

## The Sharia Fintech Product on Bank Performance during COVID-19 Pandemic

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### **ABSTRACT**

*Throughout the COVID-19 epidemic, the Fintech sector has continued to increase access to financial services, especially in developing nations. This study aims to look at how Indonesian Sharia banks' performance is affected by Sharia fintech products (FTPs). Sharia fintech products are a combination of financial and technological innovations that can facilitate customers' transactions and investment processes based on rules and Islamic law so that customers intend to use the Sharia fintech products and then perform well in the bank. This study used 250 Sharia bank customers given self-designed questionnaires as part of our data collection. This study looked at the fictitious relationship, and the results reveal that FTPs have a considerable impact on bank performance, as indicated by the path coefficient and t-value using correlation regression analysis. The study's findings perspectives on how convenient Sharia fintech products (FTPs) are for users. Clients are more receptive to FTPs when they see their use and simplicity in everyday tasks and work. The study's conclusions show that bank performance is positively and significantly impacted by Sharia fintech products of financial transaction platforms (FTPs). Also, the COVID-19 epidemic hastened changes in how people engage with financial services, leading to a hitherto unheard-of demand from poor countries to accelerate their transition to open and safe digital money.*

**Keywords** : Fintech, Sharia Bank, Bank Performance, Sharia Fintech Products

### **A. INTRODUCTION**

The COVID-19 coronavirus epidemic has negatively impacted Indonesia's economy and created many difficulties, so financial inclusion is crucial for the country's economy. One of the keys to growth in the age of digitalization is the community's willingness to accept financial inclusion or access. Fintech can contribute to the process of economic recovery. Due to its low-touch economy,

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customer-focused, social capital-based, data-driven, and pushed by young professionals' traits, fintech continued to grow favourably during the pandemic.

According to F Financial Services Authority or *Otoritas Jasa Keuangan* (OJK) statistics data as of July 2020, the total amount of loans disbursed through Fintech in 2020 from January to July was IDR 35 trillion, growing at a rate of 135 percent annually (July, 2020). This demonstrates from OJK in 2020 that the public desire to obtain loans through Fintech is still rising despite the epidemic. The existence of Fintech is now increasingly relevant as a means to explore the financial market in Indonesia, especially community groups that formal financial institutions have not served. According to INDEF, in 2022, the distribution of Fintech loans outside of Java expanded by 107% (year over year), demonstrating the significance of Fintech in the distribution of the economy, particularly MSMEs.

The Fintech sector is essential to expand financial inclusion and improve people's welfare. The existence of Fintech is increasingly beneficial because of the massive use of smartphones by the community. Even in rural areas, Fintech has become a means of connecting and providing solutions for people who have difficulty reaching formal financial institutions. Through smartphones, people can quickly get financial services to meet their needs or maintain business sustainability to recover the national economy, which is experiencing a slowdown due to the widespread impact of the COVID-19 pandemic.

This research is distinctive in combining a survey on financial transaction use with introducing Sharia fintech products (FTPs) during the COVID-19 crisis, using the programming language Python for statistical analysis techniques. Using FTPs should reduce the likelihood of direct interaction with Covid-19.

Sharia fintech combines financial and technological innovations to facilitate transaction and investment processes based on Islamic law. Even though fintech is a breakthrough, it is increasing. Islam is a religion that covers all spheres of life, so Islamic Sharia values must be applied in the financial sector (Agustina, 2023). Sharia fintech in Indonesia has been regulated in the Fatwa of the National Sharia Council-Indonesian Ulema Council (DSN-MUI) number 117/DSN-MUI/II/2018 governing Information Technology-Based Financing Services according to Islamic law. The usage of Sharia fintech products (FTPs) on individual consumer attitudes during the epidemic in Central Java, Indonesia, is described in this study. The analysis's findings also raise important questions about how financial transactions using Fintech should be implemented during the

ongoing Covid problem. The objective of the current study is to ascertain how individuals used fintech during the COVID-19 outbreak in Central Java, Indonesia. These results can help fintech companies target, diversify, and advertise their goods more effectively in the Central Java market in Indonesia. To do this, we created and distributed a survey questionnaire, which 250 respondents completed. To offer a fresh viewpoint on statistical survey analysis, we also evaluated the data from the study question hypotheses in a computer-generated environment using Python.

