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REVIEW ON THE APPLICATION OF OPEN BANKING IN SHARIA BANKING: AN SWOT ANALYSIS

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Abstract

This study was conducted to analyze SWOT (Strength, Weakness Opportunity, and Threat) Open Banking in Islamic banking in Indonesia. The analytical method used is descriptive literature research, namely by providing a description or description of the problems that have been identified and carried out intensively and in detail on a problem from the available literature. The results of this study indicate that there are several strategies that can be taken by Islamic Banking in dealing with Open Banking, including the S-O strategy: cooperation with fintech and e-commerce; and expand the network of cooperation nationally and internationally; W-O strategy: socializing open banking, improving technology and security, and increasing service complaints; S-T strategy: cooperate with other financial institutions, implement standardization prepared by the regulator; and W-O Strategy: multiple security enhancements, sorting out cooperation to third parties, and upgrading Islamic banking internal servers.

Keywords: *Information Systems, Islamic Banking, Open Banking, and SWOT Analysis*

Abstrak

Penelitian ini dilakukan untuk menganalisis SWOT (Strenght, Weaknessm Opportunity, dan Threat) Open Banking pada perbank syariah di Indonesia. Metode analisis yang digunakan adalah penelitian deskriptif litelatur yaitu dengan cara memberikan deskripsi atau gambaran terhadap masalah yang telah diidentifikasi dan dilakukan secara intensif dan terperinci terhadap suatu permasalahan dari berbagai litelatur yang telah tersedia. Hasil penelitian ini menunjukkan bahwa terdapat beberapa strategi yang dapat diambil oleh Perbankan Syariah dalam menghadapi Open Banking antara lain strategi S-O: kerjasama dengan fintech dan e-commerce; dan memperluas jaringan kerjasama secara nasional dan internasional; Strategi W-O: melakukan sosialisasi open banking, peningkatan teknologi dan keamanan, dan peningkatan pengaduan layanan; Strategi S-T: melakukan kerjasama dengan lembaga keuangan lain, melaksanakan standarisasi yang disusun oleh regulator; dan Startegi W-O: peningkatan keamanan berganda, memilah kerjasama kepada pihak ketiga, dan peningkatan server internal perbankan syariah.

Kata kunci: Sistem Informasi, Perbankan Syariah, Open Banking, dan Analisis SWOT

INTRODUCTION

The modern generation now rarely visits local bank branches to meet their financial needs. People want to access banking services not where the bank is, but where they are. Banking is now innovating with increasingly modern customer journeys and multi-channels. This emerging new demand, combined with the emergence of increasingly innovative software technologies, creates a new form of finance embedded through application programming interfaces (APIs) that enable banking services and consumer data to be integrated into third-party applications (Pandy, 2020).In 2010, UK and European policymakers passed regulations requiring banks to securely disclose data and services to third parties to encourage innovation that would transform and create better financial products for consumers. This results in greater investment in the fintech ecosystem, as many entrepreneurs and investors take the opportunity to revolutionize banking with the support of existing infrastructure. This initiative is also called open banking or open banking, which was issued in the UK under the UK Open Banking regulations and in continental Europe under the Payment Services Directive 2 (PSD2). Some industry leaders understand the attractive potential of business, but many prefer to maintain the status quo (Muqorobin, et.al, 2021).

In Indonesia, the development of open banking through API has been implemented by several banks, including BCA, BRI, Permata Bank, BNI, CIMB Niaga, and Mandiri. In 2016, it was the first moment for banking to open up to the ecosystem in the form of API. At that time, BCA, through Finhacks 2016, was an effort to accelerate Indonesia's digital innovation in the field of financial technology (fintech). It aims to introduce API availability to the developer community in Indonesia. Furthermore, BRIAPI allows business consumers to make transactions and access information about BRI products directly from the application, starting from the payment feature via virtual accounts and Direct Debit, the BRIZZI balance refill feature, to the feature of checking the location of Branch Offices and BRI E-Channel locations. On the internal side of the company, BRI's open API also facilitates the process of checking balances and business account mutations, as well as making transfers to either BRI accounts or other banks (Siagian, 2021).

One of the SOEs, namely Bank Mandiri, recently introduced the Mandiri Application Programming Interface (API) service that targets the digital business market, such as financial technology (fintech) and e-commerce, which are growing in Indonesia. Mandiri API has 13 sandboxing features and 3 by call features for e-money top up, direct debit, and seller financing. This platform can be accessed by digital business players to find product

