

# Open Banking and Information Service: A Strategic Relationship in the FinTech World

Sadia Sharmin<sup>1</sup>, Mani Prabha<sup>1</sup>, Fatema Tuz Johora<sup>2</sup>, Nur Mohammad<sup>2\*</sup>, Md Azad Hossain<sup>1</sup>

<sup>1</sup>Department of Business Administration, International American University, 3440 Wilshire Blvd STE 1000, Los Angeles, CA 90010, United States

<sup>2</sup>Department of Business Administration, 17877 Von Karman Ave 4th Floor, Irvine, CA 92614, United States

Email: \*n.mohammad.254@westcliff.edu

**How to cite this paper:** Sharmin, S., Prabha, M., Johora, F. T., Mohammad, N., & Hossain, M. A. (2024). Open Banking and Information Service: A Strategic Relationship in the FinTech World. *Open Journal of Business and Management*, 12, 3743-3758. <https://doi.org/10.4236/ojbm.2024.125186>

**Received:** July 12, 2024

**Accepted:** September 27, 2024

**Published:** September 30, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

Open banking has revolutionized the financial sector by providing access to financial data and enabling better-informed financial decisions. With their unique traits and competitive positioning, open banks present opportunities for the financial sector. Open Banking Account Information Services (AISP) are services that businesses can integrate into their products, enhancing customer experiences and making better decisions. The emergence of open banking presents numerous opportunities, and the evaluation of these opportunities is crucial. This study aims to expand the understanding of potential, challenges, and assessment in open banking and emphasizes the relationship between open banking and Information Services. The emergence of open banking presents numerous opportunities, such as personalized banking services, partnering with competitors or other service providers, and creating an embedded financial system. The study aims to identify business concepts that can be practiced within an open banking perspective by developing an opportunity evaluation model for challenger banks. This research contributes to the sector of open banking opportunities by analyzing current market dynamics and developing an assessment framework covering the most number of parameters. This will enable practitioners in the financial industry to analyze changes in current conditions more systematically and allow subsequent researchers to build on this study for opportunity exploration and evaluation studies in various fields.

## Keywords

Open Banking, Information Service, Blue Oscan Strategy, Disruptive Innovation Strategy, FinTech

## 1. Introduction

Open banking, also known as “open bank data,” is a banking practice that allows

third-party financial service providers to access customer banking, transactions, and other financial data from banks and non-bank financial institutions through application programming interfaces (APIs). This innovation is poised to reshape the banking industry by allowing customers to securely share their financial data with other financial institutions. APIs can facilitate the process of switching between banks' checking account services and identify the best financial products and services for customers (Hsiao, 2021). Open banking can help lenders get a more accurate picture of a consumer's financial situation and risk level, offering more profitable loan terms. It can also help consumers understand their finances better before taking on debt, as an open banking app could automatically calculate what customers can afford based on all the information in their accounts. Large, established banks will have to compete more with smaller, younger banks as a result of open banking, which should lead to cheaper prices, better technology, and improved customer service. Established banks will have to adopt new ways to handle and spend money to adopt new technology, but they can take advantage of this new technology to strengthen customer relationships and retention by better-helping customers manage their finances instead of simply facilitating transactions. So, open banking is a driving force of innovation in the banking industry, enabling customers to securely share their financial data with other financial institutions. By leveraging APIs, banks can strengthen customer relationships and retain customers by providing better financial management services. The concept of open banking is the opposite yet fruitful of traditional banking. Open banking offers customers a more secure alternative to conventional banking, allowing them to share only the necessary data for their desired product or service. This technology, which benefits from robust security measures like secure APIs and stringent customer consent protocols, enhances data protection and safeguards against fraudulent activities, reducing the need for customers to share extensive personal or financial information (Amon *et al.*, 2020; Hasan *et al.*, 2024a; Hasan *et al.*, 2024b; Hasan *et al.*, 2024c; Zeynalova, 2024).

Tracking the various attempts to describe FinTech will provide an excellent understanding of this modern word, even though there is no agreement on the appropriate description and it is premature to define a subject that is fast growing. The term "FinTech" refers to businesses or representatives of businesses that integrate contemporary financial technologies and financial services. FinTech also refers to a range of creative business models and developing technologies that have the power to revolutionize the financial services sector.

The Financial Stability Board describes FinTech as "innovation in financial services enabled by technology that may lead to new business models, applications, processes, or products with a related material effect on the provision of financial services" (Dorfleitner *et al.*, 2017; Johora *et al.*, 2024; Mahmud *et al.*, 2024; Mohammad *et al.*, 2024). As to IOSCO's statement in 2017, the term "financial technologies," or "FinTech," refers to a range of inventive business mod-

els and developing technologies that possess the capability to revolutionize the financial services sector. The Financial Stability Board described FinTech as “technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services” (Adrian *et al.*, 2015; Al Mahmud *et al.*, 2024; Shahana *et al.*, 2024).

The open bank tends to rely a lot on IT management or information services. Open Banking offers Account Information Services, providing businesses and consumers with new tools for better financial understanding. These services enable better application, verification, and onboarding processes, resulting in smoother experiences for customers and better risk management for providers.

