem (see next page).

Europe can draw inspiration from global Open Finance initiatives

Various global regions are adopting unique approaches to open finance. In North America, instead of being driven by regulations, Open Finance and Open Banking are propelled by the market, leading to various industry partnerships.
Asian countries like India and Singapore also prefer a market-driven approach. India's substantial open banking ecosystem comprising over a billion accounts, stands as a pillar in the global open finance landscape. Singapore fostered financial data exchange through a unified platform through which all financial players can exchange data.
South American countries prefer a regulatory driven approach. Brazil launched a notable open finance initiative in 2021. The regulatory body established a governance framework and adopted a leadership approach, positioning Brazil as a frontrunner in open finance endeavors.
In 2023, Nigeria introduced open banking and open finance guidelines as the first African country. Leveraging Consumer Data Rights (CDR), Australia is advancing towards an Open Data Economy, with a current emphasis on "Open Energy" and "Open Telco," facilitating data accessibility in the Utilities and Telecommunication sectors.
These diverse strategies illustrate the dynamic, evolving landscape of open finance worldwide.

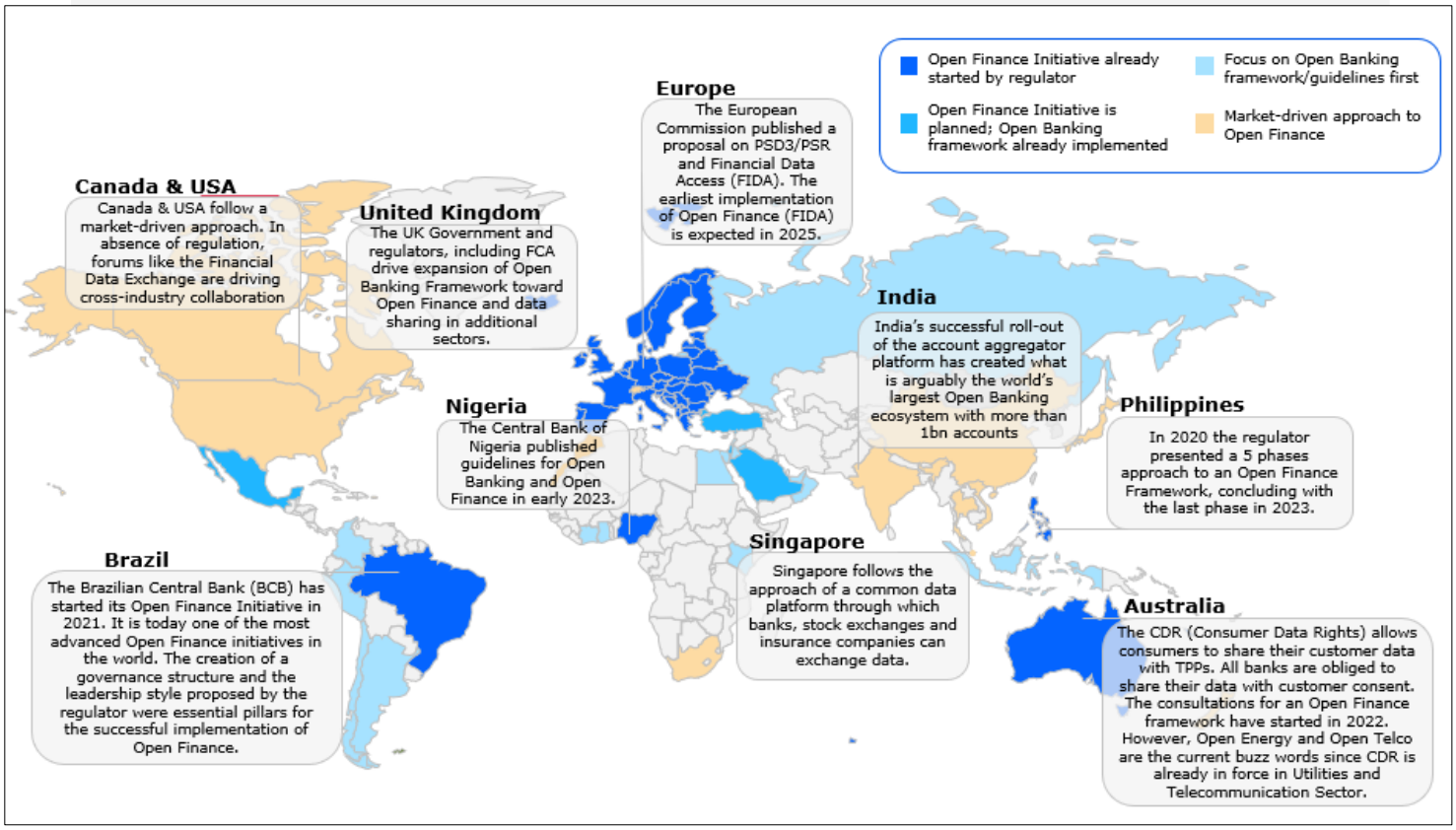


*Figure 2: Global Approaches to Open Finance**

Source: Own illustration based on www.openbankingmap.com; Platformable: Open Banking Trends Report 2022