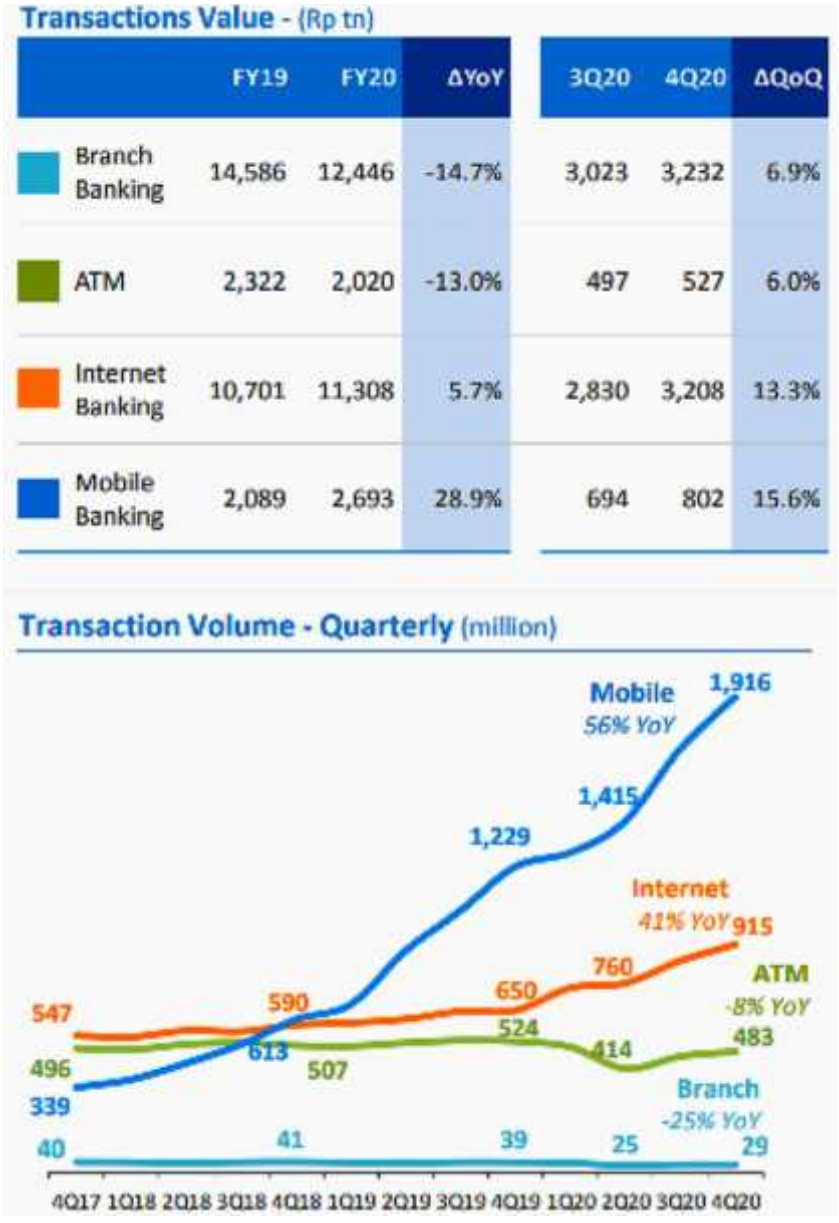
information, develop and test, as well as integrate Bank Mandiri banking products and services directly through their website or application. In addition, the open API can also speed up the interlink process between banks and other financial services, such as payment fintech, peer-to-peer lending fintech, or other types of fintech (Haryono, 2021).A number of banks are also progressively collaborating with fintech. Since 2018, BRI has started cooperation by channeling funding through the Investree fintech platform and Modal Rakyat. The fintech startup Modalku has also collaborated with Bank Sinarmas as the custodian bank that will be authorized to accommodate lenders' funds in order to improve the security and transparency of funds. Basically, the implementation of open API in Indonesia has the same goal. Welcoming the era of digital economy and financial inclusion. It is hoped that the availability of these various features will encourage major changes in the national banking ecosystem (Siagian, 2021).

Financial technology (Fintech) has the potential to be a disruptor to the financial and banking industry, but fintech has weaknesses in experience, capital, and customer base. In fintech, customer trust and brand recognition are still low, and weak in regulation (Acar & Çitak, 2019). Therefore, the required relationship between fintech and banking is to emphasize openness and collaboration between the two in building the financial services industry ecosystem in the midst of the rapid flow of digitalization. This is also in line with the vision of the Indonesian Payment System Blueprint (BSPI) 2025, where Bank Indonesia encourages the role of the banking industry in developing open banking in the payment system through the formulation of Open API Standards with linkages between the banking industry and financial technology (Fintech).

Application Programming Interface (API) is defined as a set of protocols that define how an application interacts with others in order to facilitate the exchange of information. Specifically, Open API refers to public access to power sharing and functionality. In the banking context, this Open API provides access to third parties to customer data of financial institutions (with customer permission) or services and functions of financial institutions. The API allows banks and fintech to disclose financial data and information related to payment transactions from customers in a reciprocal manner (the principle of equality). This means that there are three parties who will be involved in developing the API, namely customers as data owners, banks, and also fintech (Mohammed, 2019).

Interconnection between Islamic financial institutions is growing and stronger with the Open API service or commonly called open banking. With sharia open banking provided by Islamic financial institutions, it is a very

good development. Open banking allows the more complete and development of the sharia economic ecosystem so that it will not be inferior to the open banking ecosystem with conventional systems. In the past, the financial infrastructure that provided facilities was the stronger or dominant party so that it would be dictated as cooperation, now it has changed where both parties need each other. Both the infrastructure provider and its users need each other (Muqorobin, et.al, 2021).



Source: OJK, 2021

Figure 1. Digital Transaction Rate on Bank BCA

Current open banking prioritizes collaboration to make it more efficient. Infrastructure providers need to provide a complete ecosystem to

make it more attractive to the market. So, open API services that have a more diverse network or ecosystem will certainly be superior, so that infrastructure providers have an interest in collaborating with more parties. The development of fintech will be a bridge for business actors to Islamic banking financing services, so that the role of Islamic banks as a driver of the real sector economy will be carried out properly. The development of financing services through fintech at Islamic banks in Indonesia requires various strategic steps to be achieved optimally (Muqorobin, et.al, 2021).

