



## The Law Alteration on Artificial Intelligence in Reducing Islamic Bank's Profit and Loss Sharing Risk

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Article	Abstract
<p><b>Keywords:</b> Artificial Intelligence; Islamic Finance; Legal Arrangement; Potential Risk.</p> <p><b>Article History</b> Received: Oct 26, 2022; Reviewed: Oct 31, 2022; Accepted: Dec 2, 2022; Published: Dec 5, 2022;</p>	<p><i>Artificial Intelligence is categorized into the domain of computer science focused on creating intelligent machines that function like humans. Artificial Intelligence supports institutions including Islamic Financial Services in learning, making decision, and providing useful predictive analytics. The progress and promise that artificial intelligence has made and presented in finance have so far been remarkable, allowing for cheaper, faster, closer, more accessible, more lucrative, and more efficient finance especially during the pandemic covid-19 when people are required to stay at home yet still doing a banking transaction. Despite the incredible progress and promise made possible by advances in financial artificial intelligence, it nevertheless presents some serious perils and limitations. Three categories of risks and limitations involve the rise of virtual threats and cyber conflicts in the financial system, society behavioural changes, and legal amendments that cannot respond to technological developments, especially in developing countries. The main objective of this article is to evaluate the operations of the potential risks that may arise in the use of Artificial Intelligence in Islamic finance services, especially dealing with the legal arrangement that is supposed to be in line with business development. Indonesia is a country that adheres to civil law system, in which every legal arrangement is supposed to be based on written law. The lack of this legal system is where the speed of legal changes cannot keep up with the pace of technological development, which is present as a hinder to the development of Artificial Intelligence in the financial system. This article concludes that Artificial Intelligence will have a huge impact in the future on the Islamic Finance industry, but in Indonesian context, it still needs various efforts to reduce the potential risk that eventually has a big impact on the progress of Islamic banks.</i></p>



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## INTRODUCTION

The application of artificial intelligence (AI) offers numerous advantages for Islamic financial services in Indonesia, especially in today's digital age, where banks are expected to provide fast and practical services (Laksana Utama, 2018).

AI is becoming increasingly important in a variety of industries, including finance. There is a lot of potential for using AI to help the banking industry in Indonesia progress. The potential for using AI is enormous, ranging from customer protection, credit decisions, chatbots, trading algorithms, to report analysis and many more. This should be able to make Indonesian banking even more advanced with a proper combination of data scientists and the hardware and tools (Johnson et al., 2019) (Rombe, 2020).

However, incorporating AI technology into a banking system presents a number of challenges. Banks must have an adequate IT system, which necessitates a significant capital outlay. Furthermore, not all banks have adequate databases and funding sources, particularly those in the book 1 and book 2 categories, showing banks with a limited scope of business (Nisaputra, 2020).

In addition, the implementation of AI in Islamic banking is very difficult because there is no legal basis on it. Moreover, banks are fully regulated financial institutions that must obey many regulations, so that the application of AI is a bit contrary to the civil law legal system where the regulations that apply are only the written regulations.

However, the increasing spread of the Covid 19 virus in Indonesia in early 2020 caused a shift in the behavior of consumers who initially prioritized conventional banking transactions to online transactions following social restrictions that limit interaction between people (Sholahuddin et al., 2020). Thus the role of AI is very important in facilitating and advancing online transactions. By increasing the needs for the implementation of AI in Islamic banking on the one hand and on the other hand the absence of legal regulations related to AI makes it a problem to solve. Therefore, it is essential to take into account law reform that can link the needs for Islamic banking for AI and also does not violate the basic concept of written law (Kusuma et al., 2021).

As a result, one of the approaches that can be undertaken is bank synergy. This collaboration can take the form of mutually utilizing customer data through the use of AI. On the one hand, the role of regulators in the implementation of AI in the banking industry is critical.

## METHOD

This research used normative legal research based on literature study and a descriptive analytical approach to analyze information about artificial intelligence in Islamic banking. According to (Marzuki, 2019) normative legal research is a process to find a rule of law, legal principles, and legal doctrines in order to answer the legal issues faced.