Chapter 2

Use Cases

FIDA Will Enhance Existing PSD2 Use Cases

In the initial three years post-PSD2's 2019 implementation, banks predominantly concentrated on seamless API integration, without placing significant emphasis on crafting Use Cases based on customer transaction data.

Open Banking platform facilitator, ndgit, revealed that while 83% of their PSD2 users in Europe are banks, a staggering 96% of API requests originate from Third Party Providers (TPPs), illustrating that banks primarily focus on functionalities like Multi-Banking, while TPPs are venturing into more sophisticated business models. Major banks in Germany, including Deutsche Bank and Commerzbank, have launched Account Information Services (AIS), but fintech companies still hold a dominant position in this domain.

Finanzguru, a German financial tech company, is a top example of diving deep into open banking. They stand out, especially in bringing together account details and managing personal finances.

Open Finance is going to enhance current Open Banking Use Cases rather than creating entirely new ones. Most consumers might be unfamiliar with the term "Open Finance". The key is to seamlessly integrate it into the daily use cases consumers encounter. By harnessing a broader spectrum of financial data, Open Finance will enhance existing Use Cases, such as Credit Assessment Buy Now Pay Later, and Account Aggregation. The graphic below provides a summary of examples of Open Finance use cases and potential future cases for an Open Data Economy.

