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Impact of Open Finance on Financial Product Innovation

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Impact of Open Finance on Financial Product Innovation

Abstract

The aim of this study is to explore and better understand the potential impact of open finance on financial product innovation. To achieve this goal, it is important to understand what drives innovation in the financial ecosystem, what are consumer opportunities, how this impacts the consumer journey, and what challenges they face in the process. Bringing out the industry perspective, it is also necessary to understand the opportunities and challenges for financial institutions, how these impact their business processes, and the industry's readiness and acceptance of open finance.

To explore the research objectives, I conducted semi-structured qualitative interviews with 12 experts from different fields, which were recorded and later transcribed for thematic analysis. The analysis involved coding the transcripts based on pre-defined themes and sub-themes. The results highlight that open finance is catalyzing a new wave of innovation in financial products with a multifaceted impact.

The main themes of our findings include customer-centric personalization, ease of product switching and contextual innovation, the role of trust and decision-making, market disruptions, and operational and strategic challenges for service providers. As a result, the thesis provides an overview of how companies can benefit from open finance in terms of product range, business process improvements, and the challenges of implementing the new directive. The contribution of this thesis will be useful for organizations and individuals seeking to understand where innovation is most likely to occur in financial products and what barriers need to be addressed in terms of open finance.

Keywords: consumer, data, financial products, open finance, personalization

CERCS: P170 Computer science, numerical analysis, systems, control

Avatud finantseerimise mõju finantstoodete innovatsioonile

Kokkuvõte

Selle uuringu eesmärk oli uurida ja paremini mõista avatud finantseerimise potentsiaalset mõju finantstoodete innovatsioonile. Selle eesmärgi saavutamiseks tahtsime mõista, mis soodustab innovatsiooni finantsökosüsteemis, millised on tarbijate võimalused, kuidas see mõjutab tarbija teekonda ja milliste väljakutsetega nad protsessi käigus silmitsi seisavad. Tööstusharu perspektiivi arendamise kaudu pidime mõistma ka finantsasutuste võimalusi ja väljakutseid, kuidas need mõjutavad äriprotsesse ning valdkonna valmisolekut ja aktsepteerimist avatud finantseerimisele.

Uurimiseesmärkide uurimiseks viisime läbi poolstruktureeritud kvalitatiivseid intervjuusid 12 eri valdkondade eksperdiga, mis salvestati ja hiljem transkribeeriti temaatiliseks analüüsiks. Analüüs hõlmas transkriptide kodeerimist eelnevalt määratletud teemade ja alateemade alusel B2B ja B2C kontekstis. Tulemused rõhutavad, et avatud finantseerimine katalüüsib uut innovatsioonilaine finantstoodetes, millel on mitmetahuline mõju.

Meie järelduste peamised teemad hõlmavad kliendikeskset isikupärastamist, tootevahetuse lihtsust ja kontekstuaalset innovatsiooni, usalduse ja otsuste tegemise rolli, turuhäireid ning teenusepakujate tegevusalaseid ja strateegilisi väljakutseid. Seetõttu annab lõputöö ülevaate sellest, kuidas ettevõtted saavad avatud finantseerimisest kasu tootevaliku, äriprotsesside täiustamise ja uue direktiivi rakendamisega seotud väljakutsete osas. Selle lõputöö panus on kasulik organisatsioonidele ja üksikisikutele, kes soovivad mõista, kus finantstoodetes on innovatsiooni kõige tõenäolisem esineda ja milliseid takistusi tuleb avatud finantseerimise osas lahendada.

Märksõnad: tarbija, andmed, finantstooted, avatud finantsid, isikupärastamine

CERCS:P170 Arvutiteadus, arvutusmeetodid, süsteemid, juhtimine (automaatjuhtimisteooria)

1 Introduction

The digital transformation in the financial ecosystem has increased access to data and our ability to process large data sets. Technology has evolved rapidly and has enabled financial institutions to create more advanced products by better leveraging their customer data. Banks have always relied on customer data to improve their offerings, risk assessment, and efficiency. For example, a bank might look at what customers buy to offer customized credit limits or suggest investment products based on spending habits. These innovations have formed the scaffolding for a desire to improve financial services, which ultimately is (and has for the last several decades been) limited to only the data that individual institutions own. Customers often have financial products such as insurance policies, pension funds, or mortgages spread across multiple banks.

However, limited data sharing between institutions prevents the development of more comprehensive financial solutions that could integrate information from different sources in one place. Expanding data sharing within the financial services ecosystem is widely seen as a way to drive innovation, increase competition, and support the growth of small and medium enterprises (SMEs). One of the main goals of open finance in the EU is to create a level playing field, increase competition, and have space for new entrants in the financial ecosystem. The EBA plans to achieve this goal by providing financial products and service providers with more access to data conditional on consumer consent so that they can create more innovative financial products. The developments are part of a larger strategy of democratizing data, increasing collaboration, and creating new products in the European Union.

The 2020 Digital Finance Package identified this as a critical area of focus, and subsequent efforts, such as the Financial Data Access (FiDA) and the Payments Package of June 2023, have aimed to expand Open Banking and introduce Open Finance. This package includes amendments to PSD2 (PSD3), a Payment Services Regulation (PSR), and a new FDA Regulation for financial data access. The European Parliament's ECON Committee has also shaped this regulatory landscape, adopting a report for a harmonized framework for access to financial data at the EU level.

Financial Data Access (FIDA) is a new regulatory framework that establishes guidelines for secure data sharing outside of the traditional banking setup. The directive interfaces with several players, such as data users, data holders, and gatekeepers, in-

cluding insurance solutions, pension plans, and investment platform products. FIDA works to create a standardized, protected framework for people to share their financial information with third parties through secure channels under regulatory supervision. The EU legislative measure works to develop a unified financial system that promotes transparency and increases competitive market forces through its implementation. 2018 marked a pivotal milestone for the EU financial sector, also known as the "Big Bang II," due to the parallel implementation of four transformative measures. These measures include different regulatory initiatives, each addressing a separate objective (European Banking Authority, 2018).

The measures included:

Digital Regulatory Reporting Requirements: The Markets in Financial Instruments (MiFID II) and the Alternative Investment Fund Managers Directive (AIFMD) introduced reporting obligations to protect investors and improve transparency (Zetzsche et al., 2020).

General Data Protection Regulation: GDPR established a data privacy and protection framework. Its provisions, particularly those related to data protection, complemented the objectives of PSD2 by allowing customers to transfer their financial data between service providers smoothly (European Commission, 2016).

Open Banking (PSD2): PSD2 mandated and forced access to customer account data to licensed third-party providers through secure APIs. This has laid the foundation for the development of new financial products in the EU (European Banking Authority, 2018).

Pan-European Digital Identity Framework (eIDAS): The eIDAS regulation facilitated cross-border digital identification and authentication, allowing the public to access financial services seamlessly throughout the European Union.

Together, these measures laid the foundation for digitalization and also for transformation that opened new opportunities to develop customized solutions addressing specific consumer needs.

Open finance represents a continuation and expansion of the principles introduced by open banking. Research has shown that while open banking facilitated the development of new financial products and services, adoption has been uneven and many expected benefits have not fully materialized (Vives, 2019; Zachariadis & Ozcan, 2017).

The concept of open finance goes beyond handling payment data in open banking by incorporating comprehensive financial data consisting of savings, pensions, insurance,

and investments. New financial innovation opportunities arise through this broader scope, allowing service providers to build specific and dynamic financial products. The comprehensive nature of open finance contrasts with open banking, as it aims to transform all financial operations through a whole-system approach and increase market competition between legacy institutions and new participants. This thesis investigates the impact of open finance on the evolution of financial products and services. Specifically, it seeks to understand how broader access to financial data will influence product innovation and whether it can overcome some of the limitations observed in open banking. Although existing research suggests that it is still too early to assess the full economic implications of open finance due to the absence of a complete market cycle for fintech and new business models (Zetzsche et al., 2020), this study aims to contribute by evaluating the potential value that open finance could provide to the European Union as a whole.

The research aims to have a deeper understanding of what open finance can provide in the EU and the implications of open finance for financial products and services. Thus, the overarching research question of this thesis is how open finance should impact innovation in financial products and services.

The research questions are as follows.

RQ1: How can existing financial products and services be innovated considering the open finance directive? Understanding existing products on the market and the open finance promises of direct products provides the foundation for analyzing opportunities for innovation.

RQ2: How would open finance impact consumers of financial products and services? By enabling data sharing and increasing the operability of data, open finance promises to have a customer-centric approach. However, there are obstacles and unpredictable consumer behavior. Although history suggests existing challenges such as trust and acceptance with regard to new financial products, the research question should help to better understand the current impact on consumers after the digital shift.

RQ3: How would open finance impact financial products and service providers? The expected scenario from open finance is to impact the decision-making processes of all major players, such as traditional banks, fintech companies, big tech organizations, and digital banks. These actors shall face unique opportunities and challenges that require organizations to tailor their efforts accordingly.

RQ4: How can open finance impact the business processes of financial products and

service providers? For Open Finance to function correctly, it needs transformation in operational processes. Understanding how these transformations occur enables providers to change their perspective and optimize processes efficiently.

RQ5: How can open finance impact consumer processes in adopting financial products and services? Customers rely on organizations for a seamless, personalized customer experience. Analyzing these impacts shall help to understand and improve decision-making for organizations in the evolving open finance ecosystem.

RQ6: What are the challenges for financial products and services providers in adopting and capitalizing on Open Finance? This research question aims to identify the challenges ahead for the four major players, including big tech, traditional banks, fintech companies, and digital banks.

RQ7: What are the challenges for consumers of financial products and services about open finance directives? The motivation behind this question is that it shall help design inclusive and user-friendly products and services that enhance consumer confidence and accessibility. Addressing challenges such as lack of digital literacy, trust, and security risks will help better adapt to open finance directives.

RQ8: What challenges will industry stakeholders face in implementing Open Finance and reaching maturity? This question aims to understand the industrial and infrastructure gaps. It focuses on the readiness needed in the ecosystem, the standardization of APIs and the alignment between technology enablers, providers, and regulators.

The qualitative research design uses stakeholder interviews as its main data source to answer these research questions. The thesis utilizes representatives from financial institutions and fintech firms, members of regulatory bodies, and representatives from consumers. The research employs interviews that reveal how the industry understands open finance, its expected hurdles, and positive outcomes. Secondary data from academic literature, regulatory reports, and industry white papers enhance the primary information obtained in the study. Open finance remains theoretical and has not received widespread implementation. This research methodology enables experts and researchers in the financial sector to create a future-oriented study.

The benefits of the research thesis are multifold. It shall benefit professionals directly involved in the development of new financial products and services. Individuals working in research and development and marketing divisions in the financial industry should also

help, as they must understand evolving consumer behavior and innovate product offerings accordingly. In this research, a qualitative approach is adopted based on interviews. The insights gathered from semi-structured interviews with industry experts will form the foundation for the study. Therefore, this thesis shows how organizations can understand the impact of open finance directives from both consumers' and producers' perspectives. This research expands the knowledge of financial innovation while filling knowledge gaps and identifying key challenges and opportunities associated with Open Finance adoption.

The thesis continues as follows. Part I introduces the topic, the core principle of open finance, the regulations involved, and describes the research question. Part II covers the background of open finance, the key players involved, and the technology used in the emerging open finance ecosystem. In addition, it explores the new developments in financial product innovation with the changing society and the behavioral landscape of the customer. In addition, it explores the innovation of financial products and how they have evolved for existing and potential customers in the last few decades. Part III covers the data and methodology used in the analysis. The results of the analysis of the interviews are then presented in part IV of the findings. Part V includes a discussion of the results and their limitations. Part VI concludes by confirming the impact of open finance in the product innovation space and future recommendations in the financial sector in the European Union.

2 Background

2.1 Open Finance and Open Banking

Open Finance and Open Banking are seen as closely related concepts in the evolution of the digital financial ecosystem, but differ in scope. Open banking generally refers to the regulated sharing of data (focused on payments data) with third-party providers through a secure API connection, initiated by policies like the EU Payment Services Directive (PSD2), which took effect in 2018. It required banks to allow third-party providers who are licensed with access to customer payment data and payment initiation capabilities, marking the beginning of Open Banking. In addition, a new wave of financial services is growing and raising the bar on whether underserved customers in the EU will benefit from such new laws and new players on the market (Zhang & Yang, 2023). This is subject to customer consent and is intended to foster competition in the financial industry. Building on this base, the European Union followed a data-driven approach and introduced the concept of Open Finance in 2020 to be originally achieved by 2024. Open Finance, as the name suggests, allows broader financial data access originating from large institutions such as banks, pension providers, insurance companies to third party providers, and fintech companies, in order to create more innovative products (Arner et al., 2022). The main aim of open finance is to empower consumers by offering a holistic view of their financials and more tailored products. In essence, the regulators have taken the data-sharing principles of Open Banking and applied them across the entire financial sector in Open Finance. Policymakers recognize that breaking down data silos in finance can lead to a more flexible and inclusive services market. The European Union views open finance as a bridge that will help keep financial markets competitive for all. At the same time, the strategy to do so is to place consumers at the center of financial innovation and improve competition and choice at the same time. This also aligns with the goals of the EU's digital strategy of promoting a data-driven economy for individual countries and the European Union as a whole.