Using new technical advancements in financial goods and services is one definition of financial technology (Leong & Sung, 2021). Definition: Sharia fintech products are inclusive of innovative ideas that will enhance financial service processes by recommending technological solutions for various business situations, and these ideas may later result in new business models or even new businesses, according to the definition given by the industry group (Leong & Sung, 2021). The financial technology sector (Fintech Products), according to the previous definition (Milian, Spinola, & de Carvalho, 2019; Ratecka, 2020), cannot be characterized as a new industry but rather as one that has evolved at a very rapid rate.

The emergence of new technologies opens up a wide range of possibilities for businesses, particularly those at the local level, to market their goods internationally at a low cost while anticipating a more significant share from both the local market and the global market (Koutras, Panagopoulos, & Nikas, 2017), which is followed by transaction finance. Information technology is, therefore, essential to the growth of financial services (IT). Financial services experienced a shift beginning with the introduction of automated teller machines (ATMs) by Barclays in the middle of the 20th century when automated securities trading and internet banking arose, and the analogue age of electronic payment systems gave way to the digital era (Wójcik & Cojoianu, 2021). Sharia fintech products (FTP), made possible by the development of data science and computers' capacity to store and analyze large financial data sets, were made possible by the Global Financial Crisis (Gretzel et al., 2020). Moreover, technology plays a significant role in environmental, social, and economic systems. It may be used to address some of the issues that arise during crises without considering the broader social ramifications. Data science is, therefore, seen as a method for achieving the technical advancements required to resolve the dilemma (Gretzel et al., 2020).

Fintech, a technology revolution in financial services, has fast taken off. As well new business models, applications, procedures, or products may substantially impact financial markets, financial institutions, and the delivery of financial services (Lee & Teo, 2015; Vučinić, 2020).

The banking sector now has new incentives to improve performance in various ways thanks to digital and FTP technologies that provide services for financial inclusion (including ATM and mobile banking). For instance, to enhance the connection between customer expectations and satisfaction, employee productivity and service quality, and profitability. All businesses place a high value on performance, and there are two methods to gauge organizational performance: financially and non-financially. Islamic banking is mainly a value-oriented ethical proposition that aims at socioeconomic development instead of the economy's financialization instead of the economy's financialization (Purnamasari & Darmawan, 2017).

According to this research, FinTech companies negatively impact bank performance. According to this report, Islamic banks perform worse than regular banks. This research finds that a higher number of FinTech startups positively impacts Islamic banks' performance, especially in the peer-to-peer lending category, when they engage with Islamic banks (Yumna, 2019). According to the findings, the following factors influence a customer's behaviour regarding Sharia compliance in Islamic banks: attitude, subjective norms, perceived behavioural control, financial literacy in Islam, religiosity, consumer conformity, Islamic branding, and behavioural intention. Interestingly, the results showed little about sustainable aims, Islamic branding, and consumer compliance (Andespa, 2023).

Putting a lot of emphasis on the FTP's five guiding principles: low-profit margins, light assets, scalability, innovation, and simple compliance (Lee & Teo, 2015). Many writers have produced a Fintech literature review, and they have also considered potential future research topics. Fintech goods include wearable technology, cross-country and cross-regional peer-to-peer transfer networks, and smartphone-based financial transactions. (FTPs) (Gomber, Koch, & Siering, 2017).

FTPs are more prevalent in nations with developed economies or fragile financial systems. (Haddad & Hornuf, 2019). The International Monetary Fund and the World Bank launched the Fintech Bali Agenda, which highlights the significance of expanding Sharia fintech products (FTPs) into financial services, intending to foster global cooperation and assist member countries to take

advantage of the advantages and opportunities of swift developments in financial technology while minimizing potential risks. (IMF 2021). Consequently, take advantage of asset capitalization (Laksana, et.al, 2017). By removing obstacles, accelerating economic growth, reducing poverty and income inequality, and assisting clients in managing risk and crisis circumstances, the expansion of financial services can help sustain macroeconomic stability (Vučinić, 2020).

The majority of peer-to-peer investments are done through online platforms. Thanks to peer-to-peer firms, those with money may lend them to individuals needing a loan at a set interest rate. Customers can register their debit or credit cards to the bank's mobile application using the digital portfolio application, allowing them to pay directly with their digital devices. Crowdfunding is getting a small amount of money from many individuals to support a startup business concept.