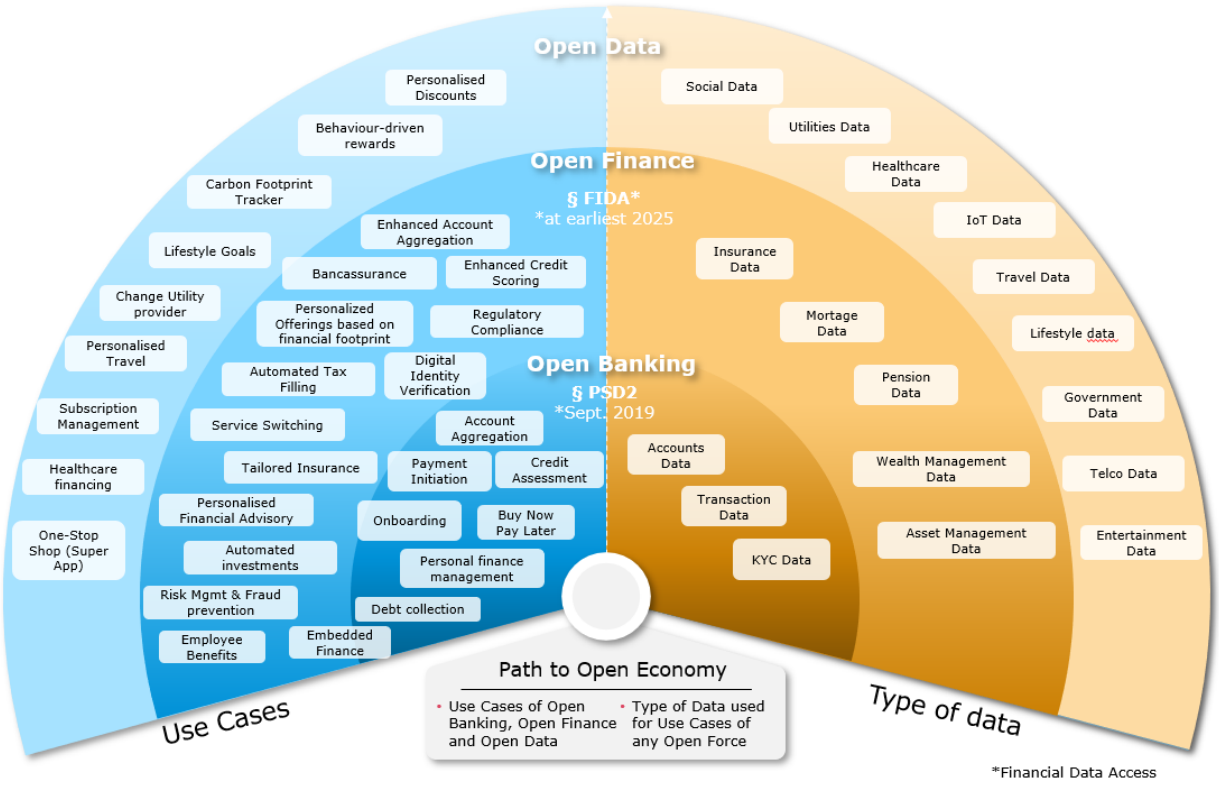


*Figure 3: The Path to Open Economy**

Source: Own illustration based on Open Banking in Saudi Arabia, Mod5r & WhiteSight.

Spotlight on Top Use Cases: A Quick Overview

Super Banking App

With FIDA's rollout, Account Information Services can be broadened to encompass the following additional accounts: mortgages, credit and savings accounts, investments in financial instruments, insurance-backed investment products, crypto-assets, real estate, pension products, and other financial assets. Banks and other financial institutions will be able to bundle all financial affairs on only one platform by becoming a Super (Banking) App for consumers. This positions them directly at the customer's point of engagement. A daily direct interaction between the customer and the bank will not only strengthen customer loyalty but also generate valuable customer data. Such data can provide insights into the customer's financial situation and fuel value-added services like Personal Finance Management (PFM). This in turn facilitates actionable budgeting tips and tailored savings recommendations.

Pioneer: The Asian Super App Grab

Originating in Singapore, the Grab App started as a cab booking and ride-hailing platform in South East Asia. The demand for seamless payments there caused the creation of a mobile wallet to support their primary transportation app. By extending this wallet's use to third-party merchants, Grab accumulated a vast amount of data regarding customer payment preferences. This information, combined with geo-location insights and data from transport, food delivery, and social networks, paved the way for a deeper understanding of a customer's financial profile in new ways. Meanwhile, various financial institutions have also been integrated into the app, which launched GrabPay. At present, GrabPay is a Super App bundling all financial affairs plus additional services in a single app.

Personalized offerings based on financial data

The proposal of the European Commission respects the General Data Protection Regulation (GDPR), which sets the general rules on the processing of personal data related to a data subject and ensures the protection of personal data as well as the free movement of personal data.

Nevertheless, if customers give TPPs explicit consent to use their data for marketing and cross-selling purposes, TPPs can offer personalized products based on the data collected through enhanced account aggregation. In this way, it will be possible to offer product campaigns that are more in line with customer's real needs.

Pioneer: Vodafone using Open Banking

In 2022, Vodafone launched its "Voxi for now" plan in the UK, offering customers on state social benefit payments unlimited 5G, texts, and calls for a consistent monthly fee of £10. To qualify for this rate, customers had to verify receiving a benefit payment within the prior 12 weeks. Instead of relying on bank statements, which would have necessitated significant manual processing, Vodafone turned to Open Banking. Collaborating with Moneyhub, they integrated an Open Banking connection into their onboarding process. This allowed users to link with Moneyhub and forward their last 8 weeks of transactions. Moneyhub's system would then scrutinize these transactions and simply confirm to Vodafone with a "yes/no" response if a benefits payment was identified.