## RESULTS AND DISCUSSION

### The Existence of Islamic Banks in the 4.0 Era

The banking industry is now entering a new era, known as the banking 4.0 era, in which banking can be done anywhere in real-time by leveraging technological advancement. Aside from real-time activities, there are also contextual experiences and touchless engagement, as well as a variety of other artificial intelligence-based activities. The majority of it is carried out through Omni-digital channels, with no physical distribution channels (Ayunda & Rusdianto, 2021). Such conditions necessitate adjustments to almost all processes and services provided to the customer. The banking industry progress, started from banking 1.0 to the most recent development, is classified as follows:

Banking 1.0 lasted from 1472 to 1980. During this time, banking services were provided traditionally and centered on branch offices as the primary access point. The internet network was not yet known as one of the breakthroughs that facilitated banking work in Indonesia at the time.

Banking 2.0 was a period of the emergence of self-service banking which took place between 1980 and 2007. Banking 2.0 was defined as the first attempt to provide access outside of bank hours, such as ATMs providing 24-hour banking services, and was accelerated in 1995 with the commercial internet. During this time, people began to use technology to meet their needs for funds that could be withdrawn at any time using an ATM, as well as the use of an ATM in conjunction with which customers could withdraw funds by paying very low administrative fees. This technology greatly facilitates the need to withdraw funds at any time, without regard to standard business hours and days.

Banking 3.0 was a period between 2007-2017 using a catchphrase banking anytime and anywhere. This period was marked by the introduction of smartphones in 2007 and accelerated by the shift to mobile payments and challenger banks built on mobile phones; channel-agnostic. In this period, the use of internet banking as a service was introduced; banks were attempting to adopt this as a convenience offered in every transaction. Stanford Federal Credit Union was the world's first financial institution to use internet banking through its website, which was launched in October 1994. Several banks in Indonesia began offering internet banking services in the early 2000s. The introduction of payment gateways, mobile banking, and internet banking is one of the

important points for the selection of customer loyalty for Indonesians, and the influence of the quality of online banking services through internet banking is considered quite strong, implying that there is a significant influence between the quality of internet banking services and customer loyalty.

Banking 4.0 refers to the period from 2017 to the present. As previously stated, banks must have definite planning to make adjustments to almost all processes and services provided to customers that are in line with current needs. The current financial industry's growth and market share demonstrate the existence of Islamic banking. Since it was first promoted in the early 1990s, Islamic banking in Indonesia has been recorded as a slow-growing industry, and the market share of Indonesian Islamic banking has only reached 6.55 percent in April 2021, comprising 15 commercial Islamic banks, 20 Islamic business units, and 163 Islamic rural banks. The slow growth of the Islamic industry in Indonesia is an interesting paradox, given that Indonesia has the world's largest Muslim population. Indonesia's Muslim population accounts for 88 percent of the total population of approximately 230 million people. However, it turns out that the market share of Islamic banks growth remained around six percent, although it has been around for 30 years.

This could be due to a growing perception in our society that people do not fully understand how Islamic business is conducted in Indonesian Islamic banking, and the long process that has been carried out with various promotional and educational efforts has not been sufficient to increase the value of Islamic banks to be better and recognized by the Indonesian people. This means that Islamic banks have not been widely recognized by the general public, and even if they have been recognized, they have not fostered a favorable perception, let alone piqued the public's interest in using Islamic banking products and services. A good perception comes from a long process of continuous promotion and education to foster a deep understanding, which will eventually change consumer behavior towards Islamic banking products and services. In the Indonesian context, perception is more influenced by attitudes and personalities formed through family, learning processes, and attitudes. These attitudes are unique because of its relationship with Islamic law, implying that consumers who understand Islamic law have a positive attitude toward Islamic banks (Nurdin, 2020).

To further improve the Indonesian people's perception of Islamic banks, strategic efforts should be made in the areas of promotion and education that touch on religious aspects of the community, so that they can change their attitudes and paradigms and become more interested in Islamic financial products. Particularly in the current era of banking 4.0, where banks must be able to provide real-time services through technological advantages, contextual experiences, and touchless engagement, as well as a variety of other artificial intelligence-based activities. With all of the current limitations of Islamic banks, the institutions must have particular strategies to make adjustments to almost all processes and services provided to customers that

correspond to the current needs, as well as promotions and education that are capable of changing customer attitudes and behavior, so that Islamic banking can continue to exist (Tazkiyyaturrohmah & Sriani, 2020).