Open Banking broadens access to financial data, allowing consumers more control over their data, enabling better informed financial decisions for both consumers and industry. Open Banking Account Information Services (AISP) are services that businesses can integrate into their products to provide a single financial dashboard, enhance customer experiences, and make better decisions. These services can be used by lenders to underwrite credit, allowing applicants to access their financial history quickly and easily. In the coming years, both consumers and businesses will become familiar with Open Banking Account Information Services, similar to Google’s single sign-on tool. Consumers will know it as part of the brand they are dealing with. For the financial sector, the open banking movement has revolutionary ramifications that include the rise of new business models, technological innovations, and client demands. Furthermore, the unique traits and competitive positioning of challenger banks may make them more creative and nimble. Just as challenger banks formerly posed a threat to established banks, it is now intriguing to consider how those banks could respond to the difficulties presented by the more recent and agile competitors. Further study can explore the potential of open banking and propose an evaluation model for existing banks to bridge the knowledge gap. There are several models for open banking financial margin evaluation in the case of IT management.

Disruptive innovations (DIS) are the strategy that, by starting with simpler, more accessible, or more inexpensive products or services and frequently focusing on underserved client segments open up new markets. These developments have the potential to eventually overtake current market leaders (Nagy *et al.*, 2016). Important elements consist of:

- 1) Market Entry: Starting small or developing a brand-new market niche.
- 2) Displacement: Improving gradually to pose a threat to and eventually supplant established items.
- 3) Customer Segments: Initially targeted at non-consumers or the least picky users of established brands.

The Blue Ocean Strategy (BOS) places more focus on developing new markets (“Blue Oceans”). The main concept is to differentiate one from the competition

by providing a special value proposition that meets unmet needs. This strategy incorporates the following fundamental ideas:

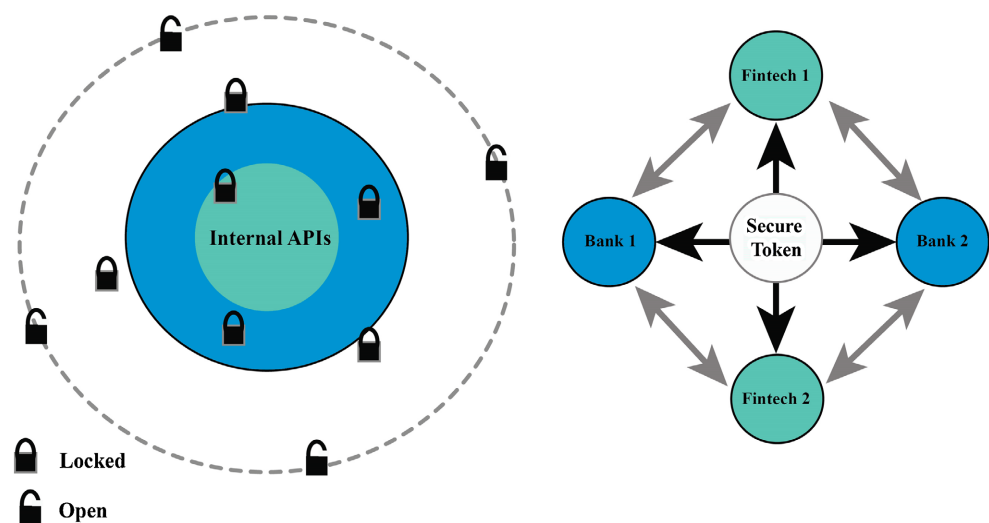
- 1) Value Innovation: To create new demand, innovation should be matched with price, cost, and utility positions.
- 2) Uncontested Market Space: Establishing and taking control of new markets while eradicating the opposition.
- 3) Rebuilding Market Boundaries: Examining the market structure and raising questions about industry presumptions.

The study highlights the European Union (EU) and European Economic Area (EEA) as it covers a total of 59 country economics and some of the most high currency economies are bound in those areas. With the research in these areas, the world open bank economy can be predicted.

Therefore, this study aims to expand the understanding of potential, challenges, and assessment in the context of open banking. The research also emphasizes the relationship between open banking and Information Services following the popular two evolution models.

## 2. Literature Review

Open banking, a model that has gained business relevance, is transforming the financial industry by offering superior and agile offerings to customers. This innovative model enables banks to manage financial affairs, make better decisions, and save money. Digital disruption, FinTech, and regulatory compliance have accelerated competition, forcing banks to open up their systems. The open banking structure is shown in **Figure 1**. It enables banks to transform their core systems, integrate with internal and external partners, and overcome challenges in implementing open banking. Initiatives for API standardization are being taken to further enhance this business relevance (Aditto et al., 2023; Premchand & Choudhry, 2018).



**Figure 1.** Open banking structure.

Banking business models are constantly evolving, with the adoption of digital technologies such as informational and operational computing algorithms, quantum computing, Artificial Intelligence (AI), blockchain technology, process automatization, biometrical technologies, big data, mobile banking, and branch digitalization. This transformation involves a shift from human to machine interactions, affecting back-office operations, payment services, and individual/retail lending services. The concept of branch networks will be deleveraging, and the traditional structure of the banking system will be transformed into a more open, fast, and digitalized one. Early stages of digital progress have included deposits, lending, payments, asset management portfolios, equity, and capital. The internal architecture of banks will be reshaped from a traditional banking system to a more digital one, with FinTech coexisting with core bank activities (Kobler *et al.*, 2016).