Embedded Finance

Embedded finance describes the embedding of financial solutions in a company's own platform or app. With Open Banking, many companies have already benefited from keeping customers on their own platform throughout the entire purchasing process without having to redirect them to a payment service provider. These include companies from retail and e-commerce, automotive, healthcare, travel and hospitality, and other platforms and marketplaces. With Open Finance, insurance or even investment services can be integrated into the app of a non-financial business.

Pioneer: 1st stage Embedded Finance with Mercedes Fuel&Pay

Mercedes Benz has incorporated a feature called Fuel & Pay in their Mercedes Me App, offering a seamless payment solution for refueling. Customers can effortlessly pay right at the pump using their Mercedes. The payment procedure is integrated into the app, with authentication done via the smartphone. This eliminates the need to use a separate banking app, visit the gas station cashier, or swipe a card at the pump. While the amount is directly debited from the user's bank account later on, this can be viewed as an initial foray into Embedded Finance Use Cases.

Digital Identity Verification

A unified digital identity recognized across various platforms can streamline user verification processes. For example, a bank's authentication could be accepted by an affiliated investment platform, avoiding redundant verification steps and enhancing efficiency with user consent. This system, fortified with multi-factor or biometric authentication measures, not only reduces potential errors and fraud risks but also speeds up customer onboarding in financial entities. Beyond finance, digital identity verification holds promise in enhancing security and efficiency in e-government, healthcare, and other sectors.

Pioneer: Banco do Brasil – Verification via bank credentials

Banco do Brasil stands out for its dedication to Open Finance, going above and beyond regulatory requirements. The bank operates with a transparent platform strategy and an inclusive ecosystem for its API program, even presenting opportunities outside traditional banking. Pertaining to Identity Verification, the BB API Platform's Login (OAuth) enables BB's clientele to utilize their bank details to access Brazil's government online portal (gov.br), which offers public services to its citizens.

Buy Now Pay Later (BNPL) & Enhanced Credit Assessment

With the data access capabilities of Open Finance, BNPL providers can quickly assess a customer's financial position and creditworthiness by tapping into their financial data (with customer's consent). This facilitates immediate lending decisions. BNPL providers generally present diverse repayment options, from bi-weekly to monthly, enabling users to select the plan most compatible with their finances. BNPL is especially dominant on online shopping platforms. Open Finance APIs facilitate the effortless incorporation of BNPL options into e-commerce transaction processes, offering consumers an alternative payment method right at the point of sale.

By harnessing a wider spectrum of financial data via Open Finance, BNPL providers can curate personalized promotions or unique terms for specific customers, considering their shopping trends and financial practices."

BNPL is more than Klarna and PayPal

Affirm, Afterpay, Amazon Payments, Klarna, Mastercard, PayPal, Split Payment, Visa, Zip – these are the leading players in the BNPL Market. Not to forget, Apple Pay, Barclays, Revolut, CitiGroup, Billie, JP Morgan, Goldman Sachs, and many more. Financial and non-financial institutions have already discovered the potential of BNPL. The market size of B2C BNPL will be valued $309.2 billion in 2023 and will almost double in market size ($565.8 billion) by 2026 based on current calculations. Open Finance and GenAI will give BNPL an additional lift since credit assessments could be conducted with a bigger amount of financial data available.*

*GlobalData Report 2023

Open Finance and Artificial Intelligence

AI has the potential to revolutionize Open Finance. This advanced technology can enhance the efficiency and precision of credit scoring, fraud prevention, and individualized financial planning. By evaluating factors such as credit records, earnings, employment data, and user behavior, AI can refine risk assessments and credit evaluations.