The existence of Islamic banks in Indonesia formally started in 1992, with the enactment of Banking Law No. 7 of 1992. However, it must be acknowledged that the law has not provided a sufficiently strong legal basis for the development of Islamic banks because it still does not explicitly include the words "Islamic principles" in their business activities, instead referring to them as profit-sharing banks (Ramadhan, 2016).

The amendment to Law No. 7 of 1992 that resulted in Law No. 10 of 1998 explicitly states that banks can operate on Islamic principles. Banking law policies in Indonesia adhered to a dual banking system during the era of Law Number 10 of 1998. This policy essentially allows conventional commercial banks to provide sharia services through the Islamic mechanism after first establishing an Islamic Business Unit. As a result of this law, many conventional banks began offering Islamic services to their customers (Taga et al., 2019).

In 2006, Bank Indonesia made it easier to provide Islamic services by introducing office channeling in Bank Indonesia Regulation (PBI) Number 8/3/PBI/2006. The essence of office channeling is to provide sharia services to Conventional Commercial Banks that already have an Islamic business unit at their head office; there is no need to open new Branch Offices or Sub-Branch Offices, but rather to open a sharia counter in existing Branch Offices or Sub-Branch Offices. It will be more cost-efficient because it no longer necessitates new infrastructure such as buildings, office equipment, employees, and information technology. Furthermore, the Islamic banking industry has grown rapidly and now has a solid legal foundation, marked by the issuance of Law No. 21 of 2008 on Islamic Banking. This regulatory support will undoubtedly encourage faster growth of the Islamic banking industry, and it is hoped that the Islamic banking industry's role in supporting the national economy will become more significant (Nofinawati, 2015).

#### **Application of AI in Islamic Banks**

The application of artificial intelligence (AI) in today's banking services by utilizing AI-led technology has widely become a new trend born from digital penetration, which is rapidly developing in the community. The use of AI has numerous advantages for the Indonesian banking industry (Kaya & Schildbach, 2019).

People's habits for accessing banking services have changed as a result of the digital era. According to a survey, 40 percent of respondents prefer online banking transactions, and 42 percent will use mobile banking, compared to only 8 percent who say no. It also shows that most customers prefer to use digital platforms for more accessible banking services in today's digital era. Furthermore, the use of AI technology will provide numerous benefits to both customers and banks (Sayekti, 2021).

According to McKinsey & Company data, there are several benefits to using AI in banking services, such as, first, increasing revenue by increasing the personalization of services provided to customers and employees, second, cutting costs by maximizing the efficiency of automation technology, lowering error rates, and making better use of resources. Finally, banks can capitalize on new opportunities based on the information they have gathered (McKinsey&Company, 2019).

In addition to AI, other infrastructures such as cloud, data, and application programming interfaces (API) are required to support intelligence banks. Banks can increase the speed of the computer engine that aids in the banking service process by utilizing the cloud. Customer data in banking services, on the other hand, is sometimes fragmentary. Data management and banking marketing activities will be more targeted if data can be integrated into a single location. Meanwhile, API integration is required to improve data availability and provide customers with end-to-end services.

Intelligence banking is digital banking that uses artificial intelligence (AI) to provide a simple, smart, and personalized banking experience (Daldaban, 2019). It is safe to say that the use of AI in banking appears to be too late in comparison to the use of this technology in financial institutions such as fintech. Banks initially appeared to be hesitant to take advantage of this technology due to several major factors, including the existence of many barriers in the use of technology in the banking sector, particularly the regulatory sector, which is quite strict in regulating banking institutions. Aside from that, it is also related to the high cost of this technology, which has prevented banks that are still relatively small in operation from taking advantage of this high-cost technology. Aside from that, the data protection factor for banking customers is another factor for banks not to embrace this technology fully.

However, this situation began to shift slightly in a new direction when new competitors emerged in this institution, namely fintech from start-ups that fully integrated technology into their operational processes. This condition is well received by millennials who are well-versed in digital technology. In addition, at the end of 2019, the entire world was hit by a pandemic caused by the coronavirus, necessitating the restriction of human-to-human social interaction. This also has an impact on the operations of Islamic banking institutions, where operating hours are limited as well as the restriction of the number of visitors permitted in each office. This condition then has a significant impact on the growth of Islamic financial institutions.