Under the open finance umbrella, the FiDA proposal was introduced, including the rights and obligations to share customer financial data beyond payment accounts in 2023. FiDA establishes a framework for data sharing, including provisions for data types, data holders, data users, permission dashboards, compensation, and financial data sharing

schemes. Six building blocks make up the FiDA proposal, which are as follows:

- Data users
- Data holders
- Types of data
- Permission dashboards
- Compensation
- Financial data sharing schemes

The vital points of the FiDA proposal are the following:

Data users: The financial institutions and FISPs can only access and use customer financial data to create value dashboards and new products.

FISPs: Financial Information Service Providers are a new form of authorized group introduced by FiDA itself. FISPs must be authorized and have insurance or a comparable guarantee to cover their liability for access to customer data.

Data sharing: Data using entities and data holding entities must shake hands and have a prior agreement for the sharing of financial data. Certain data types such as health data, business data and undisclosed data (merger and acquisition) are excluded from the scope of the FiDA proposal.

Compensation: The data holding entities are entitled to reasonable compensation from data users.

Gatekeepers: These are platform providers who support facilitating the exchange of confidential data. They are not eligible to become FISPs or data users.

For example, to better understand the key players, a financial advisory company specializing in AI-driven financial planning wants to offer personalized recommendations to customers based on their spending patterns and banking transactions. However, since traditional banks mainly hold this information, the company must connect and comply with FiDA regulations to gain access to the data. Once it receives authorization to become an FISP and insurance that covers liabilities related to access to customer data under FiDA, it has the right to access the customer data. The following course of action includes establishing a data sharing agreement with the bank. The agreement would include the scope of the data the financial advisory company wants to access,

security-related protocols to ensure safe data handling, and user consent protocols to ensure that the data exchange has the customer's consent approved. It should be noted that the company can access financial data, but cannot request sensitive information, including health-related spending and confidential business transactions (undisclosed mergers, company payroll data). Once an agreement is signed between the bank and the company, the data exchange shall be facilitated by secure channels held by the gatekeepers. A third-party API provider shall enable financial data transfers. However, the third-party API provider cannot act as a FISP or a data user under FiDA – its only role is to ensure secure data flow. Since the bank maintains customer data and complies with regulatory requirements, the financial company shall pay a reasonable fee for access to the data. This compensation helps the bank cover operational costs and data protection investments. Thus, the above is an example of how, following the FiDA framework, a financial company can gain legal and ethical access to customer financial data. At the same time, the bank is compensated for its role.

At the technical level, standardized APIs are critical to facilitate data exchange while ensuring compliance. A third-party API provider enables financial data transfers, but does not act as a FISP or a data user under FiDA: its sole function is to ensure the secure flow of financial data. The technological bricks used to implement the basics of Open Banking have been APIs (Application Programming Interfaces) (Zachariadis & Ozcan, 2017). The idea of connecting APIs with existing legacy apps for banks has been far simpler in theory than in practice and has faced problems with innovating new products. By navigating their way through the data governance and regulatory changes around PSD2, the banks in the EU mainly prioritized one of the following: either building compliance-driven APIs or trying to align their internal systems to collaborate with third parties (Dinçkol et al., 2023).

2.2 Financial Products

Financial instruments help people and businesses achieve effective financial resource management. Traditional financial institutions, consisting of banks, insurance companies, and investment companies, present products that provide savings and investment opportunities, loan agreements, and risk management capabilities, while digital transformation has evolved financial products to establish digital replacements for cash-based

transactions over time (Chesbrough, 2003). Open finance delivers these additional enhancements for the transformation of the financial industry because it creates simplified data transfers between multiple financial service companies, leading to greater transparency, personalized services, and assisted competition. Financial products in open finance incorporate digital financial services that go beyond banking solutions to provide robo-advisory, insurtech, and embedded finance features. Through the Financial Data Access (FiDA) proposal, open finance implements secure processes that allow third-party providers (TPPs) to connect with financial institutions and consumers for data-sharing attributes. Open finance impacts four major financial product categories, which are:

- **Payments and Digital Wallets:** Financial openness enables instant payments and perfect data exchanges between bank accounts, digital payment applications, and e-wallets. A combination of transaction records, account balances, merchant names, and payment settings make up the data set.
- **Lending and Credit Services:** Lending methods from the past have been transformed into modern financial technology solutions that include peer-to-peer (P2P) lending, buy-now-pay-later (BNPL) frameworks, and alternative credit rating systems (Preziuso et al., 2023). The system analyzes creditworthiness through transaction analysis and evaluates income flow patterns, payment history, and spending habits.
- **Investment and Wealth Management :** Open finance enables the operation of robo-advisors alongside automated portfolios and investment services that collect data from various accounts. Integrates information on investment portfolios, risk profiles, historical transactions, and financial goal requirements.
- **Insurance : (Insurtech)** Under the framework of open finance, Insurtech solutions facilitate smoother operations during underwriting, policymaking, and claims settlement. The system maintains records of policyholder data, transaction history, and current health and lifestyle conditions information, except health data.

Consumer behavior has also transitioned with respect to changes in the financial industry. Retail customers are more aware and research deals before buying financial products, including credit cards and mortgage loans. Due to changing preferences, users actively seek personalized financial information, budgeting tools, and aggregated

financial dashboard features. Through open finance, consumers would also have greater access to financial information in multiple service categories, allowing better product development and greater access to services. In recent years, there has also been rapid growth in the adoption of digital financial products (Babina et al., 2023). The following is a representation of the different available financial digital products and the rate of customer growth in 2020-2021 and 2021-2022 in different industry verticals, adapted from *The Future of Global Fintech: Towards Resilient and Inclusive Growth* (2024) report by the World Economic Forum, see Figure 1.

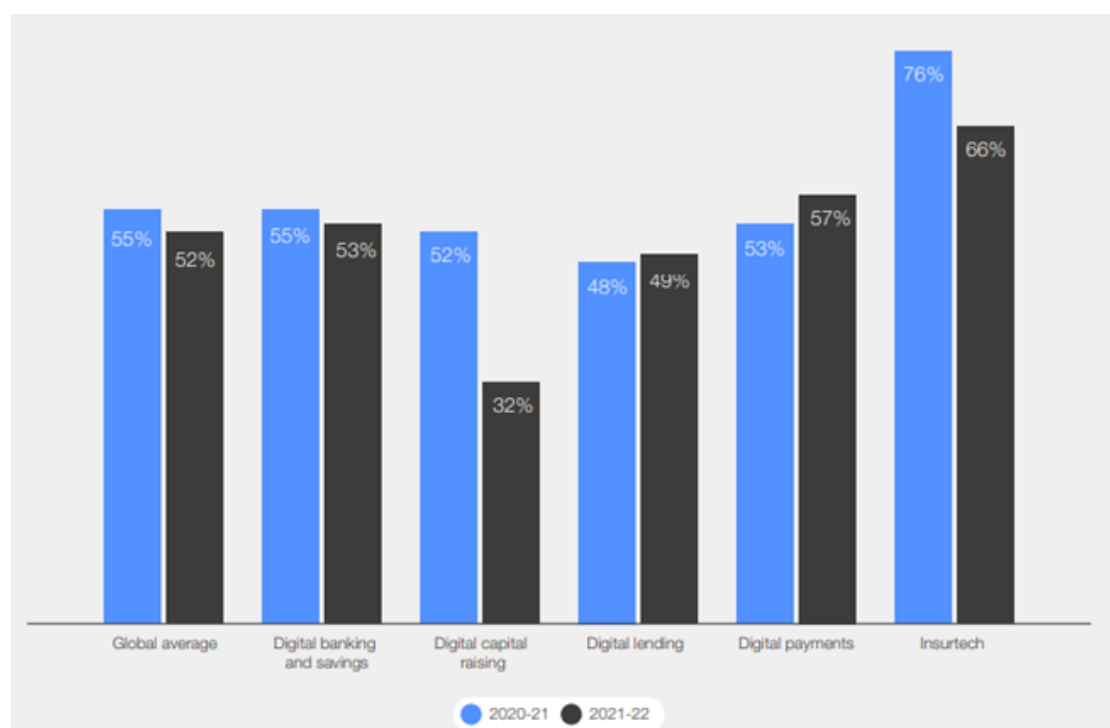


Figure 1. Representation of digital products and rate of customer growth

We can understand that Insurtech witnessed remarkable growth over the years, although there was a dip from 76% to 66%, which could be attributed to macroeconomic factors in play in Figure 1. Talking about SMEs, integrated payment solutions are a priority for them because they need financial solutions that match their current accounting and taxation systems. The advantages of open finance are notable for financial accessibility and product innovations, but regulatory conformity and user trust remain essential problems (Polasik & Kotkowski, 2022). Secure data-sharing infrastructure combined with legal frameworks will fundamentally impact the future of financial products for

SMEs as well.

2.3 Related Work

It is established that open finance includes a broader scope of data sharing across a wider range of financial products and services. In essence, Open Finance builds on the foundations of Open Banking. Regulatory bodies have noted that data sharing arrangements are evolving “from open banking to open finance,” expanding access to data from multiple financial domains under a consent-driven framework.

Several academics and jurisdictions illustrate the progression from Open Banking to Open Finance. The United Kingdom was the first country to implement open banking through regulatory mandates (under the Competition and Markets Authority Order 2016) and is now exploring how to extend this into a broader open finance framework. In Australia, an even more expansive approach has been adopted: Consumer Data Right (CDR) is an economy-wide data portability initiative, with banking as the first sector implemented. Australia’s CDR is now being extended into other areas of finance (sometimes termed “Open Finance”) and even adjacent sectors like energy and telecommunications. Regarding the European Union, the PSD2 regulation laid the legal groundwork for open banking, and discussions are underway on PSD3, FiDA, and the new regulations needed to facilitate Open Finance in the EU.

For example, industry bodies such as the Financial Data and Technology Association (FDATA) define Open Finance as customer data rights across all financial products. In contrast, regulators can emphasize the extension of existing Open Banking technical standards to other verticals (Preziuso et al., 2023). There is also an ongoing debate based on the current scenario of data reciprocity, where banks are forced to share data with third-party providers and fintech companies, which further act as payment initiation applications and are on the end-user side. However, Open Finance could imply that other entities like big tech or fintech companies might need to share their data to level the playing field. These considerations show that Open Finance is a broader concept that, though built on the foundations of Open Banking, will still require new industry and regulatory standards and coordination. My research builds on the same and extends in delving deeper into this area to identify how these different actors will be impacted by Open Finance and identify challenges from the industry perspective.

Babina et al. (2023) document that Open Banking allowed consumers to access tailored financial advice and facilitated small businesses in obtaining credit through new fintech lenders. These new services were possible because fintech innovators could utilize rich banking data with customer permission to design offerings previously unattainable without such data access. In a broader sense, scholars view these initiatives as part of an open innovation paradigm in financial services, where external innovators leverage incumbents' resources (in this case, data) to co-create value. My research builds on the same and identifies how product innovation will occur in the financial ecosystem and further define the landscape of Open Finance.

Komandla (2024) emphasizes that data portability through Open Banking has empowered fintech developers to design highly personalized financial products, addressing specific customer pain points that incumbents may have overlooked. Academic research also highlights how data sharing can improve the features of existing financial products. For example, banks have started providing account aggregation services within their applications, effectively mimicking fintech aggregators so that customers can see accounts from other banks in one place, an innovation driven by Open Banking (Polasik & Kotkowski, 2022). This research has been carried out from the perspective of only Open Banking. The existing literature also points out that Open APIs serve as the interface for innovation in Open Banking, allowing banks, fintechs, and even non-financial firms to build complementary products on top of traditional banking infrastructure. Open APIs that expose financial data have been suggested as the “driver of API Economy,” enabling third parties to develop novel applications on top of bank data (Zachariadis & Ozcan, 2017). Academic and industry researchers also agree that APIs helped break silos and shift to a modular structure. The role of small and large technological players cannot be ignored in the ecosystem. In fact, a recurring theme in academic papers suggests that Big Tech firms could become powerful intermediaries in an Open Finance environment, which might challenge new entrants (Zetsche et al., 2020). On the other hand, since Open Finance fosters collaboration, there is a high chance that big techs will work with fintechs and banks in partnerships. Previous research suggests that this can be seen as a strategic opportunity rather than a threat (Ozcan et al., 2023). Scholars describe these partnerships using concepts such as “banking as a platform” and “banking as a service.” Instead of vertically stacking all services, an open ecosystem allows banks to offer products through others or aggregate services from others into their own interface.