This study discusses empirical research on how the COVID-19 epidemic and its usage of Sharia fintech products (FTPs) are connected to the definition and explanation of the use of financial instruments. Discusses the objectives and research methodology explaining the survey questionnaires conducted, the scale applied, the methods used, and the background. The calculation of statistics and hypotheses tested lies in the results and discussion section. The scope of specific crisis events has grown significantly over the past several decades, most notably during the present COVID-19 period. People are dealing with more crises and tragedies than ever before on a worldwide scale (Pennington-Gray, 2021).

## **B. THEORITICAL**

Bank performance, from the client's point of view, is a significant achievement of the world's new banking system. Client satisfaction and maintenance are progressively improving into the main success elements in e-banking. It causes current bank managers to take more challenges in making strategies in continuity to deal with and promote e-banking to sustain with them, also an essential factor in helping banks to preserve a competitive advantage (Li, 2021).

Most previous studies have agreed that FTP increases banks' competition. FTP development promotes lending to firms because Internet credit intensifies bank loan competition (Nguyen, 2022).

Sharia fintech combines financial and technological innovations to facilitate transaction and investment processes based on Islamic law (Agustina,

2023). Sharia fintech in Indonesia has been regulated in the Fatwa of the National Sharia Council-Indonesian Ulama Council (DSN-MUI) number 117/DSN-MUI/II/2018 governing Information Technology-Based Financing Services according to Islamic law. The core elements of the Islamic fintech ecosystem identified are financial customers, fintech startups, government, technology developers, traditional financial institutions and fatwa (Islamic legal opinion). Furthermore, the development of the Islamic fintech ecosystem in Indonesia is examined under these identified core elements, providing critical insights into the Islamic fintech ecosystem currently established in the country's industry (Hudaefi, 2023).

Fintech, or financial technology, will answer banking finance needs, particularly for working capital funding. The terms shall decide on profit sharing in Sharia FinTech of the loan arrangement between the lender and the borrower. The contract system is where Islamic fintech adds value (Saputri, 2020). Financial technology types are shown below.

#### 1) Electronic Payments

Fintech digital payment businesses offer online payment transaction services to make the process more convenient, quick, and affordable. These service provider businesses typically use virtual wallets with various functionalities to enable online business-to-business (B2B) transactions between customers and business owners.

#### 2) Crowdfunding and Peer-to-Peer Lending

Fintech P2P lending firms connect borrowers needing money with investors by making loans available to the latter. Fintech P2P lending firms in Indonesia offer a wide range of excellent loans, including business capital, auto loans, public housing loans, credit without collateral, wedding and maternity loans, home improvement loans, and travel loans.

#### 3) Details and Feeder Websites

This kind of Fintech business offers informational services related to products and services in the financial services sector that prospective clients may require. The offered data may take details about insurance premiums, mutual funds, credit cards, interest rates, and more. The information that PUJK provided at banking, capital markets, insurance, financial institutions, and other places was used to gather information about these issues.

#### 4) Individual Budgeting

The whole populace currently needs financial planning. Several fintech firms in Indonesia are creating a kind of fintech that can handle this in light of this. Fintech companies for personal finance via their platforms.

### C. METHODOLOGY

The current study aims to ascertain how individual consumers employed Sharia fintech products (FTPs) during the COVID-19 crisis. A poll of 250 adults over 17 with a verified identity served as the basis for the demographic assessment. The trial will run for six months, from March through July 2020. A Google form was used to disseminate the questionnaire to reach the respondents for this study. According to (Baltar & Brunet, 2012), new technologies in social research are still contested since selection bias makes it challenging to perform scientific research online.

Because younger and more educated respondents are thought to be more technically proficient, the poll was distributed via Facebook groups for PhD students, researchers, and lecturers. In survey-based research, it is envisaged that using virtual networks with non-probabilistic samples will enhance the sample size and its representativeness.

The study made use of the snowball sampling approach. The term "technique" describes a targeted sampling strategy in which the researcher starts with a small group of well-known respondents and then broadens the sample by asking these initial participants to suggest other people who would be interested in participating in the study. Throughout the survey, the sample population grows from a little snowball to a more significant sample. Links to online surveys were disseminated through personal social networks, such as Facebook pages and groups and university websites, using a snowball sampling technique (Johnson et al., 2019). The analysis steps are shown here:

1. Interactive gathering data web Python.
2. Data Correlation of Jupiter notebook statistical.

For data processing, this study uses a web-based interactive computational Python statistical technique to create a Jupyter Notebook document. Our software libraries, such as Pandas v1.1.4 (created in Python for data manipulation and analysis; McKinney, 2011), are used to carry out statistical analyses.