This research was inspired by open banking investment management. Open banking is a structured sharing of customer data between consumers and service providers, based on their needs and consent. This data sharing is discrete and reversible, involving transaction and value-added customer data. Open banking empowers customer choice, ensures customer protection, and enables industry innovation. It benefits all stakeholders in the financial services industry, providing better customer service, personalized financial products, and improved financial health. Businesses can use technology to streamline operations, improve cash flow, and gain better insight into their customers. FinTech and innovators will revolutionize spending, management, and understanding finances, while banks can reimagine their business models. Open banking requires clear, understandable consent, regulatory oversight, and standardization. Canada's federal government must play a proactive role in establishing a level playing field for stakeholders. A lot is changing quickly in the financial services industry, impacting the conventional methods of doing banking, from putting banking operations "on the cloud" to digitally advancing innovative technology. Creating a significant additional value in terms of efficiency of time and integrating everything pertinent resources, including transactions and financial investment, the digital trend begins to open up new service opportunities for banks. It is also influenced by demonstrating reduced margins in other areas, such as credit or international transaction costs (including investment management), making it more appealing and long-lasting for a wide range of clients (Ahmed & Sobuz, 2011; Akid *et al.*, 2021; America, 2019; Jabin *et al.*, 2024; Piirainen, 2016; Sobuz *et al.*, 2024b).

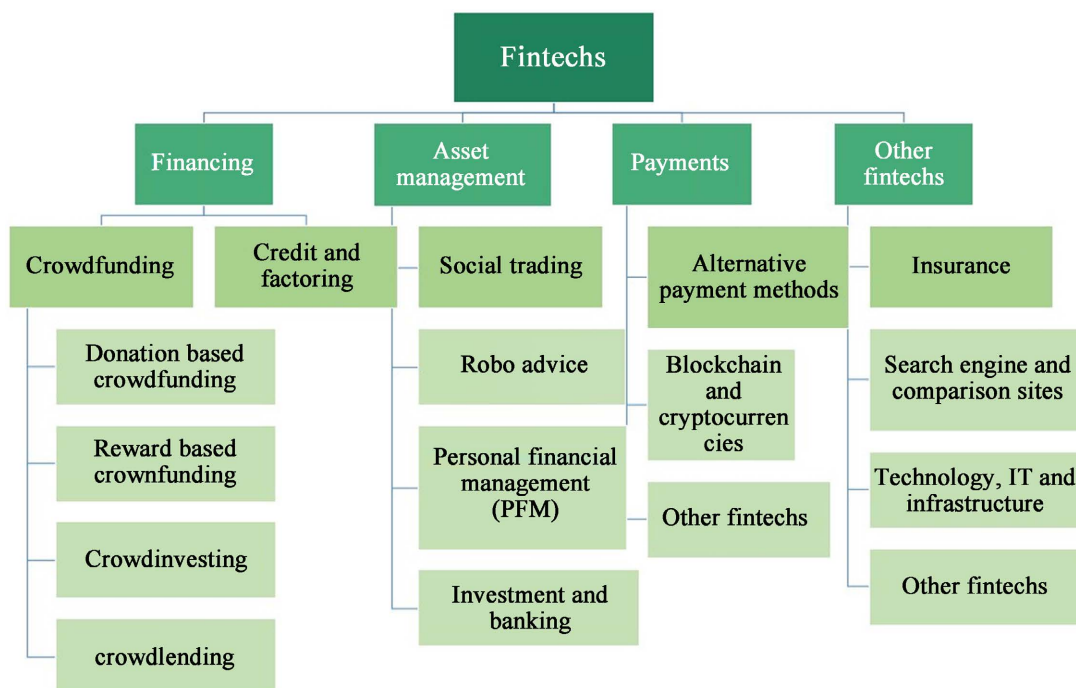
Anna Eugenia Omarini's research on Banks and FinTech discovered that digital technologies and open banking are revolutionizing the banking industry, transforming traditional business models from pipeline to modularity. This shift is driven by regulatory pushes, new players, and digital technologies. Open banking models offer banks new revenue streams and opportunities for modular services. These models can range from compliance with PSD2 requirements to

incorporating new services, opening banking core and data, and aggregating them within a platform experience. Value is created through economies of scope in production and innovation. This paper explores the evolution of FinTech and TechFin in the market and the emergence of platform models in banking (Sobuz *et al.*, 2024a). Yuchen Hsiao, in 2021, examined opportunities and evaluations of open banking. This research led to the discovery that Open banking is gaining traction in the financial industry, with challenger banks emerging as key players. These banks, with their digital competence and agility, are exploring opportunities in personalized banking services, modularity, and embedded finance. A study identifies three segments of opportunities: modularity, embedded finance, and personalized banking services. A practical model for assessing these opportunities has been developed, providing banks with a systematic and comprehensive approach (Sobuz *et al.*, 2023).

In 2018 it was researched about managing digitalization in banking. According to the paper, the article explores the evolving banking sector and the digitalization processes that occur in the financial market and society. It identifies 10 challenges in managing this strategic transformation, including the digital era, technological development, new mobility banking services, AI, blockchain, big data, and new business banking models. The paper also discusses the management of digitalization and its potential implications on the banking business. Digital innovations and developments transform the banking industry and every organization. The transformation involves a strategic management process with a mixed-competency team, considering customer behavior, expectations, and experiences from other industries. A strategic partnership between IT and business functions is crucial for managing digitalization. The paper emphasizes the importance of responsibility, accountability, adaptability, and flexibility in the management process of digitalization. Specific tools and activities are needed to plan, attract, and coordinate human and technological resources, test and modify, assess and impact, change, and re-engineer. Successful digitalization in banking requires an educational pack and sale for all stakeholders (Omarini, 2018).