On the flip side, the fear of being reduced to a commodity infrastructure (sometimes described as banks becoming the “dumb pipes” of finance) has driven many banks in the EU to engage with Open Banking initiatives rather than passively comply. In lieu of staying relevant in the customer-facing value chain, banks have launched API sandboxes and new initiatives to attract innovators to integrate with them. My research delves deeper into broadening the scope and understanding how financial products and service providers will be impacted by Open Finance.

The success of this directive depends on the willingness of consumers to utilize these new data sharing services, which bring their consumer behavioral traits to the forefront. Early research on the adoption of open banking indicates that consumers weigh perceived benefits against perceived risks when deciding whether to give consent access to their financial data. Using different models, Hoffmann et al. (2022) found that key drivers for consumers’ intention to use Open Banking services include performance expectancy (that is, the perceived usefulness of the Open Banking service, such as getting better financial insights or offers) and effort expectancy (ease of use). The ground-level aspect of consumer behavior, as in trust in financial products, financial providers, and their decision-making process, has been explored in my research.

Previous research demonstrates that opening financial data to providers can catalyze new products and personalized services. At the same time, studies highlight critical factors such as API infrastructure, ease of use and efficiency, and supportive regulatory frameworks as prerequisites to utilize these benefits. The existing literature converges on the view that while Open Finance can unlock substantial value from the footnotes of Open Banking, it also brings specific challenges in implementation, including technical integration and ensuring data privacy. These insights from existing research provide a foundation for the discussion. I examine how these opportunities and challenges are playing out in practice and analyze the extent to which the promise of Open Finance is being realized in the current financial landscape. My research provides a ground-level view from both consumers’ and providers’ perspectives regarding opportunities and challenges, and a bird’s-eye view from an industry readiness and acceptance perspective.

3 Methodology

To understand the implications of how Open Finance impacts financial products, I conducted a qualitative study using an interview-based research technique. Since Open Finance is a rapidly emerging area with evolving regulations, varied stakeholder roles, and business models, a qualitative approach enables the capture of ideas and concerns from diverse industry actors. This study aimed to understand how Open Finance transforms financial products conceptualized, delivered, and experienced. I chose semi-structured interviews because they enable a more open conversation between the interviewer and interviewees, allowing novel topics to emerge while providing sufficient structure for a focused discussion on specific issues related to the research focus. This structure also allowed the interviewees, many experienced financial technology and banking professionals, to reflect on their institutional experiences, regulatory restrictions, and consumer-facing outcomes. In the following sections, we will elaborate on the specifics of our research questions, study setup, data collection, and analysis procedure.

3.1 Research Questions

Covering the overarching research question that binds all individual research questions (RQs) together was what impact Open Finance can achieve on financial product innovation. Exploring the following questions helped us understand the motivations and efforts that go into innovating new-generation financial products and the opportunities and challenges Open Finance brings with the evolving financial landscape for both consumers and providers. During interviews, I gather responses that address the following individual research questions (RQs). RQ1: How can existing financial products and services be innovated under the Open Finance Directive? This question focuses on the potential for product-level innovation. It helps determine how financial institutions, including fintechs, banks, and big techs, can leverage data-sharing access to design more personalized offerings. RQ2: How will Open Finance impact consumers of financial products and services? This question investigates the consumer experience, including personalization, and seeks to understand how data sharing might improve consumer autonomy, financial literacy, and service quality. RQ3: How will Open Finance impact financial products and service providers? This question examines changes in provider roles, business models, and competitive dynamics among different actors. Exploring how

traditional and digital banks, fintechs, and technology platform providers adapt to an open data environment, this question also addresses issues related to the ecosystem and the general changes needed in positioning. RQ4: How will Open Finance impact business processes within financial service providers? This question focuses on understanding operational transformation and process integration. It examines how providers must overhaul internal systems to support embedded finance, cross-platform collaboration, and seamless consumer interactions, which would increase with the Open Finance directive. RQ5: How will Open Finance impact consumer adoption processes for financial products and services? This question helps to address the changes that can occur in the consumer journey. Trust in financial products, decision making patterns, and experience with onboarding processes are all due to changes based on the open finance directive. RQ6: What challenges will financial product and service providers face in adopting and capitalizing on Open Finance? This question highlights the significant barriers that providers face with Open Finance. The practical limitations with organizational, regulatory, and technical challenges that providers must navigate to fully utilize Open Finance. RQ7: What are the challenges that consumers will face in utilizing Open Finance-enabled products and services? This question highlights the gaps in the consumer experience, followed by challenges in terms of financial literacy and equal access to financial products and services. RQ8: What challenges will industry stakeholders face in implementing Open Finance and reaching maturity? The question aims to identify the gaps that exist in the industrial infrastructure. The focus is on the general readiness needed in terms of standardization of APIs and synchronization between technology enablers, providers, and regulators.

RQ1 and RQ2 laid the foundation for the investigation, focusing on different product innovations and consumer value. Based on that, RQ3 and RQ4 addressed the providers' aspect and the business processes they must focus on. RQ5 highlighted the expected changes in consumer behavior and decision-making. RQ6, RQ7, and RQ8 concentrate on challenges and limitations from the consumer and provider perspectives. These questions collectively address the dynamics of innovation, consumer behavior, opportunities, limitations, and industry readiness under the Open Finance framework.

3.2 Study Setup

This study targeted professionals and experts from companies operating in the financial services sector, including fintechs, traditional banks, digital banks, and platforms, mainly API infrastructure providers. The entire process of interviews with individuals was carried out digitally without the requirements of physical human interaction. The B2B (business-to-business) and B2C (business-to-consumer) models are represented throughout the sample. These business models are based in different industries, including core banking, financial consulting, SME lending, consumer finance, credit scoring, digital wallets, data aggregators, and regulatory infrastructure. In our interviewee selection process, I contacted people who are actively involved or possess expertise related to the topic. These experts occupied strategic leadership or product-focused roles such as innovation leaders, industry and wallet heads, senior product managers, digital transformation consultants, partners, and open banking and AI business leaders within their respective organizations. I contacted these professionals through LinkedIn, email contacts, and referrals from personal connections. The final sample consisted of 12 interviews. These interviews were conducted either on Zoom or Microsoft Teams, and the duration of interviews varied from 30 to 70 minutes. (See Table 01). It is also important to note that OpenAI (2024) was used as a support tool to assist in the structuring and refinement of ideas. All AI-generated outputs were critically assessed, modified, and fact-checked by me to ensure precision while adhering to academic integrity. Its use is in accordance with the guidelines set by the University of Tartu.

Table 1. Overview of Interview Participants

| ID | Role | Model | Industry | Company Type | Country | Experience |
|-----------|-------------------------|--------------|--------------------|---------------------|----------------|-------------------------------|
| I-01 | Business Analyst | B2C | Financial Services | Bank | Estonia | 3+ years in retail banking |
| I-02 | Senior Business Analyst | B2C | Financial Services | Bank | Estonia | 7+ years in business analysis |

Continued on next page

| ID | Role | Model | Industry | Company Type | Country | Experience |
|-----------|--|--------------|--------------------|-----------------------|----------------|---|
| I-03 | Agile Product Owner | B2C | Financial Services | Bank | Estonia | 11+ years in product management and business analysis |
| I-04 | Partner | B2B | Financial Services | M&A Advisory | Netherlands | 5+ years in M&A based on fintech and payments |
| I-05 | Expert Business Developer | B2C | Financial Services | Bank | Denmark | 12+ years in business development |
| I-06 | Senior Product Manager (Open Banking) | B2B | Financial Services | Fintech | Spain | 18+ years of experience in product management |
| I-07 | Open Banking & AI Business Leader | B2C | Financial Services | Bank | France | 28+ years in data, product management, and AI |
| I-08 | Senior Business Analyst (Open Banking) | B2C | Financial Services | Financial Consultancy | UK | 4+ years in business analysis |
| I-09 | Head of Industry & Wallets | B2B | Financial Services | Open Banking Platform | Netherlands | 7+ years in strategy and payments |

Continued on next page

| ID | Role | Model | Industry | Company Type | Country | Experience |
|-----------|----------------------------------|--------------|----------------------|-----------------------|----------------|---|
| I-10 | Open Banking Product Manager | B2B | Information Services | Credit Info Provider | Estonia | 16+ years overall, including 4+ in Open Banking |
| I-11 | Software Developer (OB Platform) | B2C | Financial Services | Open Banking Platform | UK | 3+ years in platform development |
| I-12 | Product Manager (Leading Teams) | B2C | Financial Services | Bank | Finland | 10+ years in product management and payments |

The following is the industry-level breakdown of the interviewees and also their years of experience as a reference. (See Figure 2 and Figure 3)

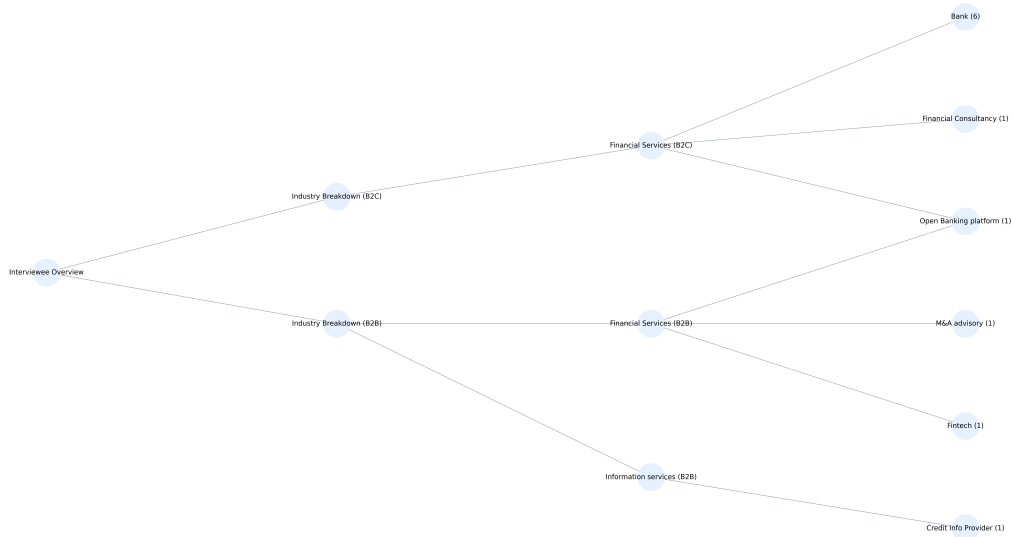


Figure 2. Interviewee Industry Breakdown

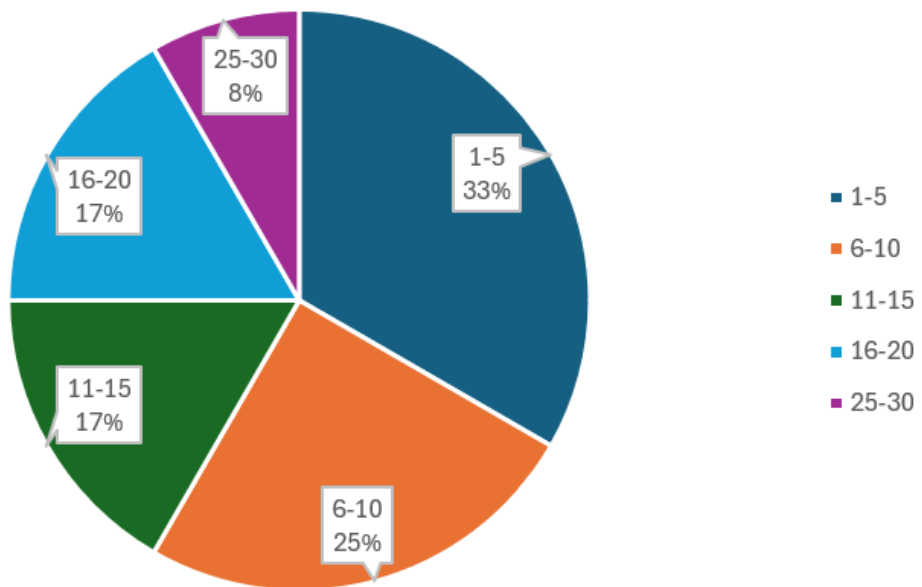


Figure 3. Interviewee Distribution by years of experience

3.3 Data Collection

I requested the interviewees to provide consent to record the call right at the beginning. Due to the sensitivity of the contents, it was also made clear that the data collected shall not be made publicly available. I reassured them that the collected data would only be used for research and analysis in data privacy and sensitivity cases. The discussion with interviewees was conducted in a semi-structured format. During the interviews, I did not always stick to the sequence of questions as included in the guide but instead followed the interview flow while covering all research questions. I started discussions with the participants about their views and experiences related to innovation in the financial products around them. The interview questions addressed how participants perceive innovation in financial products in the context of data sharing, what kinds of changes they anticipate for consumers and service providers, and what structural or behavioral changes are required for Open Finance to succeed.