Each research technique may be used in several ways (Adamko, Spuchřáková, & Valášková, 2015). The scientific approach compels us to

formulate hypotheses after conducting experiments and gathering data. Four theories underlie our work:

H1 : The relationship between the perceived benefits of FTFS and bank performance is positive.

H2 : The relationship between the perceived usefulness of FTFS and bank performance is positive.

Fisher's theory states that only the null hypothesis is tested. Hence, it is determined to utilize the p-value in conjunction with a stratified approach to assess if the evidence warrants further investigation and replication: more or less demanding depending on how unlikely it is that it will need to be done, and "not any isolated experiment, however significant, can suffice for the experimental demonstration of any natural phenomenon." (Fisher, 1971). If the null hypothesis of no impact is correct, this approach may then be used to calculate the likelihood of detecting a result at least as dramatic as the test statistic (Fisher, 1959).

Levene's test is practical since many more scientific issues have to do with population variation than with mean or geographic characteristics. Before comparing sample averages, we should confirm that the underlying population shares a common variance. The Levene-type test is used as a preliminary test to assess if a standardized ANOVA test can be conducted in this study with the aid of contemporary hardware, software, and, notably, programming languages like Python. Levene's method employs a one-way ANOVA of the initial centred data and the standard F-test for equality of means based on intermediate scores, which are absolute deviations from the group centre assessment data points (Nordstokke et al. Levene's test and ANOVA are also utilized, utilizing Fisher statistics.

#### D. RESULTS AND DISCUSSION

The research results consist of the respondents' profiles and the statistical results. The research's findings describe the respondents' demographics first, followed by the data's outcome following data analysis.



The study's findings are displayed in table I below.

Table 1. Demographics of respondents

| Customers Age                     |       | Total population (%)            |
|-----------------------------------|-------|---------------------------------|
| 18–24                             |       | 32.00                           |
| 25–34                             |       | 27.71                           |
| 35–44                             |       | 32.23                           |
| 55–64                             | 7.74  | >65                             |
|                                   |       | 0.00                            |
| Gender                            |       |                                 |
| Female                            | 75.85 | Male                            |
|                                   |       | 24.15                           |
| Holding a commercial bank account |       | Working for the commercial bank |
| 1 year or less                    |       | 4.54                            |
| 1–4 years                         | 15.53 | 5–10 years                      |
|                                   |       | 40.65                           |
| 10 years or longer                |       | 38.29                           |

The study showed that 76% of respondents were female (Table I). The bulk of respondents—60%—were found to be between the ages of 25 and 44 based on the age range. Table I demonstrates that 70% of respondents have a higher degree. According to the study, most participants, particularly millennials, prefer to communicate with their banks through FTP. Banks are being compelled to go digital by this. Also, it is observed that most clients hold bank accounts between the ages of 1 and 4 years (15%) and 5 and 10 years (63.65%).

Table 2. Frequency of Using FTPs

| Frequency of using FTPs  | Total population (%) |
|--|----------------------|
| Every time I need to deal with the banking business                    | 58.34%               |
| In most of the cases when I deal with the banking business             | 73.79%               |
| Sometimes  | 6.15%                |
| Hardly ever, I prefer bank counter service                             | 8.26%                |
| How did you know about FTPs  |                      |
| bank clerk   | 17.34%               |
| Social media (e.g. WhatsApp, Instagram, Facebook)                      | 80.11%               |
| Word of mouth  | 45.80%               |
| News, announcements. SMS   | 68.57%               |
| Official publicity of the bank (e.g. Bank website, posters, bank Apps) | 52.06%               |

One generalization that can be drawn from the respondent profile is that young, highly educated women are more likely to participate in such online surveys, mainly through social networks. The findings of our poll are comparable to those of a 2022 research among young people performed in Indonesia, where 70% of them reported having a cell phone in their home, and almost one in ten reported having an additional mobile phone. A significant number of young people, 63%, reported having a mobile phone, and 12% of families had two or more, allowing for more individualized mobile app usage (Mitev and Kovacheva 2019).