To fill the void left by this pandemic, a breakthrough in financial-related technology, previously adopted by fintech, is required, such as the use of AI or artificial intelligence. Artificial intelligence (AI) is human intelligence that has been implemented into technology or machines. A machine is said to have AI if it can demonstrate its intelligence by imitating human cognitive functions without the intervention of a human (Purwaamijaya et al., 2021).

Machine learning (ML) is a term that is inextricably linked to AI because it is a type of AI application in which machines learn data using statistical methods and then perform a task without being programmed first. In principle, AI does not replace human labor that necessitates a more mature approach. AI is used to solve simple and repetitive tasks, allowing humans to focus on more complex issues. AI on chatbots can assist humans in explaining simple procedures such as securing the loss of a customer's debit/credit card by blocking the card, checking balances, viewing customer application status, and so on. While customer service can concentrate on more intricate tasks (Donepudi, 2017).

Based on McKinsey's (2020) working paper, the application of AI in the banking sector can provide 4 (four) positive benefits for the bank itself, namely increasing profits, large-scale personalization, working on the omnichannel market (online shopping), and increasing innovation in companies. From McKinsey's research, it was also found that nearly 60% of large banks have utilized AI in their business systems. Most of them utilize AI for virtual assistants (CS robots), as fraud detection tools, and realtime risk monitoring. As for the Banking either Islamic banking and conventional banking in Indonesia has been adopting AI in their banking operation (McKinsey&Company, 2020).

The following are examples of AI applications in the Islamic banking industry:

1. Chatbot and Virtual Assistant

The banking industry's development is accelerating alongside the pace of the Industrial Revolution 4.0. Banking has now reduced the importance of physical offices and even human functions. Banks are beginning to innovate by utilizing technology to continue to provide excellent customer service. With the advent of artificial intelligence (AI) technology, major Indonesian banks now have AI robots to assist their customers. Customers will be served when they ask a question, seek information, or submit a complaint by using message services that are answered by robots or chatbots, as part of a service called virtual assistant (Khan & Rabbani, 2020). AI is a machine that can learn on its own (a learning machine) and analyzes the communication behavior of users, in this case, bank customers. An example of AI technology that has been widely adopted by banking institutions, including Islamic banks, is the use of chatbots (a kind of text service) and voice bots (with voice) to solve problems experienced by customers. Typically, the customer can submit a problem online or by calling the bank's call center number (Dewantara, 2019). This chatbot is an AI-powered technology that can interact with customers in the same way as humans do. The procedure is as follows: AI is given some initial customer data on some of the most common issues faced by customers, and from this data, AI is able to generate answers to every problem encountered by customers .

## 2. Customers Profiling

AI technology, which is widely used, can also be used for customer profiling. Banks can communicate and make decisions based on each customer's detailed profile. Decisions are made without the involvement of human interventions. Banks provide initial information derived from big data owned by banks, and AI views customer profiles using structured and unstructured data (Jagtiani et al., 2018). With this technology, banks can assess their customers' risk, allowing them to offer a variety of products such as loans and credit cards. Initially, account analysts would assess the potential risk of each customer applying for financing as part of this customer profiling program. There is no need for officer intervention in decision-making with the use of AI, so the process that occurs in every decision making related to financing is based on the data provided, to avoid bias of opinions and personal interests that may arise, so decisions are more objective and risks can be measured.

## 3. Simplifying the process

Banking processes that are trivial and repetitive can be delegated to AI because it is equipped with knowledge of relevant laws and regulations, including Islamic compliance information derived from fiqh books and MUI fatwas. Furthermore, AI can be used to predict a system's potential failure, which opens up the possibility that preventive maintenance is unnecessary because everything is measured from the start.

## 4. Detecting pattern

Artificial intelligence can detect patterns and anomalies in transactions that indicate fraud or money laundering. Face and voice recognition can be used to identify fraudsters. The data can also be used to discover new business insights and use cases related to risks and investment opportunities (Malali & Gopalakrishnan, 2020). With this capability, any suspicious transactions, from money laundering and terrorism financing to fraud, can be detected. Every transaction in Islamic banking will be evaluated by AI for any anomalies.