From the review of the Blue Ocean strategy, this study explores the impact of the BOS on a firm's competitive advantage and performance. It reviews relevant literature and synthesizes articles to establish a theoretical framework linking the BOS to competitive advantage and firm performance. The framework aims to provide a foundation for further research on the BOS, competitive advantage, and firm performance. However, there is still a need for more research on methods, tools, and the implications of the BOS on competitive advantage and firm performance. Further research could help confirm whether competitive advantage mediates the BOS and firm performance (Hsiao, 2021). With the review of dispersive innovation strategy, the study enhances our understanding of business platform strategies by examining the implementation of sophisticated software. It explores the strategies used by financial platforms, such as capturing,

analyzing, and exchanging large volumes of data. **Figure 2:** Segments of the FinTech industry in open banking.



**Figure 2.** Segregates the segments of the FinTech industry in open banking.

The research also examines the effectiveness of customer-focused strategies, such as Experience-Based Offerings (EBOs), in gaining a competitive advantage. The findings suggest that businesses can improve customer experiences by integrating technology, and managers and employees can enhance these experiences. This study contributes to our understanding of business platforms and their potential for success (Nițescu & Duna, 2018). In a study of a comparative study of the BOS and dispersive innovation strategy, The BOS is a strategy that aims to create a new market or blue ocean, making competition meaningless. It involves formulating and implementing strategies aimed at simultaneous differentiation and low cost. The key concepts of BOS include “innovative value,” “leadership,” and “fair process.” Blue oceans are created through systematic and productive methods and processes, allowing organizations to create a common mind and implement effective strategies through easy communication.

The road to the blue ocean requires strong intuition, an open mind, creativity, and good listening ability. Analyzing customer feedback is crucial for success in the blue ocean. The Ankara Chamber of Commerce (ACC) analyzed Turkey’s foreign trade in 2010, revealing that over half of the trade deficit stems from the foreign trade of advanced technologies. The impact of destructive innovations is increasingly seen in the replacement of letters by emails, horses by motor power, satellites by satellites, newspapers by e-news sites, and taxis by Uber. To compete in international markets, enterprises must be sensitive to developments and pay

attention to R&D, start-ups, and cooperations with the status quo. Increased quality and budget allocation to R&D is necessary to create innovative technologies and create a more competitive blue ocean (Yunus & Sijabat, 2021).

The research related to open banking, FinTech, and Open banking strategies mostly are limited in connecting any two of the related. The strategies are not abruptly discussed in the European Economic Area. Comparing the two strategies can help open new gates to discover new paths for improving open banking techniques, especially when the world economy is getting tech-biased day by day. Therefore, this research will highlight the lack of information on the relationship between open banking and the FinTech industry. Also, comparing the two innovative techniques reveals the current state of open banking with numerical parameters.

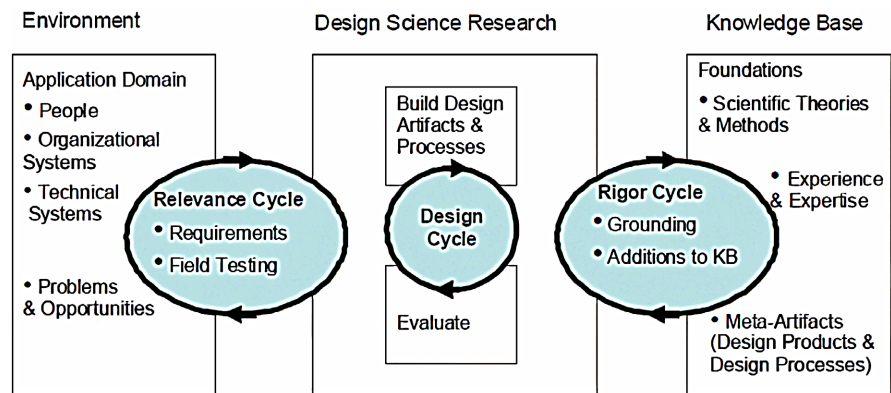
### 3. Methodology

Open banking has revolutionized the banking industry by enabling banks to identify new opportunities and overcome challenges. Entrepreneurial opportunity identification and development involves perception, discovery, and creation processes. This study focuses on identifying business concepts and developing a model for evaluating them. The design science approach is adopted to build an artifact to evaluate and solve problems, with some research focusing on identifying new opportunities. The study uses the three-cycle view of the design science approach to build potential business concepts and the opportunity evaluation model, aiming to answer the research question of what opportunities open banking offers and how they can be evaluated. The process is broken down into four phases: creating artifacts, field testing, assessing efficacy, and developing the knowledge base.

**Developing the knowledge base:** This study aims to identify opportunities for challenger banks in open banking by analyzing market information and customer needs. Four types of opportunities are defined: known market needs and value creation capability, imitation, spillover, and sequential opportunities. The data sources framework includes industry rivalries, new entrants, suppliers, customers, and substitutes. The study will focus on the European Economic Area (EEA) and the UK, with a specific focus on Sweden. The second aim is to develop an evaluation model, incorporating scientific theories on opportunity evaluation and resources from innovation management and strategic management fields. The study is inspired by Porter's five forces.

**Creating Artifacts:** This study analyzed market data from five aspects and identified similarities and differences between business models, supplier offerings, and customer needs. It summarized the data into business concepts for challenger banks and evaluated them using seven main parameters with twenty-six attributes. The design science research framework cycle is shown in **Figure 3**.

**Field Testing:** The study employed a mixed-methods approach, including a



**Figure 3.** Design science research framework (Agyei-Boapeah et al., 2022).

workshop and a post-workshop survey. The workshop, designed based on the entrepreneurial opportunity identification and development theory, focused on the creation stage, involving resource allocation and recombination. Participants were asked to migrate their organization's capabilities to identified business concepts using the opportunity evaluation model. The workshop was conducted online and recorded for data analysis. A post-workshop survey was sent to assess the effectiveness of the model. The survey aimed to understand the impact of each parameter on perceived usefulness, attitudes toward the model, willingness to practice, and the influence of the instructor.