Discussion on impact of open banking in general is still unclear because research on this topic is still limited (Boateng & Nagaraju, 2020). Research on fintech and banking collaboration is also still focused on company perceptions (Paymentsforum.uk, 2015). This research is still new, especially in Indonesia, because it looks for strategies that will be faced by Islamic banks in dealing with open banking using SWOT analysis. SWOT analysis is one of the important aspects in managerial decision making based on the analysis of Strengths, Weaknesses, Opportunities, and Threats. SWOT analysis is a useful instrument in conducting strategic analysis, in the context of this study to assess the effects of open banking faced by Islamic banks so that it is expected to be able to minimize the weaknesses contained in an institution, especially Islamic banking and reduce the impact of threats that arise. SWOT analysis is used to see from various perspectives of Islamic banks in dealing with open banking. Based on the gray area of the impact of open banking on banking, especially Islamic banks, this study aims to formulate strategies and what steps can be taken by Islamic banks in implementing open banking using SWOT analysis.

LITERATURE REVIEW

Technology- Information System Based

The entry of the Industrial 4.0 era which is marked by digitalization and automation makes all aspects of human life easier. The industrial revolution 4.0 has the principles of transparent information, independent decisions, technical assistance that makes work easier, and conformity to needs. These four principles are a support for business/business growth, which can simplify the supply chain for the business world. The Industrial Revolution 4.0 will develop digital-based business models with the aim of increasing efficiency and better product quality. There are 4 things that need to be optimized by business actors related to Industry 4.0, namely: Old machine + fast connection = new machine; Open standards = open economy; Automation = new job opportunities; and connected technology = convenience(goleman, daniel; boyatzis, Richard; Mckee & Perdana, 2018).

In the last 10 years, it can be seen that technological developments have always received attention from global industry players. Competition to develop a new technology is a top priority in gaining market share globally. Its impact is felt in the lives of people throughout the country. Currently, the Indonesian people have been faced with a technological revolution that has fundamentally changed the perspective on the role of technology, both from the pattern of life, to the form of interaction with other people. It is undeniable that a major change, especially in the economic and banking industries.

Information system is an organized combination of people (users), hardware, software, communication networks, and data resources that can collect, transform, and disseminate information within an organization. Information systems are used to communicate with one another using physical tools (hardware), commands, and information processing procedures (software). While technology is a whole means intended to provide goods needed as a form of progress for humans around the world where its sophistication can ease work so as to help human survival, convenience, and comfort. Technology-based information systems are a means to obtain an information product that can provide convenience and comfort for humans as users(Nsour et al., 2019).

Open Banking

Open banking began to be practiced in the UK and became an example for other countries in adopting how open banking was implemented. In August 2016, the UK Competition and Markets Authority issued a ruling requiring the nine largest UK banks – HSBC, Barclays, RBS Santander, Bank of Ireland, Allied Irish bank, Danske Bank, Lloyds and Nationwide to allow licensed startups direct access to their data. to the level of transactions(Adinegoro & Winengko, 2020). This is an entry point for banks to implement Open banking. This is done by the regulator issuing various provisions and regulations, especially related to data security and consumer protection. If an open bank is to be operated, of course, it needs to get support from the regulator. The support needed is of course in the form of regulations that must be met. In Indonesia, Open banking is included in the five main initiatives for implementing the Indonesia Payment System Vision 2025 in addition to the retail payment system; financial market infrastructure; data; and regulation, licensing, and supervision. Open banking will refer to the opening of internal bank data and processes to external parties through digital applications. This could include sharing of customer's official financial data with third parties or distribution of partner-based products to bank customers (WIjaya, 2019). Open banking can be an application that can be used for various activities including cash management, artificial intelligence (AI), internet of thinks (IoT),

virtual banks, cash access, digital checks, and personal advisers. Open banking can also improve various economies (economic sharing) which is not limited to financial services but also other sectors such as supply chain, education, health, trade finance, e-commerce, and so on.

Bank Indonesia encourages the role of industry to develop a direction for the development of open banking (open bank data) within the framework of the payment system in Indonesia through the involvement of the preparation of Open API (Application Programming Interface) standards and interlinks between banks and financial technology. This involvement is realized by providing opportunities for industry and the public to provide input and feedback on consultative papers regarding Open API standards in the context of open banking and interlink banks with fintech for payment system service providers. There are several challenges in the framework of open banking; First, disintermediation, where open banking is an opportunity on the one hand and a threat on the other. Direct interaction between customers and fintech will obscure the bank's position as the main financial service provider. Second; reputation risk, Open banking poses a reputation risk for banks if the fintech that collaborates with banks has poor governance and is prone to fraudulent behavior. Therefore, a bad perception of fitech will have a direct impact on banks. Third; The challenge of transformation, the implementation of open banking requires banks to be able to transform both from the strategic and technical aspects. Banks need to view this transformation as a necessity and not an option in order to survive in the digital era. In fact, there are many opportunities when implementing open banking, including encouraging innovation in financial products or services. Banks also have a wider innovation space to remain competitive, especially with fintech. The bank's position as the customer's 'data keeper' becomes an attractive bank to cooperate with fintech(Paymentsforum.uk, 2015).