To be able to apply AI in banking, banks need to pay attention to the following factors:

### 1. Creating a secure and fast digital backbone

AI requires a large amount of high-quality data in order to function properly, perform analysis, and make sound decisions. This data must be able to move safely and quickly from one point of collection to another, and vice versa. This large amount of data can benefit from the bank's existing Enterprise Data Warehouse (EDWH) or big data. This data has a relatively high cost, so a bank with limited operational scope will be unable to create this data bank unless there is data sharing that can be done jointly among all banks that can use the same data while still prioritizing the personal data security of each customer.

### 2. Transforming human resources



AI is used to perform trivial work, however, AI does not take the place of humans. AI serves as a supplement to humans. Humans are designed for jobs that require more complex analytical skills that AI cannot handle. However, banks must improve their resource capabilities, and employees must be properly trained in the use of AI in their daily work.

3. Complying with privacy and security laws

Regarding data, it is critical to respect customer privacy while maintaining high-security standards. Large amounts of customer data are used by AI to learn and do its job. However, the use of this data must adhere to national regulations set by Bank Indonesia or the Financial Services Authority. To minimize the risks that may be caused by the use of data by AI, it must be accompanied by the protection of customer data security.

4. Maintaining constant contact with customers.

AI assists banking customer service in interacting with customers for needs such as predicting future events or providing personalized recommendations to customers. AI is also used to solve problems in a timely and efficient manner.

However, AI lacks emotional and empathy skills, which are critical components of Customer Service. As a result, banks must strike a balance between AI and humans so that businesses can continue to connect with customers in the context of human relations (Bank, 2018).

### **AI For Mudharabah Financing: Breakthrough In Reducing The Risk Of Profit And Loss Sharing Financing**

AI can essentially make the Islamic banking transaction process more efficient in terms of time, cost, and energy. The utilization process has now begun to be implemented in simple processes such as the use of virtual assistants in the form of chatbots that have been adopted by Islamic banks in Indonesia, such as Virtual Assistant called Aisyah, which is one of the mainstays of Bank Syariah Mandiri that provides information to customers about its products (Hidayati et al., 2020).

Islamic banking, just as conventional banking, has a mechanism that acts as an intermediary institution between parties with excess funds and those with insufficient funds. The distribution of funds at Islamic banks is known as financing, where Islamic banks use the concept of Profit and Loss Sharing (PLS) or sharing profits and losses together, rather than using the interest system.

Under ideal economic conditions, *mudharabah* and *musyarakah* contracts with the PLS scheme should be implemented the most by Islamic banking because this scheme divides the risk between the bank and the customer. *Musyarakah* is a profit-and-loss partnership. A *musharakah* financing agreement calls for the bank and its customers to pool their capital and expertise in a project. Profits and losses will be allocated based on the share of the available capital. *Mudharabah* financing is a type of

cooperative arrangement in which the bank provides capital and the customer provides expertise. Both parties will reach an agreement on a profit-sharing ratio. Without any influence from the bank, the customer will be personally responsible for running the business, project, or contract. All types of loss, if any, will be borne by the bank, while labor losses will be borne by the customer. (Khan, Siswantoro, & Rahman, 2020) In practice, the distribution of Islamic bank financing in Indonesia is *musharakah* by 25 percent and *mudharabah* by 7 percent, with the financing of sale and purchase contracts (*murabahah*) accounting for the majority of 59 percent of total financing in Islamic banks. It appears that *murabahah* schemes dominate the financing of Islamic banks in Indonesia. *Murabahah* is permitted in sales transactions but not in financing transactions. *Murabahah* is a type of financing based on a predetermined profit, which is similar to fixed interest financing. In interest-based financing, the borrower bears all of the risks. *Murabahah* is not a financing model, but rather a tool for avoiding "interest," and it is not an ideal instrument for achieving Islamic economic goals.

Aside from being used as a replacement for customer service, AI can also be used as a Robo advisor in the context of financing distribution in Islamic banks. *Mudharabah*-based financing is the most Islamically sound type of financing. Thus, *mudharabah*-based financing can achieve the four goals of Islamic economics: achieving economic prosperity within the Islamic moral framework, upholding brotherhood and universal justice, achieving a fair distribution of income, and achieving individual freedom in the context of social welfare. Islamic banks, as modern financial institutions, should be able to become forerunners in achieving Islamic economic goals by developing profit-sharing-based products (Waluyo, 2016).