**Table 3.** Result

| Items  | Item total correlation | mean | Deviation Standard | Cronbach's Alpha | Factor Loading |
|--|------------------------|------|--------------------|------------------|----------------|
| Characteristics of Fintech Products (FTP) = 0.886  |                        |      |                    |                  |                |
| Perceived of Usefulness (PU) = 0.932   |                        |      |                    |                  |                |
| FTP reduces wait times in lines.   | 0.816                  | 3.93 | 1.022              | 0.937            | 0.751          |
| Financial service time is cut with FTP.  | 0.814                  | 3.92 | 1.026              | 0.938            | 0.745          |
| FTP eliminates the geographic restriction for financial services.  | 0.848                  | 4.01 | 1.019              | 0.939            | 0.786          |
| FTP provides full features that satisfy your daily business demands.   | 0.781                  | 4.04 | 1.098              | 0.942            | 0.694          |
| FTP lowers transaction costs, including transfer fees.   | 0.793                  | 3.91 | 1.004              | 0.941            | 0.714          |
| The third-party system can be connected to FTP to offer value-added services like hotel booking and water payment. | 0.818                  | 4.11 |                    | 0.934            | 0.748          |
|  |                        |      | 1.076              |                  |                |

|  |       |      |       |       |       |
|--|-------|------|-------|-------|-------|
| FTP gives you greater freedom, so you may learn more about how the bank does its business.   | 0.775 | 3.88 |       | 0.942 | 0.685 |
|  |       |      | 0.972 |       |       |
| FTP's precision prevents the subjective human faults brought on by morality and desire.  | 0.793 | 3.82 |       | 0.941 | 0.713 |
|  |       |      | 0.968 |       |       |
| Perceived Difficulty of Use (PD) =<br>0.916  |       |      |       |       |       |
| FTP will not be understood, leading to operational mistakes and property damages.  | 0.793 | 3.03 |       | 0.898 | 0.719 |
|  |       |      | 1,251 |       |       |
| It is a little bothersome as learning to use FTP requires time.  | 0.773 | 2.88 |       | 0.897 | 0.708 |
|  |       |      | 1,205 |       |       |
| When updates come too quickly, we must try to adapt.   | 0.821 | 2.87 |       | 0.896 | 0.772 |
|  |       |      | 1,244 |       |       |
| Compared to counter service, the FTP service has various restrictions, such as the maximum amount for each deposit and withdrawal. | 0.825 | 3.08 | 0.249 | 0.896 | 0.776 |
| Personal information can be communicated over FTP in several payment systems, which increases the danger of information leakage.   | 0.817 | 3.13 |       | 0.897 | 0.758 |
|  |       |      | 1,269 |       |       |
| Even with FTP, help from a bank clerk is still required and might occasionally take additional time.                               | 0.783 | 2.87 | 1.223 | 0.897 | 0.731 |

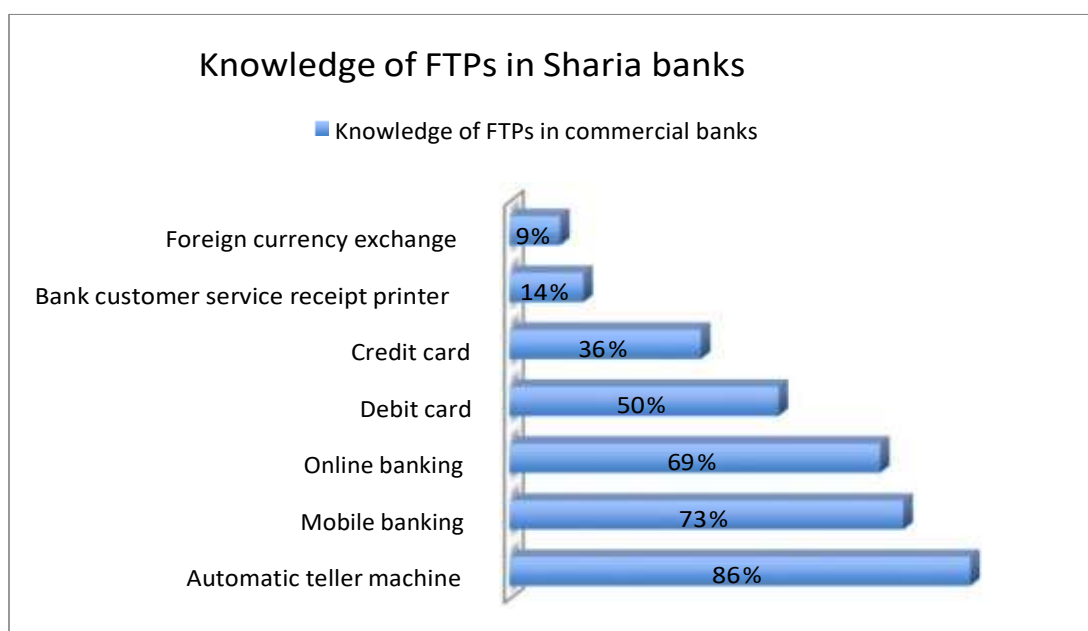
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|  |       |      |       |       |       |
|--|-------|------|-------|-------|-------|
| Occasionally, it can still be a hassle because certain FTPs are kept in banks. | 0.787 | 3.09 |       | 0.899 | 0.724 |
|  |       |      | I,215 |       |       |