Before interviewing, an interview guide was prepared in advance, aligned with the eight research questions. The guide included open-ended questions and targeted follow-ups'. RQ1 relates to how financial products and services could be innovated under the open finance directive. To do this, first, I needed to understand the innovations in financial products that consumers expect from producers. Therefore, asked what innovations might emerge if data sharing between financial service providers becomes possible (cf. RQ1). To get a clearer understanding, I also asked the interviewees to provide examples for the same (cf. RQ1). RQ2 aims to understand the value and impact of open finance directives on consumers. To get this insight, I first sought to divide consumers into private individuals and small businesses. In addition, I requested them to provide examples of opportunities that would be created for consumers by implementing open finance directives (cf. RQ2). In RQ3, the objective was to understand how Open Finance would impact financial products and service providers. Therefore, asked to share insights on opportunities that would be created for the different actors, including fintechs, traditional banks, digital banks, and big technology companies (cf. RQ3). RQ4 focuses on understanding the business processes within organizations that Open Finance would impact. To answer this question, I asked what specific business processes would be affected. In addition, inquired how these processes would need to be changed from both the provider's and consumers' perspectives (cf. RQ4). In RQ5, I wanted to uncover

the consumer adoption processes related to financial products, which led to the interview question. What aspects of the consumer journey would be affected by Open Finance? In addition, I also asked how these changes would impact decision-making and trust in financial services providers (cf. RQ5). Addressing RQ6 is essential to understand the challenges associated with financial services providers in capitalizing on Open Finance. Hence, I asked for specific key barriers to success for different actors, using examples (cf. RQ6). In RQ7, my objective was to understand the challenges consumers face in utilizing open finance-enabled services. Therefore, asked interviewees for examples of challenges that end users shall face in adopting open Finance-driven products (cf. RQ7). Finally, RQ8 is necessary to understand the industry acceptance and readiness for Open Finance, for which I asked what are the gaps on an industrial level that everyone needs to fill together to help open Finance reach successful maturity (cf. RQ8). The complete list of questions discussed in the interviews is attached as an appendix to the thesis.

3.4 Data Analysis

The interviews conducted were through Zoom or Microsoft Teams and were recorded with the consent of the interviewees. The number of interviews was 12, of which two, per request of the interviewees, were answered in a written format. The entire video interview series lasted 397 minutes (approximately 6 hours and 37 minutes), and the average length of one interview was 49.6 minutes. The duration of the interviews was 30 to 70 minutes. The shortest interview of 30 minutes was an outlier. This was because the interviewee, like all others, had received the questions in advance and prepared his responses accordingly. Therefore, the discussion was less an interview and more a clarification of his prepared responses.

To analyze the interviews, first all audio recordings were transcribed using automated transcription tools such as Otter.ai or by using the built-in transcription tool in Microsoft Teams. Then manually reviewed and corrected the transcripts for accuracy. This ensured that the transcripts retained the integrity of the original spoken content while eliminating any noise, including filler words and repetitions. Following transcription, a thematic analysis approach based on Braun & Clarke's (2006) framework was applied to identify and code recurring themes from the interviews. Our analysis was driven by the eight research questions outlined earlier and supported the creation of a coding framework.

There were five main stages of the process: familiarization, initial coding, theme development, iteration followed by refinement, and final coding scheme. The initial codes were assigned according to the prominent ideas mentioned by the interviewees. For example, to understand how Open Finance fosters product innovation (RQ1), codes such as "personalization", "switching," and "behavioral innovation" were used. For consumer-level implications (RQ2), codes like "financial awareness", "consumer empowerment," and "trust" were applied. To address the effects on providers (RQ3), codes such as "provider repositioning", "platform intermediation," and "need for embedded presence" were used. For changes in business processes (RQ4), codes such as "API platforms," "legacy system bottlenecks," and "process innovation" were used. In relation to consumer adoption behavior (RQ5), the codes included "consumer journeys," "onboarded simplification," and "interface trust." For provider-side challenges (RQ6), references to "regulatory challenges", "internal misalignment", and "talent / resource constraints" were tagged. For consumer side barriers (RQ7), the key codes were "privacy concern", "digital exclusion", and "consent". Finally, for expected industry readiness (RQ8), codes such as "lack of standardization" and "execution gaps" were included. Once the updated coding scheme was ready, it was applied to the transcripts and the results were reviewed to group the codes into possible themes. There were overlaps and additional codes such as "embedded finance," "improved credit rating," and "app driven trust" were included. The updated coding scheme was then reapplied on all transcripts. The codes were repeatedly assessed to ensure proper categorization under suitable themes and subthemes. Any duplicated or similar codes were merged or removed; in some cases, original codes were converted into themes and sub-themes. This procedure was iterated until no new themes, sub-themes, or codes emerged. After three iterations, I finalized eight themes, nineteen subthemes, in the final scheme. Refer to the table below for themes and subthemes.

Table 2. Overview of Research Questions, Themes, and Subthemes

| RQ | Theme | Subthemes |
|-----------|------------------------------|--|
| RQ1 | Financial Product Innovation | Customer-Centric Personalization, Product Modularity and Switching, Context-Aware Innovation |

Continued on next page

| RQ | Theme | Subthemes |
|-----------|--------------------------|--|
| RQ2 | Impact on Consumers | Improved Financial Visibility and Awareness, Trust and Consent, Consumer Empowerment |
| RQ3 | Impact on Providers | Platform Competition, Market Disruption, Fintech Intermediation |
| RQ4 | Business Process Changes | Business Process Innovation, Automation and Dynamic Workflow Management |
| RQ5 | Consumer Journey Effects | Consumer Journey Integration, Frictionless Onboarding and Decision-Making |
| RQ6 | Challenges for Providers | Operational Complexity, Compliance Complexity |
| RQ7 | Challenges for Consumers | Digital Literacy Gaps, Privacy Concerns |
| RQ8 | Challenges for Industry | Strategic Uncertainty, Internal Misalignment |

4 Results

In this chapter, I present the results of this study grouped according to our research questions (RQs). It consists of eight sections from RQ1 to RQ8. For each section, first there is an overview of the research question, and then the related findings of the interviews. The findings are then further explained in relation to open finance and have direct references from the interviewees.

4.1 Innovating Financial Products and Services under Open Finance (RQ1)

In this section, we present the findings for RQ1: *"How can existing financial products and services be innovated under the Open Finance directive?"* The focus here is on identifying areas and different ways financial products and services must be innovated. The interviews' results suggested that three key themes would help to incubate innovation at the ground level when we talk about product development in the open finance ecosystem. They are explained as follows:

- **Customer-centric personalization:** The offerings align with individual needs and their usage patterns.
- **Product modularity and smart switching:** Ease of switching between products, unbundling of rigid packages, and combining flexible services.
- **Context-aware innovation:** Integration of financial services into consumer daily lives.

Each theme is elaborated below with illustrative examples and direct quotes from interviews to show how practitioners conceptualize product innovation under Open Finance.

4.1.1 Customer-Centric Personalization

When the text was analyzed, the first key aspect that stood out in the theme of product innovation was customer-centric personalization. Customer-centric Personalization emerges as a foundational element in how Open Finance influences financial product innovation. It means keeping consumers at the center stage and designing products based on their individual needs and wants. It was also discussed with various interviewees

that when consumers consent to share their data, it also acts as a motivation for service providers to create even better and more personalized products. Customized products breed trust among consumers.

An interviewee explained: *"Instead of offering the same boring savings plan to everyone, we can build them separately, something that considers income fluctuation, spending behavior, and financial goals. The user journey becomes like a playlist, where he can remove or add anything he likes"* [I-03].

Another participant echoed: *"Products will no longer be bundles. You will be able to create your bundle from micro-products. Open Finance allows these micro-products to be created and personalized"* [I-04].

An interviewee highlighted: *"Through access to consolidated data from different banks and payment providers, service providers could offer ultra-personalized investment plans, insurance premiums, or even credit scoring models that reflect a customer's actual financial behavior rather than generalized segments"* [I-02].

Furthermore, another aspect of customer centricity was expressed by discussing opportunities in the B2B space, especially SMEs. A participant pointed out how SME banking products could also benefit: *"Open Finance does not talk much about SMEs, but small businesses usually suffer from rigid loan structures. Open Finance could open some doors and enable real-time cash flow-based underwriting and dynamically adjust credit lines for SMEs as well"* [I-07].

4.1.2 Product Modularity and Smart Switching

The second key area in product innovation is related to product modularity and smart switching. It refers to how consumers structure and access products daily. The convenience of switching products and also not getting entangled in existing bundles are the main subthemes that were discussed throughout. The interviewees mentioned it as a shift from bundled services to modular mix-and-match options, enabled by access to user-permissioned data across providers.

One participant highlighted: *"Smaller companies, loan providers, for example, would have the opportunity to compete with big banks. They can offer cheaper products because they do not have a large infrastructure and overhead"* [I-01].

Another participant noted: *"Instead of having a one-size-fits-all bank account, consumers could pick savings from one provider, cards from another, investments from a*

third, all orchestrated under a single user experience" [I-03].

The idea of a super-app where a user can easily switch between products and look through competition transparently was voiced throughout the interviews. A participant mentioned: *"Financial products like insurance or whether this user is going to travel, or whether this user is at the end, there is this like, kind of vision now of the banks becoming super-apps, right? I don't think that will happen with old banks, because they don't have long-term vision and the patience to get there; maybe Revolut, or someone like it, would become a very powerful place where you have, like, everything integrated"* [I-08]. Within these super-apps or even separately the holistic view of prices, products and services offered by competitors is bound to influence the user experience. Another participant explained the importance of comparison tools: *"You will see more products... more product switching and comparison opportunities. If my savings interest is 0.5%, and a fintech offers 1.5%, I want to know and switch"* [I-02].

The automation potential was also highlighted: *"We are not talking about consumers manually comparing options. Imagine an algorithm that reallocates your savings or loan to the best option every month based on open data feeds"* [I-05].

4.1.3 Context-Aware Innovation

The third key aspect focuses on context-aware innovation. It refers to the sensitive integration of financial services into consumer daily lives by accessing their data. Context-aware innovation originates from the need to have AI-driven financial advisory applications in the ecosystem. For example: AI agents suggesting when to buy stock or smart apps suggesting which insurance will be best for an individual's use case.

An interviewee elaborated: *"Imagine a savings account that increases your interest rate the more you walk or an investment product based on carbon credits. That is possible when Open Finance merges with mobility or ESG data"* [I-06].

Another explained: *"Fintechs will begin to offer travel-insurance hybrids, where your transactions in travel apps trigger automatic insurance activation, or micro-savings when you cancel a meal delivery"* [I-04].

A third interviewee emphasized: *"Once APIs can pull financial plus external data, innovation moves from financial product categories to human behaviors. That is the shift we have been expecting "* [I-03].

4.2 Impact on Consumers of Financial Products and Services (RQ2)

In this subsection, we present the findings for RQ2, which was: *“How will Open Finance impact consumers of financial products and services?”* This question helps us understand consumer experiences and seeks to explore how data sharing could improve consumer autonomy, financial literacy, and service quality. The data from the interviews suggested three related themes which are as follows:

- **Improve Financial Visibility and Awareness**
- **Trust and Consent**
- **Consumer Empowerment**

4.2.1 Improve Financial Visibility and Awareness

Improving financial visibility and awareness stood out as one of the widely mentioned topic by the interviewees. The broken and segregated view of an individual’s finances makes a consumer feel stuck and unhappy. The theme suggested that open finance has the ability to bring together the fragmented view of an individual's finances, thus improving financial visibility and raising awareness. By aggregating data across multiple providers, consumers can track their spending, monitor their goals, and manage their finances through a one-stop-shop.

An interviewee explained: *“I think people today do not really have a complete view of their finances unless they manually track everything. Open Finance, if done properly, could let people see everything in one place – their loans, cards, investments across providers.”* [I-02] This can be described as achieving a 360-degree view of finances by aggregating financial information in one place.

Another participant pointed out: *“If you could have a real-time dashboard, you might spot unnecessary expenses faster or see upcoming liabilities without waiting for a monthly statement.”* [I-05] Here, the interviewee discussed how different views based on proactive investments or early spending corrections could be helpful to consumers. There was also a mention of Spotify wrap series, but for investments and payments could also help consumers increase their financial visibility. This shift would help not only individuals, but also SMEs. An interviewee said: *“Especially for small businesses, knowing in real time how much cash you have, what invoices are pending, can really*

change the game. You don't have to rely on backward-looking reports anymore.” [I-07] Thus, across both individual and SME contexts, Open Finance is seen as a lever for fostering financial visibility and autonomy through real-time, consolidated information access.

4.2.2 Trust and Consent

Despite suggestions that Open Finance will empower consumers, several interviewees expressed concerns about trust and consent. Consumers remain hesitant to share their financial data, even when the benefits are made clear. Since no pioneering entity has established broad trust-based use cases yet, reluctance is still at hand to accept new financial services and products.