**Assessing efficacy:** This study examines the effectiveness of the opportunity evaluation model through comprehensive discussions and entanglements, based on recorded workshop recordings and transcribed discussions.

This study aimed to develop a business concept and evaluation model in open banking, focusing on challenger banks. However, due to time constraints, access issues, and limited data sources, the study may have resulted in sample frame errors and cannot guarantee the market representativeness or validity of the models. The study adheres to the five principles of research ethics from the American Psychology Association's Science Directorate, including properly citing literature, avoiding multiple roles that could impair professional performance, clearly revealing the process, asking for permission for recording, and maintaining anonymity by excluding the company's name and personal data from the study.

Open Banking opportunity evaluation models used:

- 1) Blue ocean strategy (BOS).
- 2) Disruptive innovations (DIS).

## 4. Results and Discussions

The results of the study are presented in three sections. First, by looking at the five distinct actors involved in financial operations, possible possibilities in the financial industry are identified. Next, this analysis lists seven criteria that have been recommended as deserving of investigation for opportunity assessment. In

conclusion, this study uses the opportunity evaluation model to show the empirical findings from an open bank.

Opportunity development can be inspired by any idea, new to the market, or a company's prior entrepreneurial experience. An opportunity is defined as undefined needs or unused resources, but this study uses 'the opportunity' more as a 'business concept' to clarify the assessment. The latter is easier to assess as it has already undergone initial development.

#### **4.1. Opportunities of Open Banking:**

This study explores industrial trends in the financial sector and highlights opportunities through scenario and partnership levels. It identifies three main business concepts: personalized banking services, modularity, and embedded finance. The first concept suggests challenger banks integrate technology to provide personalized services, while the second focuses on modularizing functions for flexibility and cost reduction. The third concept proposes building an embedded financial service system to connect other service providers, aiming for an Omni-finance channel.

1) Individualized financial services: Open banking enhances data transformation and management, enabling banks to effectively track customer preferences and engage them. Non-financial data with transaction records can be used to provide personalized services. Challenger banks should leverage IT resources to build personalized services, considering customer needs like online shopping perks and budget control suggestions.

2) Modularity: Since 2019, over 69% of respondents have increased partnerships with other FinTech companies, highlighting the importance of building partnerships in the banking industry. DeFi has shown that building on others' infrastructure is more efficient and mutually beneficial than doing it alone. API providers are building a convenient pathway for both FinTech and banks, with modularization being essential for faster service delivery. Challenger banks can also become providers of modularized functions, as long as they have a strong development team and allow other banks or FinTech companies to use them.

3) Embedded finance: Banks can offer a personalized experience to customers by connecting services and providing an Omni-finance channel. By analyzing non-financial transaction data, banks can gain a deeper understanding of customers' needs. This could involve partnering with online merchants to offer loyalty programs and manage monthly budgets. This would enable more efficient service quality with lower development resources and make financial services accessible to customers excluded by traditional banks, promoting financial inclusion.

#### **4.2. Risks of Open Banking:**

Open banking offers benefits to customers and financial institutions, but it's crucial to be aware of potential risks, such as:

1) Data Security: The safe exchange of financial data with third-party providers via APIs is a key component of open banking, and thus poses a potential danger of data security breaches. Open Banking API Security Concerns:

- Third-Party Risks: Open access to third-party systems can expose sensitive customer data.
- Fraud: Increased data sharing increases the risk of fraudulent activities. Cybercriminals may impersonate customers or banks to deceive users.
- Data Privacy: The vast amount of data shared across platforms raises concerns about data privacy. Ensuring data privacy is challenging, especially with GDPR not applicable outside of Europe.
- Technical Risks: Dependence on APIs can impact service reliability due to system outages or integration errors.

2) The emergence of new competition: FinTech companies that are not banks, like GAFAs, pose a challenge to established banks. These technologically advanced businesses are drawing clients by providing unique, interesting, and unbundled financial services and products.

3) Strict Compliance: Open banking, a new trend in financial services, requires strict compliance with regulations like the General Data Protection Regulation (GDPR). Financial institutions are leveraging this to gain a competitive advantage and enhance customer service. Despite its early stages, open banking has the potential to revolutionize the industry by fostering innovation and promoting new business models. The emergence of FinTech and collaboration between banks and FinTech are driving this shift. Despite data security and regulation-related issues, the momentum towards open banking is high due to the current wave of digitalization in banking.

### **4.3. Opportunities Evaluation of Open Banking**

The study involved five participants from the open banks who used the opportunity evaluation canvas to discuss a business concept, personalized banking services. They evaluated their company's capability using the RPV framework and then selected a business concept to discuss using the canvas. The evaluation process involved discussing all parameters in the model, making digital sticky notes, and adjusting the rating scale on the chart. The workshop was conducted using an online whiteboard service, and a survey was sent to collect quantitative feedback to validate the evaluation model. The results showed that the company's capabilities were compared with a business concept profile.

1) Qualitative information of the session: The opportunity evaluation model, which involves five participants from different departments, has limitations. It requires clear business concepts to avoid uncertainties, and the diversity of participants can affect the outcome of the assessment. The background of the decision-making group also affects the outcome, as it can affect the technical feasibility, time, and in-house engineers' ability to handle development work.