Compared to conventional methods, AI can sift through extensive datasets, recognize trends, and spot irregularities more adeptly. As they continually adapt from massive data sources, these algorithms can anticipate and prevent fraudulent actions in real-time, strengthening security for banks and fintech firms. Furthermore, AI can deeply analyze customer data, considering aspects like spending trends, income, investment leanings, and long-term objectives. With this insight, the models can craft personalized financial blueprints, recommending ideal investment routes, budgeting approaches, and saving avenues. This offers customers a unique, informed perspective on managing their finances.

Consider this scenario of GenAI in Banking

A bank consolidates all financial services— encompassing insurance, investment, mortgages, and more— within a single app. This app provides Personal Financial Management features, like budgeting tools and spending behavior analysis. While users can get an overarching view of their finances, some questions might remain challenging, such as:

- *Will I be able to buy that car next year without resorting to a loan? How much credit might I be eligible for?*
- *Based on my current financial stance, when can I purchase a home with a swimming pool?*
- *What should be my income to sustain a particular lifestyle?*

Such complex questions might be beyond the scope of standard banking apps. However, Generative AI can bridge this gap.
With its capability to parse extensive financial data of users, GenAI can offer advice and perspectives comparable to a financial advisor. Customers won't need to manually review their account details, comb through insurance documents, or evaluate investments. They can simply pose their questions to GenAI and receive concise, easy-to-understand responses in just a few seconds. As the data pool grows over time, GenAI's capacity to furnish precise advice or suggestions based on comprehensive data will only enhance.

The highlighted use cases merely scratch the surface of potential opportunities for both banks and non-banks. The various examples of companies already presenting similar scenarios indicate that current Open Finance doesn't necessarily have to revolutionize, but rather refine and enhance existing Open Banking applications, leveraging the abundance of financial data available to provide pinpoint solutions.

Chapter 3

Data Business with Open Finance

Let’s Start From Scratch:

Generally, there are two ways to monetize data in an Open Finance environment:

1. **As data consumer** and/or
2. **As data provider**

As a **data consumer**, data can be used by creating data insights e.g. based on analytics. While internal data is valuable, the advent of Open Finance allows businesses to greatly capitalize on external data accessed via APIs. Financial entities, along with third-party providers such as retailers, automotive firms, and other non-banking institutions, can develop digital solutions utilizing customer information from sources like insurance firms, asset managers, and banks. By doing so, these data users can create tailored products and services that cater to their customers' needs, thereby generating revenue. Utilizing both external and internal data insights can lead to increased profits, cost reductions, and risk mitigation.

As a **data provider**, internal data can either be made available on a fee basis or as a broker to external parties. This means, the customer data can be sold to data users, provided customer consent. The European Commission’s proposal for FIDA will provide schemes for every industry that contain regulations and standardization for premium APIs. Rules for pricing of APIs in FIDA still need to be worked out in the near term. However, APIs aren't the sole avenue for data monetization. There are already promising Data Sharing Cloud Platforms and Data Marketplaces available.
(Continue to the next page)

Data Marketplace and Data Sharing via Snowflake – no need for APIs

A data marketplace offers an alternative to utilizing APIs for data sharing. In such marketplaces, data providers have the opportunity to monetize their assets by sharing data sets or presenting data analytics services to the users. It allows data consumers to delve into and scrutinize the available data sets and services, aiding them in making decisions firmly rooted in data analysis. This approach not only opens up a new avenue for revenue but also heightens market presence through the swift and secure provision of live, regulated, and read-only data sets to clients.
Snowflake stands as an exemplary data marketplace offering these services, extending its capabilities to secure data sharing and fostering collaboration through Data Cloud. It facilitates organizations in secure data interchange within their business network while maintaining control over the accessibility of the shared data. This dynamic setup enables organizations to function as data consumers, providers, or both, enhancing operational efficiency and data management.

Note!
Today, Open Finance Use Cases are already within reach. FIDA just lays out the regulatory boundaries, making clear the present opportunities or the chances that were previously missed. Partnerships centered on data can be forged between financial institutions or with non-financial entities, capitalizing on the wealth of customer information. It's up to banks and non-banks alike to position themselves in this data exchange economy.