One participant suggested that, although there are regulatory safeguards, the emotional and psychological dimensions of trust would be a significant barrier. As an expert put it: *“People still have fear about sharing their financial data. They may have to give their consent, but how do they know what happens to those data afterward?” [I-03]* This highlights the gap between technical consent processes and consumer perceptions of safety.

In addition, a participant noted: *“Compliance with GDPR is a must, but real trust goes beyond ticking legal boxes. If customers feel exposed, they will hesitate to use Open Finance even if technically it is compliant.” [I-09]*

Another view tied trust issues to the history of Open Banking adoption: *“I think this is like the typical product adoption curve. If you ask people on the street about Open Banking, even now in 2025, maybe only two out of ten can answer correctly. So, if you expand this to Open Finance, adoption will take even longer.” [I-05]*

Managing complexity associated with consent was also identified as a practical risk. Innovation and opportunity in terms of building consent management dashboards and views for consumers were discussed in the interviews. An interviewee noted: *“There is a risk of overwhelming consumers that we face here. If everything needs permission, they might just click 'Accept' without understanding, even the modern user, and that defeats the purpose.” [I-07]*

4.2.3 Consumer Empowerment

Another significant challenge that was discussed was that Open Finance can expose inequality between different consumer groups. Users with high digital literacy may benefit more, while others are at risk of being left behind. The need to empower consumers in terms of accessing, adapting, and utilizing open finance driven products is vital in the ecosystem.

An interviewee reflected: *“Services will no longer be based on generic assumptions. They will be tailored according to actual financial behavior, allowing consumers to get better deals suited exactly to them.”* [I-04]

Another participant suggested the importance of consumer understanding around consent: *“This is a challenge; I think consumers must understand what they have actually allowed to do... It has a positive outlook because it empowers consumers with more choices, more data, more information.”* [I-06]

4.3 Impact on Providers of Financial Products and Services (RQ3)

In this section, we present the findings for RQ3, which was: *“How will Open Finance affect financial product and service providers?”* The question highlights the changes that financial institutions must anticipate with Open Finance.

The qualitative data from the interviews suggested that there are three main themes that impact financial product and service providers.

- **Market Disruption**
- **Fintech Intermediation**
- **Platform Competition**

4.3.1 Market Disruption

The subtheme that stood out when discussing the impact of Open Finance on providers was its ability to disrupt the existing relationship of traditional institutions with customers, leading to disrupting the market. The as-is situation in the financial world states that the traditional banks have been in monopoly since a long time, and with open finance creating opportunities, it is low entry-to-barrier for new entrants. Having said that new entrants are owning up the end-user aspect of consumer journey but its not visible in the

big picture. An interviewee pointed out: *“Who owns the relationship when everything is API-based? Banks may still provide the product, but the customer interface will belong to someone else.”* [I-08] Expanding on the same, another participant said: *“In Open Finance, those who control the user journey—apps, platforms will control the financial experience. Banks are bound to lose their connection with customers”* [I-06]

Although traditional institutions, such as banks, hold the data, they would still need to abandon a certain part of the consumer journey. Another interviewee noted: *“When you lose the daily interaction touch point, you lose up-selling and cross-selling opportunities; it's very hard to win the customer back once they switch.”* [I-11] Banks face competition not only from new entrants in terms of grip in the market, but also in terms of targeting the brand and mindshare of the customer.

4.3.2 Fintech Intermediation

Closely related to market disruption, fintech companies play an important role in acting as intermediaries and modifying consumer journeys. The major role a fintech company plays involves interacting with the user digitally and building a relationship with them. This acting as intermediary, helps them break the end-to-end journey earlier owned only by big institutions. An interviewee explained: *“They will take consumer data from banks, combine it with data from elsewhere, and build new services that are smarter and more personalized than anything a single bank could offer.”* [I-03] In addition to this, a participant reflected on fintech's abilities to be agile: *“Fintechs are much faster in linking services from multiple providers. They don't have legacy product silos that hold them back.”* [I-07]

In the interviews, it was discussed that since fintechs have less infrastructure and lower switching costs compared to banks, fintech companies have the ability to create new products faster. Another interviewee suggested: *“Banks collaborate and work in a closer relationship with fintechs to develop custom APIs and other innovative services. Fintechs can develop more comprehensive and personalized financial tools. For example, wealth management platforms can offer tailored investment advice by analyzing a user's complete financial portfolio, including pensions and insurance. In addition, fintechs can create innovative credit assessment models for underserved populations by using alternative data sources.”* [I-02].

4.3.3 Platform Competition

The number of layers within a system also affects the overall mood of the market. The increase in number of platform providers, small fintech companies also result in increasing the platform competition. Existing fintech companies and other technological companies not only offer end-user interfaces but also provide additional services. They provide in-house API structures, linking capabilities, and support needed to institutions as well. An interviewee suggested: *“Fintechs don't offer only one service. They aggregate accounts, loans, insurance, and investments into unified dashboards. That's where customer loyalty and competition will move.”* [I-05] Referring to increased competition in Open Banking and further extending it to Open Finance, another interviewee reflected: *“There have been many players growing and absorbing smaller players. At the end of the day, I foresee a future where there are only a few players left in Europe connecting with all the banks. I don't think there's going to be a lot of room for local players. We have them now, but eventually there will be, say, five winners in every region. Those players already have connectivity and experience with Open Banking. For them, moving to Open Finance would be just an upgrade, but still a huge change in terms of managing all the data.”* [I-10]

4.4 Impact on Business Processes within Financial Service Providers (RQ4)

This section addresses the findings of RQ4, which asked: *“How will Open Finance impact business processes within financial service providers?”* The goal was to discuss internal processes, technological changes and service models that are expected to evolve with the Open Finance Directive. The qualitative data from the interviews suggest that Open Finance is reshaping business processes through two key trends.

- **Business Process Innovation**
- **Automation and Dynamic Workflow Management**

4.4.1 Business Process Innovation

One of the most discussed topics was the need for innovation in business processes. A common view highlighted the increasing use of APIs to make business processes more

dynamic rather than relying on rigid legacy systems. It was also discussed that banks need to figure out how to make business processes more agile, robust, and fast. An interviewee explained: *“You just plug into where the user is, whether it's a budgeting app, a mortgage broker, or a tax consultant app. You expose the relevant process through APIs, not through your own banking portal anymore”* [I-08] This reflects the change from the traditional single-bank delivery model to embedded financial services distributed across multiple platforms.

Innovation in business processes also included the adoption of microservices. Closely linked to API structures, the trend is moving toward breaking down large processes into smaller independent microservices. Fintechs and small financial SMEs are choosing this space over traditional products. One participant shared: *“Microservice architecture allows us to expose just the credit scoring, or the payment initiation, or the fraud check separately depending on what the third-party app needs.”* [I-04] Instead of relying on one institution for full end-to-end services, providers are decomposing value chains and onboarding specialized third-party capabilities.

4.4.2 Automation and Dynamic Workflow Management

With the Open Finance directive, there is substantial scope for automation in business processes in financial institutions. It also accelerates dynamic workflows and manages changes based on real-time data access. As an interviewee explained: *“In Open Finance, you can no longer afford manual handshakes. Consent flows, KYC refreshes, data extracts—everything must happen automatically and instantly across systems.”* [I-03]

Another interviewee added: *“I used to make payments by sending one euro first, and then I might send more money because I had to verify, but now with new apps, it gets verified automatically. And because there is automation and because there is a system, I think I'm less worried.”* [I-02]

In addition to making the consumer journey steps easier, automation is also expected to reduce manual steps on the provider's side. An interviewee emphasized: *“I propose that the progression of data access will result in hyper-automation of rudimentary processes. The ability of service providers to access the information of a subject in a situation with just consent (where needed, with an authentication to the data holder) will massively reduce the time spent, errors made, and fraud committed as part of information collection and service provisioning.”* [I-09]

4.5 Impact on Consumer Adoption Processes for Financial Products and Services (RQ5)

In this section, we present the findings for RQ5, which asked: *“How will Open Finance impact consumer adoption processes for financial products and services?”* The objective was to understand how consumer behaviors, onboarding journeys, and decision-making processes are likely to evolve under Open Finance.

I extracted two key aspects from the qualitative interviews that influence the journey of a consumer.

- **Consumer Journey Integration**
- **Frictionless Onboarding and Decision-Making**

4.5.1 Consumer Journey Integration

One of the strong themes discussed throughout was the integration of financial services in utility applications and broader digital experiences. Consumers no longer see themselves separately engaging with financial institutions; instead, they expect financial steps to happen within a nonbanking environment. This is called integrating services within the consumer journey. An interviewee explained: *“If I’m on a travel booking platform, I expect to buy insurance right there without going to my bank separately. It should just happen inside the same flow.”* [I-08] The experience of making a financial transaction should be blended in such a way that it becomes an extension of the overall consumer journey. Another participant suggested: *“When I rent a car, I don’t want to be redirected elsewhere for payment or insurance. It should be embedded right on the booking site.”* [I-05]

4.5.2 Frictionless Onboarding and Decision-Making

Another insight that was widely discussed focussed on the onboarding experience, a consumer goes through when buying a financial product. Frictionless onboarding and faster decision making are at the center of evolving consumer’s experience. It was discussed that we need to have better KYC processes and faster support in terms of knowing what will happen next in the process? One participant noted: *“When applying for a service, users don’t want to fill endless forms. If Open Finance allows providers*

to pull verified information with consent, onboarding becomes instant.” [I-03] Another interviewee focused on the speed of the service: “Today opening an account or applying for a loan still feels heavy. With Open Finance, identity, income, and account history can be verified immediately without asking the user to upload documents. Maybe you can buy a house in Spain, sitting in Paris, and your identity could be easily verified.” [I-07] In addition, a third participant reflected: “When processes are too complicated, consumers abandon them midway. Instant verification reduces abandonment rates and improves trust.” [I-02]

At the same time, to make decision making fast and onboarding smoother for consumers, there are opportunities like permission dashboards and consent management tools; but streamlining only technical workflows shall not be enough. Addressing the psychological experience that consumers go through during adoption is also important. Another interviewee suggested: *“Automation is great, but consumers need to know what they are consenting to. Trust will depend on transparency, not just speed.” [I-09]*

4.6 Challenges for Financial Product and Service Providers (RQ6)

Here we present the findings for RQ6, which asked: *“What challenges will financial product and service providers face in adopting and capitalizing on Open Finance?”* With the aim of understanding the challenges from the perspective of financial service providers, we collected various insights on operational, strategic, and compliance related difficulties organizations foresee while navigating Open Finance implementation.

The two main themes that stood out were

- **Operational Complexity**
- **Compliance Complexity**

4.6.1 Operational Complexity

Although there are remarkable opportunities with Open Finance, there are also complex operational challenges associated with it. Financial institutions aim to have well-structured systems and seamless API connections, but it is difficult to implement them as well. Legacy systems within banks are written in local country-specific languages and fintech companies lack knowledgeable resources to build infrastructure that could support them. Not only technical but also this lack of resources at different actors part

creates a delay and adds to the challenges faced by providers. An interviewee suggested: *“API standardization is a dream, but reality is messy. Every provider interprets ‘open differently, and integration becomes a nightmare for aggregators”* [I-08].

Beyond managing APIs, there is also a significant resource constraint in the ecosystem. An interviewee highlighted: *“Most institutions are understaffed to ensure compliance at the API layer. You need technical auditors, lawyers, and cybersecurity - and most smaller banks don’t have that ready”* [I-09].

The operational complexity extends not just to API management for everyone, but one of the major actors, banks, is expected to be impacted the most. An interviewee put: *“I think banks will be impacted the most. As fintechs are growing, they’re still agile in that way, and having been in a bank for some time, you would also agree that it is the most difficult for a bank to be agile from day one - having legacy systems in IT infrastructure, changing everything would be a lot of work for banks...”* [I-02]

Furthermore, the organizational culture established within traditional institutions can also cause barriers. A participant noted: *“It is about culture, it is about communication, it is about everything. You need to challenge business. You need to challenge operations. You need to challenge marketing. You need to challenge and, when I say challenges, explain, curate some kind of an evangel, make it understand to consumers.”* [I-11]

4.6.2 Compliance Complexity

Another repetitive concern that providers were concerned with was complying with the regulations. The changing nature of regulatory standards makes them complex and difficult to interpret. The worry lies in handling the ambiguity attached to how people perceive the same regulations differently and then plan their implementation around it. An interviewee pointed out: *“What counts as an equivalent alternative under Open Finance is not clearly spelled out. Institutions are left guessing, and every legal team interprets differently.”* [I-07]

This shows that not only do different institutions perceive the directive differently, but internal departments often debate how to execute compliance at operational levels. Another participant explained the challenge of handling multiple regulations at the same time: *“Between PSD2, GDPR, and now Open Finance, it is not clear where the responsibilities begin or end. Data sharing rules sometimes clash, and we have to prioritize whichever is the bigger legal risk.”* [I-01]

Especially traditional banks face issues on multiple levels not only operational and compliance challenges but also losing a certain amount of market share to new entrants. A participant suggested: *“Everyone will need to invest. It is quite a substantial amount of money to comply with FiDA. Of course, if that investment is so big, it will kind of push away other more commercial opportunities in the spaces, or it might risk doing so. If the compliance agenda becomes so dominant, the market share will also be segregated, as if a bank is currently taking 10% mortgages in an area, if the consumer has that view available that hey, these are the all-competitor banks or providers providing this rate, consumers will go to the cheapest one, and banks are busy being compliant.”* [I-03].