Open banking is a platform with a network of financial institutions and services available through the Application Programming Interface (API). Practically, open banking is about securely opening bank data to combine various financial services that will help customers with a better user experience and the most relevant options (IBS Intelligence & ERI, 2018). Open banking is also defined as an approach that allows banks to disclose their customers' financial data and information to third parties (fintech) based on customer consent. The open banking approach aims to encourage overall digital transformation in banking and build interlinks between banks and fintech. The demand for data disclosure is not only aimed at banking, but also at fintech. This is aimed at maintaining the label playing field between banks and fintech as well as encouraging collaboration between the two so as to create services that are more oriented to consumer needs (consumer centric). Open banking is pursued in order to avoid the risk of shadow banking, accelerate the development of retail payment

systems, and open up wider opportunities for economic-financial inclusion. Open banking will also be realized through Open API standardization which includes data, technical, security, and governance standards(Gozman et al., 2018).

Table 1. Financial Performance of Islamic Commercial Banks

Period	2018	2019	2020	2021		
			des	Jan	April	Agustus
Capital Adequacy Ratio-CAR (%)	20,39	20,59	21,64	21,80	24,41	24,66
Capital	36.764	40.715	45.398	47.890	48.083	49.963
Fixed Assets According to Risk	180.300	197.727	214.513	219.649	196.957	202.625
Return On Assets-ROA (%)	1,28	1,73	1,40	1,79	1,97	1,88
Profit	3.806	5.598	5.087	7.087	7.236	7.331
Average Total Assets	298.044	323.438	362.692	395.476	366.924	389.247
Non Performing Financing-NPF (%)	3,26	3,23	3,13	3,20	3,29	3,25
NPF Net (%)	1,95	1,88	1,57	1,56	1,44	1,36
Non Performing Financing	6.597	7.263	7.713	7.864	8.244	8.206
Non Performing Financing Net	3.938	4.241	3.877	3.846	3.603	3.429
Financing to Deposit Ratio-FDR (%)	78,53	77,91	76,36	76,59	76,83	74,25
Financing to Non-Bank Third Parties	202.298	225.146	246.532	246,087	250/454	252.596
Third-party funds	257.606	288.878	322.853	321.299	325.997	340.209
Operating Expenses On Operating Income (%)	89,18	84,45	85,55	85,44	81,86	83,86
Operating Expenses	31.169	30.415	30.410	3.424	11.038	24.836
Operating Income	34.952	36.014	35.548	4.007	13.483	29.615
Rentality Net Operating Margin (%)	1,42	1,92	1,46	1,93	2,17	2,01
Operating Income	3.783	5.599	5.137	7.001	7.336	7.169
Average Earning Assets	265.860	292.108	350.992	363.127	337.927	356.316
Source: OJK, Sharia Banking Statistics, August 2021						

Data standards will cover the scope and types of data that banks and fintechs need to disclose. Technical standards will include, among others, reference to the Open API specification covering communication protocols, architecture types, data formats, and data structures. Security standards include minimum security requirements that must be met by banks and fintechs including authentication, authorization and encryption. Governance standards include consumer consent, dispute resolution, API life cycle, and governing body standards. In addition, the contractual standards for open API collaboration between banks and third-party service providers, including fintech, are outlined in the form of guiding principles which include the rules for giving consent for data disclosure, procedures for accessing and modifying data and risk management (goleman, daniel; boyatzis, Richard; Mckee & Perdana, 2018).

Many banks have implemented Open API in various parts of the world because open API can collaborate with fintech so that it can benefit both parties. On the one hand, for banks, Open API can be a means for banks to grow their Return on Equity (ROE) in a sustainable manner, reduce costs, innovate faster, and improve service to customers. On the other hand, for fintech Open API can provide the funds needed for its future growth. Apart from these two parties, customers can also benefit because they can increase their accessibility to enjoy financial product services without the need to have banking services as a whole. Open API can also be a means for banks to attract customers who are still unbanked or unbanked(Adinegoro & Winengko, 2020).

The enactment of Law No. 21 of 2008 concerning Islamic Banking which was issued on July 16, 2008 has made the development of the national sharia banking industry increasingly have an integrated legal basis and will encourage even faster growth. With an impressive development process, the average acceleration of asset growth is more than 65% per year in the last five years.

SWOT Analysis

Strategic management explains that there are six stages that must be carried out in order to achieve effective and efficient performance, namely: strategy formulation, strategic planning, program preparation, budgeting, implementation, and monitoring. Of the six stages, the strategic planning stage is very crucial in realizing the company's vision and mission. One of the strategic management systems is Strength, Weakness, Opportunity, Threat (SWOT) analysis. SWOT analysis is strategic management that is carried out in a systematic manner to assess the company from an internal and external perspective as a framework in the company's strategic planning system (Mulyadi, 2007).

SWOT is used to assess the strengths and weaknesses of the company's resources and external opportunities and challenges faced. SWOT analysis is a

very important component in strategic management which includes internal and external factors of a company. SWOT analysis will assist stakeholders in understanding the identification of strengths and weaknesses of an organization or company. Later, the SWOT analysis will produce a company profile that is used by management in determining what steps the company will take by comparing internal factors in the form of company strengths and weaknesses with external factors in the form of opportunities and threats from other companies to the environment and local government policies (Pearce & Robinson, 1997).