Financial Entities must establish their position within the Open Finance Landscape

In the rapidly evolving world of Open Finance, it's no longer sufficient for financial and non-financial institutions to simply participate — they must define their unique role. The landscape is becoming crowded, with traditional banks, fintech startups, and even non-financial firms entering the arena. Each player brings distinct strengths, from technological expertise to customer relationships hence holding valuable customer data. But to remain competitive, these entities must find out their role, leverage their core competencies, and adapt to the dynamic demands of the data-sharing ecosystem. It's a race not just to join, but to lead in a domain where innovation and collaboration are key.

In the evolving financial landscape, entities can be categorized as Data Holders, Data Providers, Data Consumers, and Data Leaders, each playing different roles in the data-sharing ecosystem.

Traditionally, traditional financial institutions like banks and insurance companies were mostly **Data Holders**, a role limited to sharing data with third parties upon request only. However, regulations like PSD2 and the forthcoming FIDA are shifting this static role towards a more proactive engagement, encouraging them to monetize their vast datasets ahead of a mandatory transition that could start as early as 2025.

Data Providers mainly focus on selling data through paid premium APIs, via data cloud or data marketplace, while not leveraging external data significantly.

Meanwhile, **Data Consumers**, including large tech firms like Google, Apple, and Amazon, capitalize on both internal and external data to innovate and develop new products and services while maintaining a certain level of data confidentiality. Bigtechs gain advantages from the social and behavioral data they collect from their users' online actions and are hesitant to disclose it to external parties.

Data Leaders stand out in this ecosystem as they not only actively engage in utilizing open finance but also foster extensive collaborations with various institutions, positioning themselves as pivotal players in the data-sharing landscape through their dynamic approach to data utilization and partnership. They hold a balanced role, actively engaging in both supplying and utilizing data, facilitating continuous customer engagement, and nurturing data-centric business models.