According to Antonio (2001), the calculation of profit-sharing in Islamic banks is influenced by the following factors:

(1) direct factors, such as (a) investment rate, which is the actual percentage of funds invested as a percentage of total funds. If the Executing Bank and the *Al-Mudharabah* Financing Profit Sharing System at Islamic Banks agree on an investment rate of 80 percent, this means that 20 percent of the total funds are set aside for liquidation, (b) the amount of funds available for investment is the total amount of funds available for investment from all sources. These funds can be calculated using one of three methods: average monthly minimum balance, average daily total balance, or average daily total balance, and (c) ratio (profit sharing ratio). One of the characteristics of *mudharabah* is the ratio that must be determined and agreed upon at the start of the agreement. The ratio between one bank and another can be different, and it can also differ from time to time in one bank. For example, time deposits can have maturities of 1 month, 3 months, 6 months, and 12 months. The ratio can also differ from one account to another, depending on the amount of fund and maturity.

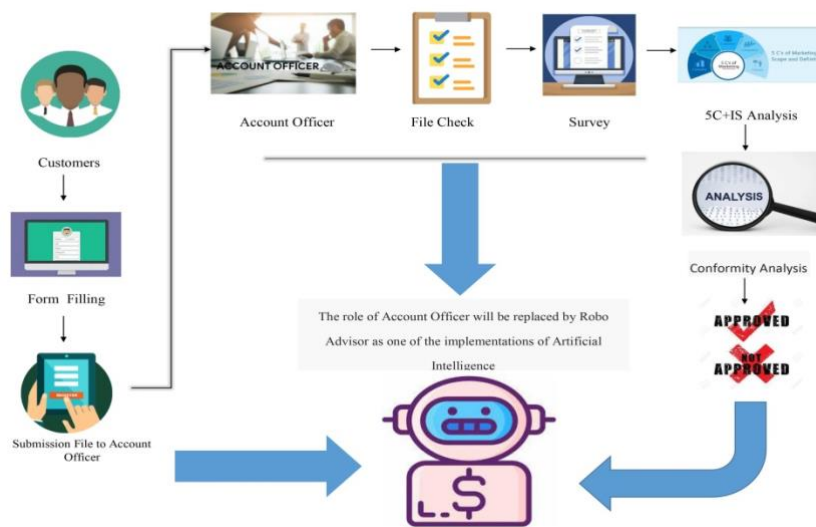
(2) Indirect factors include: (a) determining the items of income and *mudharabah* costs, as well as how banks and customers share revenue and costs. The income that is shared

is the income received is subtracted by the costs; if the bank bears all costs, this is referred to as revenue sharing. (b) Accounting policy (accounting principles and methods): the implementation of activities has an indirect impact on profit sharing, particularly in terms of revenue and cost recognition. In Islamic banks, the profit-sharing ratio is an important factor in determining profit sharing. It is because the aspect of the ratio is mutually agreed upon by the two parties conducting the transaction. The following factors must be considered when calculating the profit-sharing ratio: business data, installment capacity, business results or actual business returns, expected returns, financing ratios, profit-sharing distribution. The factors for determining the profit-sharing ratio to the determination of a customer receiving financing with a certain amount and rate of return are initially carried out by the Account officer, which is then all done by AI through a financing Robo advisor with the presence of AI. The use of artificial intelligence (AI) can shorten and reduce the cost of lengthy and costly administrative processes. With the data provided by the stored data bank, AI only needs to analyze people potential to get the financing in a matter of hours or even minutes, rather than waiting several days.

*Mudharabah* financing is one of the financing types carried out through a business collaboration between two parties, namely the bank as the owner of the capital (*shahibul maal*), which provides 100 percent capital, and the customer as the manager of the business with a specific type of business that has been mutually agreed upon (*mudharib*), as well as a profit-sharing ratio that has also been mutually determined. *Mudharabah* financing provided by banks is *mudharabah mutblaqah* financing, which is a type of cooperation between the owner of the fund and the manager with a very broad scope that is not limited by the specifications of the type of business, time, or other conditions. The disbursed financing is used for productive financing as working capital to meet the need for increased production, both quantitatively to increase the amount of production and qualitatively to improve the quality of production and trade needs. The type of business that can be proposed for financing is one that generates profits and prohibits the distribution of capital for businesses that contain non-halal elements, such as the production of liquor, pig farming, gambling, and so on. Trade, cooperatives, industry, mining, agriculture, and other types of businesses can be financed (Heradhyaksa & Markom, 2018).