There was also a view that not only certain actors are hesitant but also do not feel motivated to embrace Open Finance innovations. As one interviewee said: *“Every innovation team gets slowed down because someone from legal says, ‘we’re not sure this meets the obligation. It’s safer to say no than to explore new models under uncertainty.”* [I-06]

This reflects the general inertia that financial product and service providers experience when planning to implement Open Finance.

4.7 Challenges for Consumers of Financial Products and Services (RQ7)

This section presents the findings for RQ7, which asked: *What challenges will consumers face when using Open Finance-enabled products and services?* This question explores both technical and psychological barriers to adoption, as expressed by interviewees during interviews.

The two key themes that emerged were:

- **Digital Literacy Gaps**
- **Privacy Concerns**

4.7.1 Digital Literacy Gaps

A repeated concern was the uneven level of digital readiness among consumers. Although Open Finance offers increased autonomy and seamless service, many users still struggle to understand consent tools, particularly when they are across multiple apps and third-party platforms. It was also discussed that the level of literacy is quite inconsistent and

becomes different as we move from one country to another, old age to millennium, and even gets affected by gender as well.

An interviewee observed: *Even if you make it technically secure, there is a mental trust barrier. People don't always understand what they are consenting to, and it creates anxiety.* ' [I-06]

Another participant added: *The real challenge is clarity. When people are redirected between apps and the consent forms shown, many just click 'agree' without really knowing what the data is being shared or why, which makes them anxious, even they don't say it out loud, but it makes them itch*' [I-02]

The issue extends beyond interface design to consumer education. A third interviewee emphasized: *'We need to reassure the customers... We are upskilling and need to upskill consumers as well. We need to educate.'* [I-12] This highlights the need for consistent design standards and financial awareness programs to bridge literacy gaps.

4.7.2 Privacy Concerns

Closely tied to literacy gaps are privacy concerns. Consumers are often unsure how their personal data are processed once they give consent to Open Finance platforms. The interviewees also pointed out that privacy concerns include financial institutions not being transparent from day one about their actions, leading to trust barriers. An interviewee explained: *People are afraid to share their bank statements, especially when they do not know how the data will be used. Even if it is legal, it does not feel safe.*" [I-01]

Another participant echoed this fear: *'I don't think users feel confident that their data are not stored or reused by someone else. Even if there's GDPR, there's fear of leakage.'* [I-04]

A more constructive suggestion came from a third interviewee, which was based on building innovative products in this space, as well, suggesting: *We need transparency tools, something like a data trail dashboard, to show people who accessed their data, when and why. Otherwise, they'll always feel uneasy.*" [I-07]

4.8 Challenges in Implementing Open Finance and Reaching Maturity (RQ8)

This section presents the findings for RQ8, which asked: “*What challenges will industry stakeholders face in implementing Open Finance and reaching maturity?*” With the aim of understanding these challenges from an industry readiness and acceptance perspective, this research question highlights the broader barriers that must be addressed collectively. The findings explore institutional, technical, and strategic obstacles that prevent consistent and scalable adoption throughout the financial ecosystem.

The two most prominently discussed topics were

- **Strategic Uncertainty**
- **Internal Misalignment**

4.8.1 Strategic Uncertainty

One of the most consistent concerns across the interviews was the absence of a clear strategic path for Open Finance. Although stakeholders broadly recognize its long-term potential, many of them were unsure how to integrate it into short-term business goals. As a result, Open Finance is often treated as a regulatory burden rather than an innovation opportunity. An interviewee noted, “*Open Finance is now seen as a cost center. It’s something you do to meet future regulation and may benefit - not sure when - but surely not because you expect a short-term ROI from it.*” [I-05].

Another important factor contributing to uncertainty is the lack of unified technical and regulatory standards across the EU. Fragmentation among countries causes complications for both banks and fintechs. An interviewee explained, “*The absence of structure across Europe leads to interoperability issues. Different countries have developed their own standards; Germany has NextGen PSD2 from the Berlin Group and STET from France. This results in a fragmented landscape and complicates the integration of third-party providers.*” [I-03]

4.8.2 Internal Misalignment

The second aspect in terms of the challenges in the industry is the lack of alignment within organizations, particularly between the legal, compliance, technical, and product teams. This results in slow implementation, delays, and fragmented views on how to interpret or act on regulatory obligations. It further extends to an overall delay in the ecosystem creating atmosphere as if no one is proactively doing anything about the topic. As an interviewee remarked, *“The regulation is vague. No one agrees internally on what qualifies as compliance and that delays decisions on how to move forward. At least that is how we were when Open Banking started.”* [I-06]

Internal friction is also tied to strategic doubts and the absence of revenue-generating models around open finance. It was also discussed that, though FiDA includes that data holders would be compensated by data users, but still there is no clear path on how and when will that happen and in what frequency. An interviewee reflected *“Unless there is a clear path to monetization, the leadership will treat it as a regulatory checkbox, not a change in the business model. They will do just the bare minimum.”* [I-10]

The insights from the interviews suggested that open finance can only reach maturity when there are combined efforts in terms of sync within an organization and also alignment in practices across the industry.

5 Discussion

In this section, we address the research questions and their results. Starting with what will act as a catalyst for innovation in financial products, investigating the consumer's perspective, and addressing the opportunities and challenges that open finance can bring consumers. Along the way, we double check our findings by comparing them to what is already out there in the existing literature, followed by the promises of open finance for different financial services and product providers accompanied by their challenges. After implementing open finance, how will the consumer journey look and how will it affect their decision making? We also touch on the business processes that financial actors need to change and modify to utilize open finance. Finally, we wrap things up by discussing the overall readiness of the industry, pointing out the limitations in the study, and suggesting areas for future research.

5.1 Innovation in Financial Products

The first research question asked: *“How can existing financial products and services be innovated under the Open Finance directive?”* From our interviews, we identified three key themes that shape product innovation in the financial ecosystem. The three key themes suggested that personalized and customer-centric products reflect the daily needs of consumers, combined with context-based innovation. Connecting products to events and user behavior offers greater control to the consumer.

Together, they suggest that product innovation under the Open Finance umbrella will not revolve around creating products entirely from scratch but will begin with modifying existing products and restructuring them to the needs of consumers. They aim to be more adaptive and responsive and improve the customer experience. Keeping customers at the center, personalization refers to understanding their evolving needs and modifying the product range accordingly. Once customers have products that are suitable for their tastes and available in an easy way, they will have greater control and comfort. For example, a traditional savings plan could be differentiated for specific user segments, such as women in defense and agriculture, thus offering a better plan. The consumer's interaction with products also need to evolve over time. With Open finance, it is seen that starting with personalized products, followed by transparency in terms of competition prices and third

is providing ease of switching. Without the third component where the consumers feel safe enough to leave or switch whenever they feel like, personalization remains at a superficial level. Achieving this level of product innovation lies in shifting the perspective from simply product delivery to customer relationship management-driven products.

Context-aware innovation extends the above architecture by allowing the same products to behave differently based on user context, such as suggesting micro-savings on food deliveries or enabling insurance purchases during car or travel bookings. This system can only operate if financial products and services respond to consumer data and are in sync with the consumer's daily activities. In this view, product innovation becomes fluid, governed by situational triggers and user consent, instead of being rigidly managed by traditional institutions. By comparing these findings with existing research, our study is based on and diverged from the established literature. In earlier studies, the portability of consumer data was mentioned, but was not linked to innovation patterns or the modular service option available to consumers. Our findings extend this by showing that open finance facilitates not just the movement of data within different actors but also that this reconfiguration and smaller pieces have an innovation logic rooted in them. They offer control, modularity, and context that have received limited attention in the current situation. The OECD (2023) report on open finance also talks about improved competition and consumer choice, but limits the scope to a macroeconomic point of view. Our findings have brought out the micro level, on-the-ground perspective highlighting personalization, reassembling of products, and being aware of which, when combined, are important to meet individual consumer needs.

5.2 Impact on Consumers of Financial Products and Services

The second research question examined “*How will Open Finance impact consumers of financial products and services?*” The results suggest that Open Finance is poised to enhance consumers' lives through three interconnected subthemes: improving financial visibility and awareness, strengthening the role of trust and consent in data use, and allowing more consumer empowerment. There are opportunities for providers to bring new ideas to consent management dashboards and 360-degree view applications. This would support consumers psychologically and emotionally around financial management. Balancing trust maintenance and financial literacy development is essential for service providers. It is their responsibility not only to welcome modern consumers but also to

raise awareness among older generations. The Open Finance bridge between different financial institutions is seen as a gateway to give better financial control and enable consumers to make informed choices - choices based on real-time scenarios. Many interviewees voiced their opinions on open finance driven by empowerment.

The findings suggest a layered relationship between financial visibility, trust, and consumer empowerment. Improved financial visibility acts as the base layer, allowing consumers to track their investments, savings, and spending and manage financial goals more effectively. However, this can only be achieved when consumers trust the process. Trust and consent become the enabling middle layer. Unless consumers believe that their data will be handled ethically, securely, and for their benefit, they are unlikely to engage deeply with Open Finance tools. Finally, consumer empowerment represents the outcome layer where individuals access tailored services and gain confidence in their actions. In this sense, consumer empowerment is not automatic; it is earned through new and innovative financial products with trust-driven consent. This combination of three layers creates a solid foundation for a positive impact on consumers. Our findings are also in line with the research conducted by Ziegler et al. (2020), who emphasize the same in the structural benefits of Open Finance, including how consumers benefit from expanded access and product comparison on financial platforms. The research also supports this view, but adds that unless supported by intuitive, trust-driven interfaces and transparent communication, consumers may hesitate to explore new services, even when they offer greater value. The trust aspect is also aligned with the findings of Dorfleitner et al. (2023), who argue that although GDPR has supported formal data protection, it has not resolved the subjective trust gap of consumers when faced with unfamiliar financial interfaces. Thus, this study brings a user experience lens into the ongoing policy-driven Open Finance discourse.

5.3 Impact on Financial Products and Services Providers

The third research question explored *How will Open Finance impact financial product and service providers?* Based on interview data, the key emerging themes were market disruption, fintech intermediation, and increased platform competition. These findings highlight the evolving role of financial service providers, including all actors: traditional and digital banks, fintech companies, and big tech players. These results suggest that

traditional banks risk reducing their market share, especially their customer-facing role, while agile-driven fintech companies are increasing their role as intermediaries. Fintech companies are increasingly taking ownership of the digital experience and the consumer journey. The financial ecosystem is becoming more fragmented and competitive as service platforms proliferate. The low barriers to entry for new players disrupt existing hierarchies. It is critical to understand how these three subthemes are interlinked. Market disruption by fintech companies also means losing exclusive customer access for traditional banks. Since they place themselves as intermediaries, they act in the middle of the traditional institutions-to-consumer pipeline. With new companies entering the consumer-facing end of the value chain, there are also new back-end platform providers that have microservices as their offerings.

At a macro level, this implies that the value chain is distributed where one firm might help consumers initiate a payment, another handles its security, and a third actor helps with real-time financial advice on it. This decentralized process not only allows faster innovation but also increases competition. Fintechs are particularly better positioned because of their modular structures and speed of implementation. Digital banks are growing and have similar advantages to fintechs, but they still face challenges in securing long-term consumer trust. Talking about traditional banks, the implication is significant as they must shift focus from pure product delivery to collaborative engagement. These findings align with Baba et al. (2020) and Ziegler et al. (2020), who have previously highlighted the risks of fragmentation of the value chain and the erosion of the customer interface traditionally owned by banks. Their work emphasized how the nonbank financial service providers would grow in relevance by implementing Open Finance. However, while their focus centered on the regulatory and compliance landscape, the current study extends this by suggesting how ownership of consumer relationships is at the center of discussion. Additionally, Cornelli et al. (2020) interpret platform competition as a symptom of deregulation. In contrast, the findings of this research suggest that platform competition is part of the structural change that will further help to change the way financial services are created, distributed, and experienced in the Open Finance ecosystem.

5.4 Impact on Business Processes within Financial Service Providers

The fourth research question explored “*How will Open Finance impact business processes within financial service providers?*” The findings of the above-mentioned question suggested two key subthemes: Business process innovation and automation of processes. These could make businesses more agile and reshape internal processes in a financial organization. The modern-age business processes are moving away from static and traditional institution-centric pipelines to seamless architectures and agile ways of working. Although not standardized, these changes are driven by APIs, but still enable smoother interaction between platforms and institutions. In parallel, automation is becoming increasingly influential. Not only does it offer automated product switching for consumers, but also, within organizations, manual interventions are being replaced by machine-triggered operations that minimize latency and risk.