Some participants noted that different parameters may have different weights

for each company and that the definition of value may not be the same across companies. The model should provide flexibility for companies to define what is important to them.

Some parameters require further discussion, and it can be difficult to discuss them under a short time limit and spontaneous thoughts. The model should guide decision-makers through each parameter, allowing them to analyze critical attributes in detail within each parameter. If there is difficulty discussing a parameter, participants should seek professional perspectives and more time to conclude.

2) Quantitative data in the survey: The opportunity evaluation model received positive feedback from five participants, with four out of five responding “somewhat well” and the rest “extremely well.” The model’s effectiveness was highest for ‘value creation’ and ‘competitiveness’ parameters, with scores of 8 and 8.4 out of 10, indicating their greater impact or importance to participants.

#### 4.4. Open Banking Strategies:

This study explores the future of finance from the perspective of non-customer’s voice, focusing on consumer reports and other four actors: new entrants, rivalries, suppliers, and substitutes. Challenger banks are focusing on personalized banking services, but no one has achieved these concepts yet. The study suggests that banks can win customers by providing faster and more user-friendly services, demonstrating the importance of developing detailed business plans and executing them in a competitive market. Open banking presents opportunities for banks and FinTech companies to use data, but heterogeneity among companies means that opportunities defined by others or market trends may not apply to specific banks. The study suggests providing financial services embedded in customers’ lives as a significant opportunity under open banking. However, developing opportunities should be based on the bank’s mission and vision, aligning with technology, and gaining innovative insights from the target customer or non-customer group. After questioning about 100 participants, the results were measured on a scale of 10. **Table 1** and **Table 2** present the Effectiveness of the BOS and Effectiveness of the DIS.

**Table 1.** Effectiveness of the BOS.

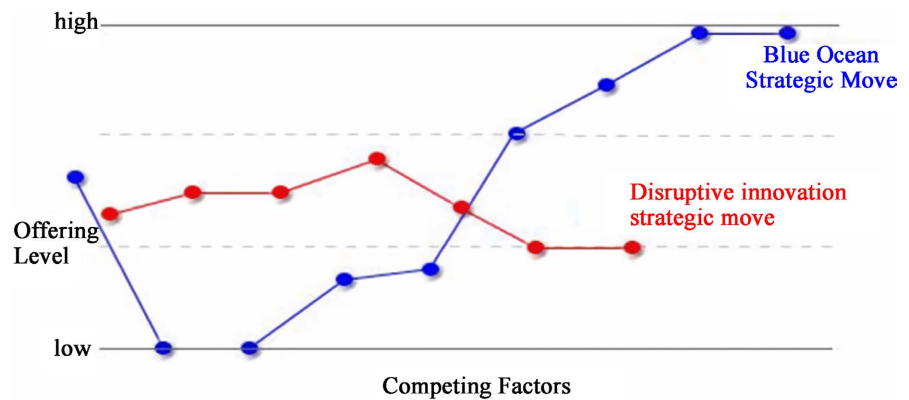
Aspect	Overall	Diversification	Tangible resources	Tangible resources
Score	9.6	7.2	7.2	7.2

**Table 2.** Effectiveness of the DIS.

Aspect	Value creation	Competitiveness	Risk	Compliance
Score	8	8.4	6.4	7.2

The study found that the parameters of “risk” and “compliance”, crucial to the

banking industry due to their highly regulated nature, received the lowest effectiveness scores. Some participants believed these parameters were known before the workshop, but others acknowledged their importance and that business concepts with obvious risks or compliance issues were not worth further discussion. Participants are likely to use the opportunity evaluation model for evaluating opportunities, with an 8.2 out of 10 likelihood.



**Figure 4.** Effectiveness comparison of two open banking opportunity evaluation models.

The Effectiveness comparison of two open banking opportunity evaluation models is shown in **Figure 4**. This study explores the future of finance from the perspective of non-customer's voice, focusing on consumer reports and other four actors: new entrants, rivalries, suppliers, and substitutes. Open banks are focusing on personalized banking services, but no one has achieved these concepts yet. The study suggests that banks can win customers by providing faster and more user-friendly services, demonstrating the importance of developing detailed business plans and executing them in a competitive market. Open banking presents opportunities for banks and FinTech companies to use data, but heterogeneity among companies means that opportunities defined by others or market trends may not apply to specific banks. The study suggests providing financial services embedded in customers' lives is a significant opportunity under open banking. However, developing opportunities should be based on the bank's mission and vision, aligning with technology, and gaining innovative insights from the target customer or non-customer group. The opportunity evaluation model is a useful tool for conducting business concept assessments, but it requires further testing and development. The model's effectiveness is promising, with positive participant attitudes and interest in adopting it. The attributes of each parameter can be flexible, allowing companies to define their internal criteria. The model can be used to compare multiple business concepts, making more objective choices. The time frame should be considered, as some axes require more detailed discussion. Despite being used in a two-hour workshop, the model could still be used as a thinking framework or a more detailed evaluation process for business concept development. Overall, the model's effectiveness is

promising but requires further testing and development.

