∙**What is open banking?**

According to the definition given by software AG (n.d.), open banking refers to implementation of APIs to share financial data and services with third parties so that those external organizations are able to provide services to the bank’s customers. In other words, with open banking, third parties are able to join a digital value chain that was previously closed. It has become well-adopted in many countries such as the EU and Australia.

∙ **How open banking works**

In general, open banking allows many different industries to participate in the value chain to provide better service. Therefore, customer data needs to be shared using financial data APIs. Kazim (2023) described open banking as a consequence of cross-industry collaboration that able to reshape our interactions with the various services we use in our daily lives

∙ **What are the benefits of open banking?**

More tailored services: With the shared data between banks and other third parties, it is much easier to meet individuals’ needs in less time.

Increased account security: Open banking is considered as an emerging technology that is difficult for hackers to break through the system and leads to unexpected disclosure of personal information.

More convenient to transfer money between financial institutes: Since the customer data is shared among financial institutes. There will be no more gaps of moving someone’s money from one financial institute to another.

Reduced cost of financial operation: Open banking integrates various financial services and makes it much easier for firms to access, especially for small organizations.

More innovative products: With the cooperation of banks and other financial institutes, the ability of inventing new products is no longer limited by the previous gaps.

∙ **What are the challenges of open banking?**

Loss of customer trust: Since open banking utilizes customer data to provide more tailored products. It is inevitable that personal information is known by some organizations. Some customers do put much emphasis on privacy and do not want their personal information to be misused by any other third parties.

Loss of the interpersonal relationship with the customer: Unlike conventional banks, open banks heavily reply on digital technologies, which means the opportunities of face -to- face communications between the banks and the customer is getting less and less and find it hard to build a stable relationship with customers.

More restricted regulations on personal information: To provide better protection on personal data and trace the misuse of any personal data. Quite a few regulations have been established, such as General Data Protection Regulation, also known as GDOR. Organizations must comply with those laws and any breaches on those regulations leads to serious punishment and loss of reputation of the company.

∙ **Open banking and privacy enhancing technologies**

Open banking needs to ensure high level of data security to gain trust from customer. An appropriate approach will be implementing privacy enhancing technologies, such as encrypted analysis, anonymized computing, and high dimensional anonymization.

According to the report given by Nordea. (n.d.), Homomorphic encryption under the category of encrypted analysis is a common approach to preserve privacy, it allows third parties to access or even manipulate data in an unencrypted format so that data can remain confidential while it is processed. Anonymized computing means a designated group of methods that focus on analytical processes and introduce various privacy features into the process. One example is Federated learning, which removes the need to share sensitive data to perform machine learning. Last but not least, high dimensional anonymization, a method that is suitable for dealing with a large set of data. For instance, differential privacy is an effective approach that is able to analyze data without revealing sensitive information about any individual in the dataset.

**∙ Conclusion**

In conclusion, open banking is a trend and is becoming more prevalent in the future, it allows customer data to be shard within a variety of financial institutes, which enormously increase the efficiency of transfer data and money. However, its drawbacks can not be neglected as dealing with data is not easy stuff, it requires a well-formed structure and regulations. Unexpected disclosure of personal information leads to huge loss of finance and reputation. Hence, it is essential to implement privacy enhancing technologies to ensure the security of data processing. Hopefully, there will be some approaches that is easy to use to protect personal information from being exposed to cyber hankers.

Kazim, W. (2023, September 14). *Open banking: How does it work? benefits + challenges*. Learn Hub. https://learn.g2.com/open-banking

*What is open banking?: Open banking apis*. Software AG. (n.d.). https://www.softwareag.com/en\_corporate/resources/api/article/open-banking.html#:~:text=Open%20banking%20refers%20to%20the,shared%20financial%20data%20and%20services.

*Emerging privacy enhancing technologies (pets) are the new blind spot in digital banking*. Nordea. (n.d.). https://www.nordea.com/en/news/emerging-privacy-enhancing-technologies-pets-are-the-new-blind-spot-in-digital-banking

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