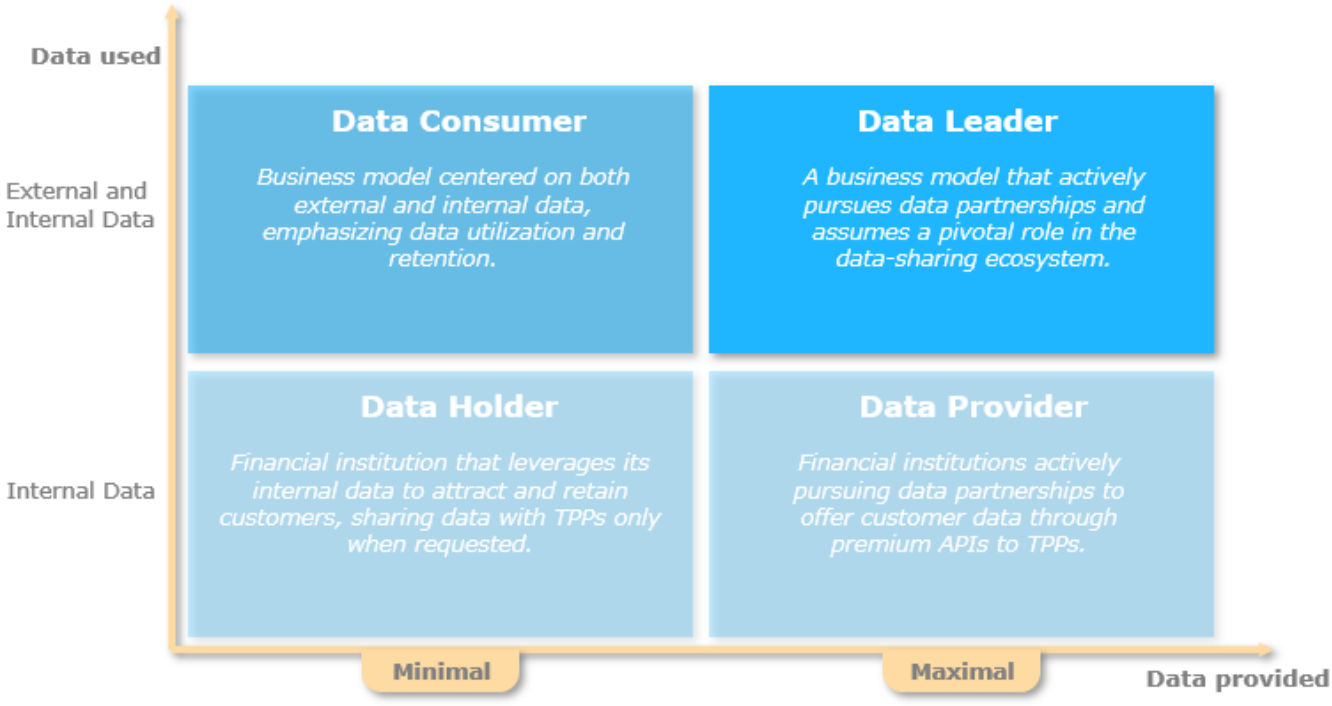


Figure 4: Roles in an Open Finance Data-Sharing Ecosystem (simplified model)

Banks and Insurance Companies in an Open Finance Ecosystem: Strategy for a Data-Driven Future

The evolution, especially with the introduction of PSD2 and the forthcoming FIDA, indicates a shift towards more active data sharing and monetization. The future of data sharing in the financial landscape will see **banks and insurance companies** transitioning from mere Data Holders to more active roles, possibly as Data Providers or partners in data marketplaces. Data management capabilities will be crucial for banks that want to become big players in Open Finance and Open Data. The first wave of Open Banking was focused on APIs, which the ecosystem has more or less understood and mastered. Now, with Open Finance banks must master data management, machine learning, and artificial intelligence. All of these capabilities will help them to realize the potential of Open Finance.

Actions Banks must undertake to excel in a Data-Driven Future:

1. Start your Open Finance and Data Sharing Impact Assessment

Begin with a deep dive into the open finance landscape, evaluating how data sharing could potentially impact your organization. Consider factors such as regulatory demands and market trends. Setting a strong foundational understanding at this early stage will guide your future strategies effectively.

2. Develop your Data Strategy

A robust data strategy is essential in the data-centric world we live in. Build a roadmap that highlights your business goals, prospective products, and your intended role in the data ecosystem. This step is about defining where you want to be in the future and how data can facilitate this journey.

3. Define your measures for success

Improving data quality and optimizing data-based decision-making times is important to quantify the effectiveness of the data strategy and continuously adapt it to corporate goals. Specific KPIs, for example, to measure conversion rates in data-driven marketing campaigns, serve as a guideline for future optimization measures.

4. Forge your Data Ecosystem Partnerships

Collaboration is your gateway to deriving immense value in open finance. Start identifying and collaborating with entities that can bolster your capabilities. This stage is about cultivating relationships that can foster mutual growth and unlock new avenues in the open finance sector.

5. Kickstart your Ecosystem engagement through implementation!

With strategies in place and partnerships forged, it's time for action. Focus on seamless implementation, transforming the well-laid plans into tangible products and services. This phase is about realizing your digital transformation aspirations by actively engaging with the ecosystem, thus catering to the contemporary market needs.

Looking at the current market trends and impending regulations, it can be inferred that we are steering towards a future where data-sharing will be pivotal. It is advocated that both financial and non-financial establishments deliberate on their prospective role in this evolving data-sharing environment which is not only endorsed by the European Union but is a globally acknowledged trajectory towards fostering open data culture.

Alongside, it is imperative to recognize the central role technology plays in this paradigm, especially considering the indispensable role of Big Data, AI, and Cloud Platforms in adeptly managing and leveraging the escalating volume of available data for informed business resolutions. Moreover, it is becoming increasingly clear that collaborative efforts, partnerships, and bridging financial and non-financial entities are not only beneficial but essential, working to create solutions that enhance user experiences by leveraging the potential of shared data. Thus, it is a prudent step for organizations to forge partnerships and embrace technologies to fully harness the potential of an open data ecosystem.

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