Another opinion was expressed by Rangkuti (1997), who stated that the notion of SWOT is a process of identifying various factors which is carried out systematically in order to formulate an organizational strategy appropriately. The analysis is carried out based on logic that can optimize strengths and opportunities. But at the same time, this analysis must also be able to minimize threats and weaknesses. The process of strategic decision making is known to be directly related to company policies, strategies, goals and mission development. That is, strategic planning must analyze various strategic factors of the organization or company ranging from strengths, opportunities, threats, and weaknesses. Because of this, SWOT analysis is also known as Situation Analysis (Freddy Rangkuti, 1997). Armstrong and Kotler argue that the notion of SWOT analysis is a comprehensive assessment carried out on the strengths, opportunities, weaknesses, and threats of a company (Kotler & Armstrong, 2008). Analytical activities are needed so that the company can determine the strategy to be carried out, be it a strategy in promotion, sales, or so on. The SWOT analysis in the context of this article is intended to assess the opportunities and challenges of Islamic banks in facing open banking by minimizing the weaknesses contained in Islamic banking institutions and reducing the impact of threats that arise and how to deal with them.

The explanation of each component in SWOT analytics, namely:

1. Strength

   Strengths is an analysis that helps companies find out what are the advantages of the company so that they can compete with other companies in the same field. The goal is to help companies formulate strategies that can strengthen the company's position with existing advantages. Strength factors are the strengths possessed by a company, including the business units in it, which include, among others, the special competencies contained in the organization which result in the ownership of a comparative advantage by business units in the market (Irawan, 2017).

2. Weakness

   Weaknesses in a business unit are limitations or deficiencies in terms of resources, skills and abilities that become a serious barrier to the appearance of satisfactory organizational performance. The purpose of this

analysis is to assist the company in knowing whether the company's policies have been implemented correctly and eliminate deviations that occur within the company. So that it is expected to help realize the company's vision, mission, and main goals (Yuliantari, 2015). Two aspects in the analysis of the company's external environment are opportunities and challenges. This analysis can be used as a basis for setting company goals and strategies. The aim is to assist the company in determining external company policies in the face of business competition. Another goal is to help companies detect what are opportunities for the company and threats that may arise.

3. Opportunities

   Opportunities is an analysis that helps companies find and find out what are opportunities for companies in running their business so that companies can compete with their competitors in the industry. Opportunity is an important situation that is favorable for the survival of the company. An important situation is one source of opportunity for the company, for example the development of technology and the improvement of the company's relationship with consumers or suppliers, this is a picture of opportunity for the company. The purpose of this analysis is to help the company determine the strategy that the company will take, in order to maintain the company's continuity (Yuliantari, 2015).

4. Threats

   Threats are the opposite of opportunities. It can be said that threats are environmental factors that are unfavorable to a business unit. If not addressed, the threat will become an obstacle for the business unit concerned both now and in the future. Examples of threats include (P. Siagian, 2016), the entry of new competitors in the market already served by the business unit, sluggish growth, increased bargaining power of buyers of the products produced, strengthening of the bargaining position of suppliers of raw materials or raw materials needed for processing. further into certain products, technological developments and changes that have not been mastered, changes in restrictive laws and regulations.

METHODOLOGY

This study uses a descriptive literature approach, which explains the object under study by providing a description or description of the problems that have been identified and carried out intensively and in detail on a problem from the available literature. This study describes the data that has been collected, then draws conclusions about what strategies can be carried out by Islamic banking in the implementation of open banking with a SWOT analysis approach. This

research starts from the identification stage of the SWOT indicator which is the key in strategy formulation. SWOT analysis is used to determine the factors of the company's strategy which is carried out to identify systematic factors and formulate strategies that should be used. This analysis is generally in the form of a matrix that clearly describes the opportunities and threats (external factors) faced by the company. These two aspects are then adjusted to the strengths and weaknesses (internal factors) of the company. The purpose of the SWOT analysis is to determine the internal conditions that are still controlled by management and the external environment of a company which is generally outside the control of management(Citta et al., 2019).

RESULTS AND DISCUSSION

The formulation of strategies needs to be carried out by Islamic banking in facing the implementation of open banking so that Islamic banking is not less advanced than conventional banking. The preparation of strategies is carried out using SWOT analysis, where SWOT analysis is a strategic planning method used to evaluate strengths, weaknesses, opportunities, and threats in a project or a business speculation. These four factors make up the acronym SWOT (Strengths, Weaknesses, Opportunities, and Threats). The process involves determining the specific objectives of the speculated business or project and identifying the internal and external factors that support and which do not achieve these goals.

SWOT analysis if viewed from a philosophical perspective is a refinement of thinking from various frameworks and strategic plans. As stated by Sun Tzu, if we know the strengths and weaknesses of the opponent, it is certain that we will win the competition. The application of SWOT in a company aims to evaluate the state of the company and provide guidance so that the company is more focused so that it can be used as a comparison from various internal (strengths and weaknesses) and external (opportunities and threats) perspectives. SWOT analysis can be applied by analyzing and sorting out various things that affect the four factors, then applying it in a SWOT material picture, where the application is how strengths are able to take advantage of existing opportunities, how to overcome weaknesses they have to take advantage of existing opportunities, how strengths are able to deal with existing threats, and how to overcome weaknesses that can make threats real or create new threats.

SWOT Analysis of Open Banking Implementation in Islamic Banking

1. Strengths

Financial institutions have long collected valuable data about their customers and transactions, without taking full advantage of it or its effective value. If this data is used properly, financial institutions can narrow the customer's habit patterns such as the customer's favorite restaurant or cafe. Financial institutions also capture non-consumer data such as their meta-data related to ATM machines, their branches and locations, loan amounts, mortgages, and various account types and transaction volumes. With all the information captured by financial institutions, it will not be too difficult to analyze customers and offer products and services that are relevant to customer needs.