The two aspects, innovation and automation, reinforce each other in the Open Finance environment. Innovation in business process management lays the foundation for automation. First, segregating and breaking complex workflows into smaller parts, followed by dynamically combining these parts, creates a responsive event-driven architecture for consumers to use. Automation complements innovation. For example, when triggered by consumer actions, KYC refreshes or AML tests can occur with human intervention and support. It is crucial to see process speed and automation as baseline expectations and that they would no longer be competitive advantages for financial institutions. The result is the transformation of financial service providers from pipeline operators to ecosystem orchestrators, where reduced error, lower overhead, and consumer convenience are the primary outcomes. My findings align with the research done by Adeyemi (2019) , who notes that open banking and, by extension, open finance require infrastructural transformations that surpass regulatory compliance. Similarly, European Banking Authority (2021) emphasizes that real-time data architecture must be integrated into business processes for Open Finance to succeed. Furthermore, a study by the Cambridge Centre for Alternative Finance (2024) supports the increasing modularization of financial services. Our interviews confirmed this trend, especially when modular service architecture is combined with automated decision-making systems, resulting in faster, more customized service delivery with minimal human effort.

5.5 Impact on Consumer Adoption Processes for Financial Products and Services

The fifth research question was addressed "*How will Open Finance impact consumer adoption processes for financial products and services?*" The findings from the discussion with interviewees highlight two shifts in consumer behavior: first, the integration of financial products into consumer's daily activities, and second, frictionless onboarding accompanied by real-time decision-making. Open finance can change the way consumers engage with financial products from isolated formal interactions to contextualized actions inside non-financial platforms.

When these two aspects are seen together, an integrated journey is created in which a consumer's financial decisions are made during broader transactions such as travel bookings or online purchases. However, repeatedly asking consumers to input redundant data creates friction and negatively impacts the convenience promised by innovative financial products. Consumers can only utilize Open finance to its potential when their onboarding is smooth and guided by the providers.

The results also suggest that, as in any other industry, the technological adoption curve will include innovators followed by early adopters, the early majority, and finally the late majority. Since each is crucially important and will affect each other, reiterating products and encouraging adoption will play a vital role. It was also discussed that this cannot be done simply by simplifying the processes but by meeting consumers where they are already and upgrading them. The research also extends to the observations made by Finextra (2020), which show the importance of embedded finance in the transformation of adoption patterns, particularly within the Benelux region in Europe. Furthermore, in Adeyemi (2019), it was highlighted that real-time consent and the role of initiation applications improve trust and speed in consumer onboarding. Extending this, Oliver Wyman (2018) report suggested that user abandonment rates in digital onboarding were often due to process friction rather than lack of interest. This also aligns with the results of my research that personalization is necessary but insufficient unless paired with clear expectations and a high-quality user experience.

5.6 Challenges for Financial Product and Service Providers

The sixth research question asked, "*What challenges will financial product and service providers face in adopting and capitalizing on Open Finance?*" Taking the results of the interviews, two broad yet deeply interrelated challenges emerged which were operational complexity and compliance complexity.

The value that Open Finance offers in terms of product innovation and new opportunities for providers and consumers is quite evident. The challenge lies in its adoption and implementation. Modernizing legacy systems, implementing new infrastructure, and meeting regulatory requirements are some of the challenges that financial companies face. These technical challenges affect the structural and strategic aspects of institutional workflows.

In the interviews, it was observed that operational complexity was about outdated infrastructure, especially within traditional banks and large institutions. Many legacy systems were built in an earlier era in a country-specific language with little to no flexibility in terms of coding standards. This results in delays and bottlenecks when integrating with APIs or even modular services. Fintech companies are seen at an intersection; they want to be agile and cooperate with banks, but at the same time, the banking systems are not up to date for them. In addition to the technical barrier, there are also capability and resource barriers among smaller banks and mid-sized fintechs. These organizations often lack dedicated regulatory specialists, technologists, or legal advisors proficient in FiDA regulations and agile development practices. In larger organizations, while there are agile teams and regulatory experts, they often operate in silos, creating another blocker in actual progress.

The complexity of compliance also adds to the mix. The FiDA framework, though proposed as a unified directive throughout the EU, is still in the early stages of being internalized. Many financial providers struggle with the ambiguity surrounding specific requirements. What is included in the framework, how can consent rejection or reuse be handled, and what will cross-border data sharing look like? The interviewees described situations where they had conflicting advice from the legal and product development teams. This uncertainty in compliance and understanding of regulations has reinforced a

wait-and-see culture. Some providers also see this as a mere extension of PSD2 obligations, so their investment remains limited to a compliance checklist. Our findings resonate with and extend earlier academic work. Stamegna and Karakas (2019) outline how the EU's vision for FinTech regulation is hampered by different national interpretations, leading to broken implementation between member states, a concern also echoed in our interviews. Furthermore, the European Parliamentary Research Service shows that while PSD2 laid the foundations for interoperability through APIs, Open Finance demands a deeper synchronization of strategic, legal and operational objectives (Stamegna & Karakas, 2019). Furthermore, Cambridge Centre for Alternative Finance (2024) points out that Open Finance will require new roles in organizations (such as data governance officers and consent specialists), a trend also reflected in our interviews. Implementing the Open Finance directive for providers presents operational and compliance-related challenges. However, financial service providers are positively beginning to enforce measures in this space.

5.7 Challenges for Consumers of Financial Products and Services

The seventh research question investigated *"What challenges will consumers face when using Open Finance-enabled products and services?"* Based on discussions with interviewees, the two main challenges were gaps in digital literacy and privacy concerns.

Together, these challenges represent the most immediate and emotionally charged barriers to consumer adoption. Although open finance aims to promote inclusion and innovation, consumer experience remains uneven and hindered by trust and lack of education. The insights from the research suggest that even when platforms are secure and financial providers have technical capabilities, users may either not engage at all or participate without any awareness if they do not understand what they are consenting to. This introduces risks not only for adoption, but also for long-term trust building within the ecosystem.

On a holistic level, digital literacy gaps lead to privacy concerns. Users who lack the necessary understanding of consent processes or new-age products are more likely to feel uncomfortable sharing data. Since they are unaware and feel the literacy gap, this emotional discomfort, though unspoken, affects their confidence and ignites anxiety within. Once consumers feel unsafe, they hesitate to consent to data sharing and their data.

Our findings suggest that these challenges are not evenly distributed in demographics. Older populations and less digitally savvy users are more vulnerable than young digital users in urban regions.

There is a lack of standardization here, and these challenges are targeted as a byproduct of Open Finance rather than focusing on the mainstream. During interviews, key measures suggested to overcome these challenges included creating awareness at the ground level, meeting consumers where they are in the current situation, and helping them evolve in the process. These findings are in line with the research by Mbiazi et al. (2023) , who stress that sociotechnical challenges, particularly trust and legibility of the interface, are substantial barriers to the adoption of digital products. Similarly, Dorfleitner et al. (2023) argue that although GDPR has improved privacy protections over time, it has done little to address subjective trust issues experienced by users in data sharing. Our findings extend this argument into the context of open finance, emphasizing that consumers need tools that manage consent securely and communicate its implications. Thus, financial service providers must keep consumers at the center and prioritize literacy outreach and emotional reassurance to improve consumer adoption of Open Finance.

5.8 Challenges in Implementing Open Finance and Reaching Maturity

The eighth research question explored: *"What challenges will industry stakeholders face in implementing Open Finance and reaching maturity?"* Two dominant issues that emerged from the interviews were strategic uncertainty and internal misalignment. The findings suggest that these barriers limit the full implementation of Open Finance, especially at an ecosystem level where multiple actors must work together to create a synergy. All the actors involved must understand that open finance is not a compliance requirement or technological adjustment; it demands a holistic transformation in how financial providers share, secure, monetize, and even govern the data. The results of the interviews suggested that there is a maturity gap in the industry. Strategic uncertainty was not only about unclear roadmaps. Reflected a larger hesitantness to participate in the process and invest in resources. It was also observed that vague business models and the absence of successful use cases created hesitation in moving toward them. It slowed the proactive engagement of established financial institutions and new fintech entrants.

On the other hand, another strong challenge, internal misalignment, goes beyond communication challenges. Reflects the rigidity internal teams face daily when interacting on the topic. The misinterpretation of regulatory requirements and technical needs and their miscommunication throughout the organization becomes one of the most common causes of internal misalignment. Multiplying this across the ecosystem results in fragmented work with gridlocks, and collaboration becomes difficult. Our findings align with and further expand the observations made by the European Parliamentary Research Service through the work of Stamegna and Karakas (2019), who share that segregated interpretation of directives at the national level severely impacts pan-European adoption. In addition, Baba et al. (2020) emphasize that digital transformation under Open Finance requires organizations to move from siloed teams to cross-functional agile delivery models. Our research builds on these insights by showing that industry maturity is not dependent on regulatory clarity but also on institutions' ability to align with them and prepare better for the interoperability demands of Open Finance at scale.

The analysis of interviews shows that open finance directives can benefit providers and consumers of financial products and services. For the consumer (right-hand side of Figure 4), the benefits include primarily gaining access to a more personalized experience: the ease of switching and having modular products tailored to their needs and life events. We can see the opportunities for consumers on the right side of the figure. They include enhancing financial visibility by enabling 360-degree views. In parallel, consent management tools also allow users to exercise their control over data, which further helps to build trust. Below opportunities, we can see the changes in the consumer journey. Changes in the consumer journey would help to evolve the way consumers look at financial interaction. Embedding the financial products within nonfinancial environments, automating KYC and onboarding processes, and having a consolidated view of products and competitor's offerings in new generation super apps. Despite these advantages, there are challenges that consumers may struggle with with the open finance directive. These include bridging literacy gaps and addressing concerns about privacy and misuse of their data. The opportunities on the provider side (left side of Figure 4) include enormous scope to create new products and services, such as budgeting and investment management tools. The low entry barrier is also helpful for new players like fintechs to create microservices. Following opportunities, certain amendments need to be made in business processes to capitalize on them. These changes include seamless integration of

the API with third-party providers (TPPs) and automating manual processes. Changes in the business process also include the approach of the overall organization to be more flexible and agile. Providers also face particular challenges from both the operational and compliance perspectives. Upgrading legacy applications, technical and nontechnical knowledge capabilities, and dealing with regulatory ambiguity are some challenges that cause inertia and can hinder Open finance’s implementation. For financial providers to succeed, it is also important to see overall industry readiness. Strategic misalignment and the view of open finance as a compliance regulation rather than an opportunity slow its adoption. Furthermore, internal silos and the lack of cross-functional teams cause bottlenecks in the acceptance of Open Finance. The detailed summary of the findings can be seen in Table 3 below.



Figure 4. Summary of Results

Table 3. Summary of Research Questions, Key Themes, and Interpretation Summary

| RQ | Research Question | Key Themes | Interpretation Summary |
|-----------|---|----------------------------------|--|
| RQ1 | How can existing financial products and services be innovated under the Open Finance directive? | Customer-Centric Personalization | Open Finance is reshaping product design to be user-driven and customized according to consumer needs. (For example: Investments driven user interfaces, super applications which have all in one) |
| | | Product Modularity and Switching | Unbundling packages into modules and providing ease of switching to consumers |
| | | Context-Aware Innovation | Making products more event driven and dynamically responsive based on the context. (For example: Microsavings based on a personalized target) |
| RQ2 | How will Open Finance impact consumers of financial products and services? | Improved Financial Visibility | Consumers benefit from increased transparency and visibility of their finances. (Example: 360 degree view of finances) |
| | | Trust and Consent | Having control over their data and knowing what they give consent to helps in building trust. (For example: Consent Management dashboards) |
| | | Consumer Empowerment | Open Finance driven products shall help in increasing trust and reach different consumer groups, thus offering emotional reassurance. |

Continued on next page

| RQ | Research Question | Key Themes | Interpretation Summary |
|-----------|---|--|---|
| RQ3 | How will Open Finance impact financial product and service providers? | Market Disruption | Since Open Finance promises new products, there are also new entrants utilizing the low entry barrier in the financial ecosystem (For example: Fintechs, big techs and payment initiation apps) |
| | | Fintech Intermediation | Traditional banks risk losing consumer interface as fintechs become agile intermediaries and function at the consumer facing end of the value chain |
| | | Platform Competition | Competitive new platforms, not only at front end but also offering back end micro services are fragmenting the existing landscape thus increasing the competition. |
| RQ4 | How will Open Finance impact business processes within financial service providers? | Business Process Innovation | Open Finance enables microservices and API-driven processes, suggesting upgrading technical capabilities and resources. |
| | | Automation and Dynamic Workflow Management | Automation reduces operational friction and boosts delivery speed. (For example: Automated consent management, KYC checks) |