## 5. Conclusion

This study makes two contributions to the sector of open banking opportunities: analyzing current market dynamics, providing three business concepts that challenger banks could adopt, and developing an assessment framework covering the most parameters. These contributions will enable practitioners in the financial industry to analyze changes in current conditions more systematically and allow subsequent researchers to build on this study for opportunity exploration and evaluation studies in various fields. The study discusses the importance of focusing on unmet customer needs to develop new opportunities in the context of Ardichnili's theory with disruptive innovation and blue ocean strategy. The study concludes by the fact that both strategies are useful for open banking with different circumstances. Due to time and funding constraints, conducting large-scale qualitative customer interviews was impossible. Instead, the study used existing market research and competitor strategies to speculate on potential opportunities. The study also highlights the limitations of the opportunity evaluation model, which was tested only once and had only five participants, potentially excluding representative participants or resulting in insufficient statistical validity. The study recommends more rigorous scientific tests to confirm the model's scientific and practical significance for banks conducting opportunity assessments. The study examined 59 European Union and EEA countries, focusing on high-currency economies, to predict the world open bank economy and examine future local and global economies. In the future, this research will be quite helpful for upgrading FinTech techniques in regard to open banking and expanding open banking facilities and strategies.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Aditto, F. S., Sobuz, M. H. R., Saha, A., Jabin, J. A., Kabbo, M. K. I., Hasan, N. M. S. et al. (2023). Fresh, Mechanical and Microstructural Behaviour of High-Strength Self-Compacting Concrete Using Supplementary Cementitious Materials. *Case Studies in Construction Materials*, 19, e02395. <https://doi.org/10.1016/j.cscm.2023.e02395>
- Adrian, T., Covitz, D., & Liang, N. (2015). Financial Stability Monitoring. *Annual Review of Financial Economics*, 7, 357-395. <https://doi.org/10.1146/annurev-financial-111914-042008>
- Agyei-Boapeah, H., Evans, R., & Nisar, T. M. (2022). Disruptive Innovation: Designing Business Platforms for New Financial Services. *Journal of Business Research*, 150, 134-146. <https://doi.org/10.1016/j.jbusres.2022.05.066>
- Ahmed, E., & Sobuz, H. R. (2011). Flexural and Time-Dependent Performance of Palm Shell Aggregate Concrete Beam. *KSCE Journal of Civil Engineering*, 15, 859-865.

- <https://doi.org/10.1007/s12205-011-1148-2>
- Akid, A. S. M., Wasiew, Q. A., Sobuz, M. H. R., Rahman, T., & Tam, V. W. (2021). Flexural Behavior of Corroded Reinforced Concrete Beam Strengthened with Jute Fiber Reinforced Polymer. *Advances in Structural Engineering*, 24, 1269-1282.  
<https://doi.org/10.1177/1369433220974783>
- Al Mahmud, M. A., Hossain, M. A., Saju, M. A. B., Wali, M., Ullah, R. H., & Suzer, G. (2024). Information Technology for the Next Future World: Adoption of It for Social and Economic Growth: Part II. *Technology*, 2, H4.
- America, F. N. (2019). *Opportunities in Open Banking*.  
[https://sencanada.ca/content/sen/committee/421/BANC/Briefs/BANC\\_StevenBomsFD\\_ATA\\_e.pdf](https://sencanada.ca/content/sen/committee/421/BANC/Briefs/BANC_StevenBomsFD_ATA_e.pdf)
- Amon, M. J., Hasan, R., Hugenberg, K., Bertenthal, B. I., & Kapadia, A. (2020). Influencing Photo Sharing Decisions on Social Media: A Case of Paradoxical Findings. In *2020 IEEE Symposium on Security and Privacy (SP)* (pp. 1350-1366). IEEE.  
<https://doi.org/10.1109/sp40000.2020.00006>
- Dorfleitner, G., Hornuf, L., Schmitt, M., & Weber, M. (2017). Definition of Fintech and Description of the Fintech Industry. In G. Dorfleitner, et al. (Eds.), *FinTech in Germany* (pp. 5-10). Springer International Publishing.  
[https://doi.org/10.1007/978-3-319-54666-7\\_2](https://doi.org/10.1007/978-3-319-54666-7_2)
- Hasan, R., Al Mahmud, M. A., Farabi, S. F., Akter, J., & Johora, F. T. (2024a). Unsheltered: Navigating California's Homelessness Crisis. *Sociology Study*, 14, 143-156.
- Hasan, R., Chy, M. A. R., Johora, F. T., Ullah, M. W., & Saju, M. A. B. (2024b). Driving Growth: The Integral Role of Small Businesses in the U.S. Economic Landscape. *American Journal of Industrial and Business Management*, 14, 852-868.  
<https://doi.org/10.4236/ajibm.2024.146043>
- Hasan, R., Farabi, S. F., Kamruzzaman, M., Bhuyan, M. K., Nilima, S. I., & Shahana, A. (2024c). AI-Driven Strategies for Reducing Deforestation. *The American Journal of Engineering and Technology*, 6, 6-20.  
<https://doi.org/10.37547/tajet/volume06issue06-02>
- Hsiao, Y. (2021). *Opportunity Exploration and Evaluation: In the Trend of Open Banking*.
- Jabin, J. A., Khondoker, M. T. H., Sobuz, M. H. R., & Aditto, F. S. (2024). High-Temperature Effect on the Mechanical Behavior of Recycled Fiber-Reinforced Concrete Containing Volcanic Pumice Powder: An Experimental Assessment Combined with Machine Learning (ml)-Based Prediction. *Construction and Building Materials*, 418, Article ID: 135362. <https://doi.org/10.1016/j.conbuildmat.2024.135362>
- Johora, F. T., Hasan, R., Farabi, S. F., Akter, J., & Mahmud, M. A. A. (2024). AI-Powered Fraud Detection in Banking: Safeguarding Financial Transactions. *The American Journal of Management and Economics Innovations*, 6, 8-22.  
<https://doi.org/10.37547/tajmei/volume06issue06-02>
- Kobler, D., Bucherer, S., & Schlotmann, J. (2016). *Banking Business Models of the Future*. Deloitte Switzerland.  
<https://www2.deloitte.com/content/dam/Deloitte/tw/Documents/financial-services/tw-banking-business-models-of-the-future-2016.pdf>
- Mahmud, A., Hossain, M., Saju, A., Ullah, M., & Hasan, R. (2024). Information Technology for the Next Future World: Adoption of It for Social and Economic Growth: Part II. *International Journal of Innovative Research in Technology Basic and Applied Sciences*, 10, 744.
- Mohammad, N., Imran, M. A. U., Prabha, M., Sharmin, S., & Khatoun, R. (2024). Com-