Open banking is a transformation of consumer financial services, banks, fintech, regulators, and other financial sector stakeholders. Traditionally, banks have held a monopoly on customer transaction data but rarely take advantage of this treasure trove of proprietary information, since its implementation in developed countries in 2018, open banking has begun to create significant changes in the market by breaking down data silos in the financial sector and opening up data access to more users. The emergence of fintech and other innovative business models, such as platforms, has shown that new markets are often better positioned or have stronger incentives to leverage data and based on that data, can offer consumers new products and services at affordable prices or lower. Therefore, open banking has begun to be used in developing and low-income countries by exploring open banking which is predicted to provide benefits.

Open banking can be used to improve financial services and streamline traditional banking processes, such as making loans and tracking transactions. Financial access aimed at customers is simply a banking practice that provides access to third party financial service providers to conduct transactions, and other financial data from various financial institutions. Through the Application Programming Interface (API), Open banking aims to enable account networks and cross-institutional data to be used by various third-party service providers, including technology start-ups and other financial service vendors. Customers and lenders can use this information as a better and broader financial picture to make informed decisions.

Security in open banking is better than the security of traditional banks. One application that is not approved by an official bank is due to the use of screen-scraping, where customers are required to enter their username and password in the application so that the application manager can access the customer's transaction history. In addition, other benefits of open banking are centralization of application users of different financial institutions so

that they can provide more accurate user profiles, transactions and account changes can be made only with the customer's name, increasing service speed, reliability, and transparency for customers or lenders. Because of the benefits of open banking, Bank Indonesia has made a blueprint on guidelines for open banking services to improve customer experience in the financial cycle, to support open banking activities more effectively. Banks are investing in digital banking, big data, and AI that will provide new insights into the financial cycle, conceptualize new products, and redesign the bank's existing product offerings.

The growth of Islamic banks in Indonesia is influenced by the development of their ability to collect funds from the community, both on a small and large scale with an appropriate deposit period. In interest-based banking, money is traded to generate high profits and it doesn't matter if the money is used for productive or consumptive activities, while in Islamic banking money is not considered a commodity, but as a vehicle for economic growth (Economy added value). The development of Islamic banking, which has recently tended to slow down due to the pandemic, has sparked discussions about mergers between Islamic banks, especially those owned by state-owned enterprises such as PT Bank BRI Syariah, PT Bank Syariah Mandiri, and PT Bank BNI Syariah to become one bank, namely Bank Syariah Indonesia, and sharia branch of PT Tabungan Negara Tbk (BTN) into one bank, namely Bank Syariah Indonesia. From the results of the merger, at least BSI serves 14 million customers, of which 8 million are from Bank Syariah Mandiri, and 6 million customers are from BNI Syariah and BRI Syariah. The main reason for the merger is the desire to have a large, strong and efficient Islamic bank with large assets and financial opportunities, and will make a significant contribution to the national economy.

2. Weaknesses

Digitalization of open banking will bring more digital banking experience to the millennial generation than the baby boomers generation. In addition, open banking also requires internet access so that not all bank customers can access open banking because they do not have internet access. Because everything has been handled digitally, there will be less face-to-face communication between customers and banks. This will certainly cause a rift in the relationship between the customer and the bank. Sometimes there are customers who do not have sufficient credibility with open banking. This is because customers are afraid to share their data, as well as lack of knowledge about how open banking works. Customer concerns refer to malicious third party applications such as resulting in empty customer accounts or fraudulent transactions on behalf of customers. Not to mention the adoption

of open banking requires a dramatic change from traditional banking mechanisms which means it will take time and effort before it is fully implemented and implementation requires a high level of collaboration and intermobility between users, businesses, traditional financial institutions, and governments.

Open banking is only a product in the form of banking services carried out by banks. Several things become obstacles in open banking, such as: First, banks are still positioning on parties who have no interest in promoting open banking; Second, open banking is still categorized as an ongoing trend and will become a necessity or even a necessity; and Third, indications related to open banking where Bank Indonesia initiated the development of national data. In the application of open banking, it takes more than a technology initiative to an API initiative because of its perception as a cost center rather than a product that generates revenue/profit so banks must treat API as a product that can be sold.

3. Opportunities

The current population of Indonesia is 274.9 million and internet users in Indonesia in early 2021 will reach 202.6 million. This number increased by 15.5% or 27 million when compared to 2020. The use of smartphones is the main factor for internet users, especially internet users aged 16 to 64 years who have many different electronic devices such as smartphones/tablets, laptops/pc, smartwatches, and others. Smartphones are the most frequently used devices to access the internet, where 96.4% or 195.3 million Indonesians access the internet through their smartphones. The development of internet technology is developing very quickly and massively, not least in terms of financial services which make all financial institutions have to adapt by implementing various features and their financial service products and can make it easier for the community to make transactions, one of which is by utilizing applications. One of the reforms carried out by Islamic banking is services in fintech financing, where financing is the main activity of Islamic banks. Financial technology (fintech) is a term used to refer to an innovation in financial services, and the term comes from the words financial and technology (FinTech) which refers to financial innovation through modern technology. Fintech is not present as a competitor from banks or other financial institutions, the two can synergize with each other by forming real collaborations.

The Indonesian Financial Technology Association (AFI) stated that as many as 63.9% of fintech business actors have been connected to banks through the Application Programming Interface. The use of API will be mutually beneficial for various parties such as banks, customers, and fintech.