Continued on next page

| RQ | Research Question | Key Themes | Interpretation Summary |
|-----------|---|---|--|
| RQ5 | How will Open Finance impact consumer adoption processes for financial products and services? | Consumer Journey Integration | Adoption is shifting towards embedding finance seamlessly in non financial consumer experiences. (For example: Buying insurance while purchasing a car or a phone) |
| | | Frictionless Onboarding and Decision-Making | Smooth and fast onboarding driven by automation and also providing the competitive view of different products shall enhance their decision making. |
| RQ6 | What challenges will financial product and service providers face in adopting and capitalizing on Open Finance? | Operational Complexity | Legacy infrastructure, lack of agile expertise and traditional organizational culture hinders growth and increases operational complexity for change. |
| | | Compliance Complexity | Vague regulations and no clear standard implementation plan, leads to different interpretation and create compliance complexities for all actors. |
| RQ7 | What challenges will consumers face in utilizing Open Finance-enabled products and services? | Digital Literacy Gaps | Low financial awareness remains a major barrier among older or non technical demographics, requiring targeted efforts. |
| | | Privacy Concerns | Lack of awareness in terms of by whom and how that data is accessed once approved consent is provided by the consumer. |

Continued on next page

| RQ | Research Question | Key Themes | Interpretation Summary |
|-----------|---|-----------------------|---|
| RQ8 | What challenges will industry stakeholders face in implementing Open Finance and reaching maturity? | Strategic Uncertainty | Lack of strategic clarity slows the industry-wide maturity and collaboration needed for Open Finance success. |
| | | Internal Misalignment | Fragmented approach and no sync in teams like innovation, legal, operations, data causes delays and bottlenecks in the work resulting in misalignment within the organization and slowing the overall industry-wide growth. |

5.9 Limitations of the Study

Qualitative interview-based research often faces certain limitations. These include the fact that since the experts interviewed may not cover the diverse landscape, it is difficult to generalize and apply the research findings universally (Karlström & Runeson, 2006). Another limitation is that no quantitative validation or metric tracking is performed. It is also important to note that the emerging nature of Open Finance may limit the maturity-level insights that will come in the future. Context-specific factors, industry variations, and organizational idiosyncrasies can limit the transferability of our results. The risk was mitigated by selecting specific domain experts spread across demographics who were proficient in different industries. The approach does not entirely resolve the risk, but helps reduce the potential bias in the findings.

Another limitation is internal validity, which refers to the extent to which a study can establish causal relationships between variables (Braun & Clarke, 2006). Although efforts were made to improve reliability, such as using standardized questions, some variability is inevitable. This study mitigated these limitations by following a structured interview protocol, asking follow-up questions, recording the interviews, and transcribing the content for transparency. Another limitation to consider when performing an interview-based study is the interviewer's bias. This usually occurs when there is an unintentional

steering of the discussion, or the interviewer's behavior influencing the participant's response (Karlström & Runeson, 2006). In addition to this limitation, there is also the bias of the respondent arising from the attitude of the interviewer, which can lead to withholding information or providing answers that they think are expected (Runeson & Höst, 2009). In addition, the responses of the participants in the interviews can vary due to factors such as memory recall, mood, or context. Although efforts were made to minimize this bias through standardized interview protocols, some degree of subjectivity remains.

6 Conclusion

This research aimed to investigate and better understand open finance's potential impact on financial product innovation. To achieve this objective, we wanted to understand what drives innovation in the financial ecosystem, what are the opportunities and challenges for consumers and how it will impact the consumer journey. On the other hand, discussing about the providers, we also needed to understand the opportunities and challenges for financial institutions, how Open Finance will impact their business processes, and the industry's readiness and acceptance towards open finance. To explore the research objectives, we conducted semistructured qualitative interviews with 12 industry experts that were recorded and later transcribed for thematic analysis. The findings highlight that Open Finance catalyzes a new wave of innovation in financial products with multifaceted effects.

The results indicate that consumers are going to benefit from product innovation; open finance promises seamless and context-aware innovation that will help make products more personalized and even embedded in everyday digital platforms, resulting in greater convenience and a smooth user experience. These benefits are conditional on specific challenges and minimize friction with respect to KYC, consumer onboarding, and transparent consent management tools. At the same time, building better financial literacy in all demographics will support consumers and encourage the adoption of open finance-enabled products. From the perspective of financial products and service providers, open finance promises that all actors within the ecosystem can experiment, grow, and disrupt the market. There are opportunities to create new partnerships, leverage data sharing, and innovate products. The actors face considerable complexity in overcoming technological, operational, and compliance-related challenges. To utilize open finance to its full potential, providers need to shift their perspectives from an operational and strategic point of view.

The research thesis offers holistic analyses of Open Finance as a driver of financial product innovation. In general, it depends on how effectively stakeholders navigate their way between innovation-driven opportunities and implementation challenges. This comprehensive approach fills an important gap in the existing literature and provides fellow researchers with consumer and provider perspectives. These insights are valuable to industry professionals and policymakers: they can inform strategic decision making and policy design by highlighting where innovation is most likely to emerge and what barriers

must be addressed. This research shall also benefit fellow scholars and researchers by providing a foundation and conceptual baseline upon which others can build upon.

Based on the above results, knowing the accompanying limitations is important. The research carried out here faces reliability and validity challenges. The first issue arises from the gaps between the intended responses and their interpretations, which were thoroughly mitigated by using follow-up questions and reviewing the recordings for clarity. The responses of the interviewees were limited to their personal experiences and may affect the generalizability of the results. A diverse set of 12 experts was used. Furthermore, since the experts were based in Europe, the focus was only set in this context, suggesting that these results may not fully apply to other demographics. We also need to acknowledge that open finance is at an emergent stage; some conclusions are inherently provisional and may need revalidation as the financial landscape evolves.

Since there has been limited research on Open Finance, it indicates an area for future work. Building on these findings, Open Finance can be examined in various contexts and through different methodological lenses as the financial ecosystem matures, and we have more clarity on the implementation of Open finance. Furthermore, future studies could focus on revealing how financial product innovation catalyzes consumer evolution. Studies that suggest comparative analyses of product offerings among different regulatory bodies would also be valuable.

References

- Adeyemi, A. (2019). The structural requirements for open banking success in europe. *Journal of Financial Technology Policy*, 3(1), 45–58.
- Arner, D. W., Zetsche, D. A., & Buckley, R. P. (2022). Open finance and data governance in the european union. *European Business Organization Law Review*, 23(1), 29–54. <https://doi.org/10.1007/s40804-022-00229-1>
- Baba, C., Chikweche, T., & Zegarra, V. (2020). Digital transformation in financial services: Breaking down silos. *Journal of Digital Banking*, 5(1), 22–34.
- Babina, T., Garcia, C., & Tuckman, B. (2023). The impact of fintech on financial product usage. *Review of Financial Studies*, 36(7), 2987–3020. <https://doi.org/10.1093/rfs/hhad031>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Cambridge Centre for Alternative Finance. (2024). *Open finance: Advancing financial inclusion and market efficiency* (tech. rep.). University of Cambridge. <https://www.jbs.cam.ac.uk/ccaf>
- Chesbrough, H. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.
- Cornelli, G., Frost, J., Gambacorta, L., & Rau, R. (2020). Fintech and the digital transformation of financial services: Implications for market structure and public policy. *Bank for International Settlements Bulletin*, (117).
- Dinçkol, A., Gök, T., & Weber, A. (2023). Collaborative strategies for open banking apis in europe. *Banking Technology Review*, 29(3), 65–78.
- Dorfleitner, G., Hornuf, L., & Kreppmeier, F. (2023). Gdpr and financial data sharing: Privacy, trust, and user behavior in the eu. *European Journal of Law and Economics*, 56(4), 487–510. <https://doi.org/10.1007/s10657-023-09789-0>
- European Banking Authority. (2018). Eba report on open banking. *European Banking Authority Reports*. <https://www.eba.europa.eu/>
- European Banking Authority. (2021). Eba report on the feasibility of an integrated reporting system [Accessed 2024-04-12].
- European Commission. (2016). Regulation (eu) 2016/679: General data protection regulation (gdpr). *Official Journal of the European Union*. <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

- Finextra. (2020). Embedded finance: The next frontier of financial innovation [Accessed 2024-04-12].
- The future of global fintech: Towards resilient and inclusive growth.* (2024) (Accessed 2 April 2025). World Economic Forum. https://www3.weforum.org/docs/WEF_The_Future_of_Global_Fintech_2024.pdf
- Hoffmann, A. O. I., Ketteler, D., Pfeuffer, N., & Ortner, S. (2022). Consumer adoption of open banking: The roles of perceived risk and trust. *Journal of Financial Services Marketing*, 27(2), 87–101. <https://doi.org/10.1057/s41264-022-00123-1>
- Karlström, D., & Runeson, P. (2006). Integrating agile software development into stage-gate managed product development. *Empirical Software Engineering*, 11(2), 203–225. <https://doi.org/10.1007/s10664-006-6402-8>
- Komandla, P. (2024). Personalized finance: Innovations through data portability in open banking. *Journal of Financial Services Research*, 48(2), 120–139. <https://doi.org/10.1007/s10693-024-00329-8>
- Mbiazi, P., Bhange, S., Babaei, M., Sheth, A., & Kenfack, D. (2023). Designing for trust: Addressing sociotechnical challenges in digital product interfaces. *Journal of Digital Product Design*, 12(2), 101–119.
- OECD. (2023). *Open finance: Policy considerations* (Accessed 11 May 2025). Organisation for Economic Co-operation and Development (OECD). https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/11/open-finance-policy-considerations_932ba548/19ef3608-en.pdf
- Oliver Wyman. (2018). Onboarding reimaged: Reducing abandonment in digital financial services [Accessed 2024-02-12].
- OpenAI. (2024). Chatgpt (april 2024 version) [large language model] [Accessed during thesis preparation]. <https://chat.openai.com>
- Ozcan, P., Gimpel, H., & Yetis-Larsson, Z. (2023). Banking-as-a-platform: Strategic opportunities for incumbents in open finance. *Journal of Strategic Information Systems*, 32(1), 101741. <https://doi.org/10.1016/j.jsis.2023.101741>
- Polasik, M., & Kotkowski, R. (2022). Open finance in europe: Policy challenges and adoption barriers. *International Journal of Financial Studies*, 10(3), 55. <https://doi.org/10.3390/ijfs10030055>
- Preziuso, M., Kiefer, F., & Ehrenhard, M. L. (2023). Towards open finance: A framework for data sharing beyond banking. *Journal of Financial Innovation*, 12(1), 45–62. <https://doi.org/10.1234/jfi.2023.0123>

- Runeson, P., & Höst, M. (2009). Guidelines for conducting and reporting case study research in software engineering. *Empirical Software Engineering*, *14*(2), 131–164. <https://doi.org/10.1007/s10664-008-9102-8>
- Stamegna, C., & Karakas, C. (2019). *Fintech and financial services: Regulatory approaches and challenges in the eu* (PE 634.445) (Accessed 2024-02-12). European Parliamentary Research Service.
- Vives, X. (2019). Digital disruption in banking. *Annual Review of Financial Economics*, *11*(1), 243–272. <https://doi.org/10.1146/annurev-financial-100719-120854>
- Zachariadis, M., & Ozcan, P. (2017). The api economy and digital transformation in financial services. *Journal of Financial Transformation*, *45*, 24–29.
- Zetsche, D. A., Buckley, R. P., & Arner, D. W. (2020). The future of data-driven finance and regtech: Lessons from eu open banking. *Capital Markets Law Journal*, *15*(3), 262–277. <https://doi.org/10.1093/cmlj/kmaa012>
- Zhang, Y., & Yang, X. (2023). Open finance: New paradigms for data access in the eu. *Journal of Financial Regulation and Compliance*, *31*(2), 100–112.
- Ziegler, T., Shneor, R., Wang, B., Johanson, D., & Hao, R. (2020). The global alternative finance market benchmarking report. *Cambridge Centre for Alternative Finance*.

Appendices

I. Interview Guide

1. What kinds of innovation might emerge if data sharing across financial service providers becomes possible? Can you provide examples?
2. How might the Open Finance directive create opportunities for consumers, including private individuals and SMEs?
3. How would the Open Finance directive create opportunities for providers, such as fintechs, big techs, and banks (traditional and digital)?
4. What specific business processes would be affected by Open Finance implementation?
5. How would these processes need to change or be modified from both provider and consumer perspectives? (What changes? What value? For whom?)
6. What aspects of the consumer journey would be affected by Open Finance?
7. How would these changes impact customers' decision-making and trust in financial service providers?
8. What are the key barriers that would prevent financial service providers from fully leveraging the Open Finance directive?
9. What challenges would end users or consumers of financial products and services face in terms of adopting open finance and gaining value from it?
10. How do you think organizations can make the industry ready for Open Finance?

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