- bating Banking Fraud with It: Integrating Machine Learning and Data Analytics. *The American Journal of Management and Economics Innovations*, 6, 39-56.  
<https://doi.org/10.37547/tajmei/volume06issue07-04>
- Nagy, D., Schuessler, J., & Dubinsky, A. (2016). Defining and Identifying Disruptive Innovations. *Industrial Marketing Management*, 57, 119-126.  
<https://doi.org/10.1016/j.indmarman.2015.11.017>
- Nițescu, D. C., & Duna, F. A. (2018). Managing Digitalization in Banking: Challenges and Implications. In *Proceedings of the 12th International Management Conference "Management Perspectives in the Digital Era"* (pp. 339-349). November 1st-2nd, 2018, Bucharest, Romania. [https://conferinta.management.ase.ro/archives/2018/pdf/2\\_17.pdf](https://conferinta.management.ase.ro/archives/2018/pdf/2_17.pdf)
- Omarini, A. E. (2018). Banks and FinTechs: How to Develop a Digital Open Banking Approach for the Bank's Future. *International Business Research*, 11, 23-36.  
<https://doi.org/10.5539/ibr.v11n9p23>
- Piirainen, L. (2016). *Digitalization of the Financial Sector and Change Management*. Bachelor's Thesis, Oulu University of Applied Sciences.  
<https://urn.fi/URN:NBN:fi:amk-201703153303>
- Premchand, A., & Choudhry, A. (2018). Open Banking & APIs for Transformation in Banking. In *2018 International Conference on Communication, Computing and Internet of Things (IC3IoT)* (pp. 25-29). IEEE.  
<https://doi.org/10.1109/ic3iot.2018.8668107>
- Shahana, A., Hasan, R., Farabi, S. F., Akter, J., Mahmud, M. A. A., Johora, F. T. et al. (2024). AI-Driven Cybersecurity: Balancing Advancements and Safeguards. *Journal of Computer Science and Technology Studies*, 6, 76-85.  
<https://doi.org/10.32996/jcsts.2024.6.2.9>
- Sobuz, M. H. R., Al-Imran, Datta, S. D., Jabin, J. A., Aditto, F. S., Sadiqu Hasan, N. M. et al. (2024a). Assessing the Influence of Sugarcane Bagasse Ash for the Production of Eco-Friendly Concrete: Experimental and Machine Learning Approaches. *Case Studies in Construction Materials*, 20, e02839. <https://doi.org/10.1016/j.cscm.2023.e02839>
- Sobuz, M. H. R., Datta, S. D., & Akid, A. S. M. (2023). Investigating the Combined Effect of Aggregate Size and Sulphate Attack on Producing Sustainable Recycled Aggregate Concrete. *Australian Journal of Civil Engineering*, 21, 224-239.  
<https://doi.org/10.1080/14488353.2022.2088646>
- Sobuz, M. H. R., Khan, M. H., Kabbo, M. K. I., Alhamami, A. H., Aditto, F. S., Sajib, M. S., Alengaram, U. J., Mansour, W., Hasan, N. M. S., & Datta, S. D. (2024b). Assessment of Mechanical Properties with Machine Learning Modeling and Durability, and Micro-structural Characteristics of a Biochar-Cement Mortar Composite. *Construction and Building Materials*, 411, Article ID: 134281.  
<https://doi.org/10.1016/j.conbuildmat.2023.134281>
- Yunus, M., & Sijabat, F. N. (2021). A Review on Blue Ocean Strategy Effect on Competitive Advantage and Firm Performance. *Academy of Strategic Management Journal*, 20, 1-10.  
[https://www.researchgate.net/profile/Ferdi-Nazirun-Sijabat/publication/349454288\\_A-REVIEW-ON-BLUE-OCEAN-STRATEGY-EFFECT-ON-COMPETITIVE-ADVANTAGE-AND-FIRM-PERFORMANCE/links/603085dd4585158939b7b59b/A-REVIEW-ON-BLUE-OCEAN-STRATEGY-EFFECT-ON-COMPETITIVE-ADVANTAGE-AND-FIRM-PERFORMANCE.pdf](https://www.researchgate.net/profile/Ferdi-Nazirun-Sijabat/publication/349454288_A-REVIEW-ON-BLUE-OCEAN-STRATEGY-EFFECT-ON-COMPETITIVE-ADVANTAGE-AND-FIRM-PERFORMANCE/links/603085dd4585158939b7b59b/A-REVIEW-ON-BLUE-OCEAN-STRATEGY-EFFECT-ON-COMPETITIVE-ADVANTAGE-AND-FIRM-PERFORMANCE.pdf)
- Zeynalova, A. (2024). From Closed Banking to Open Banking: Risks and Opportunities. *Journal of Applied Business, Taxation and Economics Research*, 3, 303-316.  
<https://doi.org/10.54408/jabter.v3i3.278>