These stakeholders will be able to gain more insight into financial data. This will certainly benefit in some financial analysis which will ultimately result in more opportunities for banking customers, such as wealth planning and insurance schemes, personalized offers and loyalty rewards, financial management, and others. Banks can also get more benefits by holding customer data, where if fintech requires more detailed customer data, more fees will be charged (with the customer's permission, of course).

4. Threats

Open banking may offer many advantages for people with low incomes, if it is well structured and with the right market conditions, the data exchange resulting from open banking can support financial resilience and financial inclusion in several ways: First, when fintechs and financial institutions can access customer financial data held by banks and other financial institutions, these new entrants can create new products. In addition, people who do not have bank accounts can benefit if data held by non-financial institutions such as utility or telecommunications companies is also accessible; Second, market entry by new types of entities and facilitated by open banking, such as account information service providers and payment initiation service providers, could increase competition in the financial services market, which could lead to lower prices and increased product diversity that would make financial services more affordable for low-income populations.

Traditionally, banks have operated in secure network zones. However, open banking will certainly expose bank services to a wider audience. This will certainly pose the greatest security risk for the banking system. Banking has also become a trust business and brand visibility will happen on its own. Open banking will disrupt the visibility of the bank's brand because with the presence of the API, it will shift the focus of customer views from the bank to open banking applications. Standardization is needed to regulate that open banking is not too burdensome on one side, but must benefit various parties. Fintech business services are digital-based financial services that span from payment systems, banking services, insurance services, loans, crowdfunding, to just learning to the public through digital media. Meanwhile, e-commerce includes online shops, online markets (digital market places), online transportation services, and online tourism support services. The relationship between fintech, e-commerce, and start-up companies has links such as providing capital or completing transactions. Even so, there are many fintech cases that are often embarrassed by criminal acts such as theft of customer data, use without user permission, fraud, and other.

One of the biggest threats faced in open banking is the fear of an open banking monopoly being introduced to make banking a more competitive business. One of its main goals is to offer shared access opportunities for all financial service providers. Currently, in the traditional system there are several big names who control most of the banking sector and it is feared that there might be a shift in the open banking system as well. If this happens, the benefits of open banking will be greatly reduced or even not useful at all. Open banking requires banks to disclose customer data to third party providers, of course this is a gold mine for fraud perpetrators, especially fraud through customer identity where this is the most feared.

Based on the SWOT analysis above, it is necessary to develop strategies so that Islamic Banking can face the implementation of open banking. The strategy is summarized by conducting a SWOT Matrix analysis in the table below:

Table 2. Sharia Banking SWOT Matrix in Open Banking Implementation

	Strengths	Weaknesses
	- Strong Islamic Bank brand image - Centralized service - Huge customer base - Improved customer experience in Islamic finance - Latest technology investment - Strong risk management and compliance practices - The level of customer security in Islamic banks	- Customer internet accessibility - Weakening the bank's relationship with customers - Customer credibility tends to be low - High tech budget - Efford in the implementation of open banking - Control of open banking - Handling crime cases
Opportunities	S – O	W - O
- Population growth in Indonesia - Open banking application features - Digital-age economic growth - Bank financial institutions, fintech, and e-commerce - Positive image of Islamic banks - Merger of Indonesian	- Cooperation between fintech and e-commerce. - Expanding network of financial transaction cooperation nationally and internationally	- Conducting socialization regarding open banking to customers and prospective sharia bank customers - Improved technology and data security for sharia bank customers - Improved customer complaint service

Islamic Banks - Personalized offers and discounts - Mutualism opportunity - MSME - Lenders		
Threats	S – T	W – T
- Fintech - Competitors from other financial institutions - Monopoly - Fraudulent activity - Brand visibility - Security - Lack of standardization	- Cooperating with other financial institutions - Follow the standard set by the regulator	- Layered security enhancements - Distinguishing cooperation between Islamic banks and third-party service providers - Improved internal server for Islamic banking

In accordance with the results of the data analysis based on the SWOT classification above, it can be described the strategy that will be used by Islamic Banking in the implementation of open banking. The following is a strategy development based on the interpretation of the SWOT analysis, including:

1. SO Strategy (Strengths – Opportunities)

Strategies based on the strengths and opportunities of Islamic Banking in implementing open banking include:

a. Cooperation between Islamic banks and fintech or e-commerce

With the implementation of open banking, Islamic Banking can collaborate with fintech and e-commerce. Through this collaboration, it is easier for customers to conduct digital transactions by shortening the transaction steps. The API can also appeal to digital partners such as e-commerce, fintech, merchants, payment gateways and others who require white label Islamic banking services that are integrated into their products and services to end-users. The API will then become a system that can be adopted and integrated with existing systems. Various features and API services including Basic services in the form of balance inquiry, overbooking, account statements. There are also several premium services such as creating and editing virtual accounts for the cash managamenet system, online transfers, ummroh travel features consisting of travel lists, umrah packages, package details, cash out, and others. This convenience certainly makes it easier for end-users to control financial transactions in real time with various protected security.

b. Expanding the network of financial transaction cooperation nationally and internationally

   The expansion of the cooperation network, especially in Islamic banking financial transactions, will make it easier for customers to conduct digital transactions both on a national and international scale. As for prospective customers, it will make more choices of existing financial transactions. Through the advantages of Islamic banks, it will attract new prospective customers, especially prospective customers who have sharia-based applications.

2. WO Strategy (Weaknesses – Opportunities)

Strategies based on the weaknesses and opportunities of Islamic Banking in implementing open banking include:

a. Conducting socialization related to open banking to customers and prospective customers of Islamic banks.