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Bank Performance (Customer perspective) = 0.703

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**Figure I.** Knowledge of FTPs in Sharia banks

In this study, additional analysis will focus on client awareness of FTPs. Eighty-six per cent of respondents use automated teller machines (ATMs), 73 per cent use mobile banking, 69 per cent use internet banking, and just 9 per cent said they utilize the foreign exchange function (see Figure I). Also, 52% of clients claimed to utilize FTPs for banking-related activities. These findings suggest that respondents engage in online banking activities. Then, 56% of clients and 48% of bank personnel said they learned about FTPs via social media (such as Facebook, Whatsapp, and Instagram) (see Table 2).

According to the report, banks use a variety of strategies to reach out to current and potential consumers and promote FTPs. According to this report, Sharia Bank employs FTPs for internet banking (72%), mobile banking (74%), and ATMs (68%). Banking customers are attempting to minimize direct

interaction with the bank during the COVID-19 outbreak, and self-service banking has emerged as a critical method for gaining access to financial services. According to this study, banks can provide their consumers with quick, safe, and digital services when all FTP is available.

This study looked at the fictitious relationship, and the path coefficient and t-value results show that FTPs significantly impact bank performance. The study's findings, shown in Table 4, confirm Kansal's (2020) assertion that good customer happiness directly affects FTP usability; hence, H1 is supported. The findings also demonstrate that high FTP difficulties will result in low bank performance. So that, H1 and H2 are accepted.

FTP has often been used daily by lone users. Fintech will likely continue to become increasingly integrated into people's daily lives, perhaps affecting additional aspects of reading, investing, wealth management, and foreign exchange.

Because of the ease of controlling and receiving financial services without regard to time or location, more and more consumers are adopting fintech and seeing it as a cost-effective way to interact with banks (Mawardi et al., 2020). The COVID-19 pandemic worldwide has caused significant changes in how people conduct business and live their banking transactions. Via FTPs, bank clients may manage their cash and accounts and enable payments using mobile cell phones or other portable devices, reducing their need for physical services (Ky et al., 2019). Consumers no longer need to physically visit a bank office to create an account or complete their banking operations.

The Covid-19 epidemic has significantly influenced the world economy and caused significant upheaval. Most people on earth behave in ways impacted by the New Normal, and their sense of self-worth is evolving daily. Because of this, the most significant distinctions may be observed in how people spend their money, interact with others, and use technology. The public's ability to see the possibility of virus infection as a chance to alter their perception of financial technology products (FTP) instruments is another focus of this study.

This research responds to how people's quality of life has improved due to utilizing Sharia fintech products more regularly. The findings of hypothesis testing and their significance will let us know if the comparison between the use of Sharia fintech products (FTP) during the immediate COVID-19 pandemic may be judged to have changed the quality of life of the questioned correspondents. However, when FinTech startups interact with Islamic banks, this paper discovers that a more significant number of FinTech startups positively

affect the performance of Islamic banks, particularly the peer-to-peer lending category. Additionally, this paper finds that FinTech startups improve Islamic banks' performance in both regular and crisis periods (Yударuddin, 2023).

The study's findings offer fresh perspectives on how convenient Sharia fintech products (FTP) are for consumers. Clients are more receptive to FTPs when they see their use and simplicity in everyday tasks and work. By using FTPs, banks can collect a ton of data and provide customized goods and services based on customers' spending patterns and personal preferences, fostering consumer loyalty and community trust and increasing banking profits.

## E. CONCLUSION

The bank customers must be able to use technology, support innovation that transforms technology, and make changes with futuristic and financial technology. The Sharia banking sectors should also promote and inform the populace about using fintech in daily life so that people may comprehend and apply fintech at a younger age. By collaborating with Fintech and software businesses, banks may provide third-party collaboration approaches by offering a range of technological skills that traditional banks lack. Banks should maintain their commitment to fortifying relations with the Fintech ecosystem in the post-COVID-19 climate, where new possibilities for the financial and banking sector will continue to develop.

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