   Open banking is sometimes a concern for customers because banks can provide customer data to third parties. However, the data provided is not in its entirety, but only general data and if there is special data it is used for certain purposes only with the permission of the customer. Therefore, it is necessary to socialize about open banking to Islamic banking customers, especially regarding the benefits and risks that will be faced by customers.

b. Improved technology and customer data security

   Digital banking services are indeed very open to the risk of burglary. Hacking cases occur not only because of the bank's own fault, but also because of the fault of the bank partner concerned and the negligence of the customer. Sharing banking customer data across the fintech ecosystem certainly places security as a primary need. In order to reduce the risk due to the implementation of open banking, it is necessary to improve technology and data security for sharia banking customers. Technological improvements such as increasing internal servers that can accommodate data related to Islamic bank customers. Increased security is also important to avoid the risk of criminal acts such as theft of customer savings, theft of customer data for criminal rights.

c. Improved customer complaint service

   Apart from improving technology and security, another important thing is the improvement of customer complaint services. Not a few after the implementation of open banking, there will be many customers who complain about their data spread to various applications, and sometimes some may experience losses. Due to the new nature of open banking and errors occurring during transactions,

whether intentional or not, service complaints will be the spearhead of Islamic banks in solving these problems. Service complaints will provide input and self-improvement for Islamic banks so that services are even better.

3. ST Strategy (Strengths – Threats)

Strategies based on the strengths and threats es of Islamic Banking in implementing open banking include:

a. Collaborating with other financial institutions

   The implementation of open banking requires Islamic banks to disclose their customer data to other parties. Islamic banks can cooperate with other financial institutions to share customer data for transferred financing purposes or so on. Islamic banking can cooperate with other financial institutions such as conventional banks, rural credit banks, cooperatives, and others. One of the steps that has implemented cooperation in terms of implementing open banking is Bank Syariah Indonesia (BSI) where BSI has collaborated with one of the Sharia BPRs in terms of digital application services, financing partners, as well as IT core banking services that can assist BPRS operations and control.

b. Following the standards set by the regulator

   In 2016, Bank Indonesia (BI) announced the construction of the Indonesian Payment Gateway System / Indonesian Payment System (SPI) as well as a regulatory sandbox for fintech. In 2019, the SPI 2025 Blueprint was officially launched to the public. The blueprint contains five initiatives and one of them is related to open banking through the open API, open API standardization that includes the technical side, security and governance. OJK has also provided support for innovation and digital financial transformation through Personal Data Protection (PDP) which is also regulated by the Ministry of Communication and Information regarding data protection. Islamic banks only need to follow the regulations that have been prepared so that the implementation of open banking can run well.

4. WT Strategy (Weaknesses – Threats)

Strategies based on the weaknesses andthreats es of Islamic Banking in implementing open banking include:

a. Layered data security enhancements

   The most risky threat to customers is the theft of customer data and assets. The implementation of open banking streamlines the spread of Islamic bank customer data which is a concern for customers. In order to prevent this, the bank is required to improve the security of customer data by creating layered security or using a system of consumer habits on end-user usage.

b. Choose cooperation between Islamic banks and third party service providers

   Currently, there are many third-party service providers that are scattered as applications that make it easier for customers to transact. However, it is not uncommon for some applications to actually harm users, such as frequent errors or other things. Of course, with the many choices of applications, Islamic banks must be more careful in collaborating with third party services because this also affects customer trust.

c. Improved internal server for Islamic banking

   The main problem in open banking is the extent to which customer data can be accessed. The bank as a server that has various customer access must have control over customer data. Data access in Open banking must be accessed when needed and only at certain times, such as loan applications, transfers, and so on. When the service is finished, then the data is locked again for security. This is because customer data is private, so it is only used for specific cases. Behind all the conveniences offered by Open banking, there are some bank customers who are still not sure about the security of open banking. This is because open banking must share sensitive and confidential information beyond the standard bank security parameters to third parties such as application providers. As a result, it is possible that customer disloyalty will occur, especially with the risk of data breaches which will eventually lose trust in the bank. In addition, cooperation with various parties will certainly increase the company's internal data. Increasing the internal server for Islamic banks will be one solution because it turns out that the internal servers of Islamic banks can also be used as digital Islamic banks.

CONCLUTION

After analyzing the Strengths, Opportunities, Weaknesses, and Threats (SWOT) on the implementation of open banking, it is possible to develop strategies that can be used by Islamic banking in implementing open banking. The first strategy is the Strength – Opportunities (SO) strategy based on strengths and opportunities, such as Islamic banking, cooperating with fintech or e-commerce and expanding cooperation networks, especially in electronic transactions both on a national and international scale. The second strategy is the Weaknesses – Opportunities (WO) strategy which is based on weaknesses and opportunities such as conducting socialization related to open banking to customers and prospective customers, improving

technology and customer data security, and improving customer complaint services. The third strategy is the Strength – Threats (ST) strategy which is based on strengths and threats such as Islamic banking, cooperating with other financial institutions, and following the regulations drawn up by the regulators. The last strategy is the Weaknesses – Threats (WT) strategy which is based on weaknesses and threats such as increasing layered customer data security for end-users, sorting out collaboration between Islamic banks and third-party service providers, and increasing Islamic bank internal servers. Based on the strategies that have been prepared above, it is expected that Islamic banking can compete or cooperate with financial institutions such as conventional banking in facing the implementation of open banking.

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