### **Reducing the Risk In *Mudharabah* Financing**

The use of AI in *mudharabah* financing is a breakthrough that can be used by Islamic financial institutions where it is hoped that the use of this program can make the financing process more effective and efficient. Besides being cost- and time-efficient, it can also reduce the risks that may arise in this financing process (Supriatna et al., 2020).



**Figure 1. Mudharabah flowchart in Islamic Bank**

(Created by authors from various sources)

In *Mudharabah*, Islamic Bank positions itself as a working partner, namely as a provider of funds to meet the customer's capital needs, while the profits will be shared with a mutually agreed profit sharing portion. In the event of a loss, the loss in the form of money will be borne by the Bank, while the Customer will bear the loss in the form of loss of business venture, reputation, and time that has been invested in their venture.

### ***Mudharabah* financing procedures**

1. Financing Application Procedures Applicants for working capital mudharabah financing are legal entities in the form of Limited Liability Companies, Cooperatives, Limited Liability Companies (CV), Firms (FA), Foundations and Cooperatives that have experience in industry and trade or in their fields for at least 2 (two) years.
2. Financing Analysis Procedure. Data collection from: proposals, applicant interviews, site visits and BI (BI Checking), Data verification: checking completeness, fairness and accuracy of data, checklists, cross-checking data information and information to related parties, Feasibility analysis, 5C: Character, Capacity, Capital, Collateral and Condition Of Economics (Hapsila & Astarina, 2020).
3. Financing Realization Procedure. After analyzing the feasibility of the customer based on the survey results, if deemed feasible, the Bank will prepare a plan for the realization of the proposed financing. The realization period ranges from one week or more, depending on the financial condition of the Bank and the volume of financing that enters the Bank. In addition, the financing realization process is followed by fees charged by the Bank to the Customer.

4. Payment Procedures Repayment is based on a predetermined payment schedule that has been mutually agreed between the bank and the customer or other procedures specified in the financing agreement. 1) Financing for housing and non-housing supporting business sectors. 2) Productive business that is declared feasible based on sound financing principles. 3) The business in question is not a business that is prohibited by the applicable laws and regulations.

With AI, the financing distribution process, which in its decision takes a few days, can be done in a matter of only hours, making it more effective. After the prospective customer comes to the bank to fill out the form, AI will take care of the next procedure. This includes anticipating whether or not there are risks that will arise in the distribution of the financing by looking thoroughly at the type of business of the prospective customer, whether the customer's business is a business field that is permitted by religion or is a business field that is forbidden, such as a business sector containing the sale and purchase of alcohol, meat, pork, pornography, gambling, prostitution and other fields that are not in accordance with Islamic teachings. AI will also be able to predict the prospects of the customer business venture in the future by looking at existing economic indicators regarding the customer's business prospects.

The assessment given by AI is very objective because in this case AI will calculate all possibilities without using feelings that tend to make a decision subjective and pose a risk of default in the future. Islamic bank is a very high risk financing channel entity. By channeling financing based on loss and profit sharing, the bank will fully bear the loss in this financing. With the *mudharabah* model financing distribution process mentioned above that any losses arising from this business will be borne by Islamic banks, causing a high risk and making the role of AI able to assess the feasibility of a business so that it is appropriate to distribute funds is necessary because it can reduce the risk of default, which will harm Islamic banks.

## CONCLUSION

Financing is one of the services provided by Islamic banks to channel funds to the community to improve people's lives. *Mubarabah*, or financing with the concept of profit-sharing (PLS), is one type of sharia-compliant financing in sharia banking. Previously, the financing distribution process took an account officer into account when deciding whether to approve or reject a loan. Using AI in the form of a Robo advisor in the process of distributing *mudharabah* financing is a technological breakthrough in the financial sector. This technology can shorten the process of financing disbursement, which previously took a long time and was costly. Using this AI, excessive risk can be measured and anticipated in advance, reducing or even eliminating the risk of unpaid financing. In the initial financing application process, the Robo advisor can analyze the customer's ability to finance the *mudharabah* by looking at various indicators such as business size, business potential, and customer business

development, which can be assessed using cloud data from the bank, and the Robo can provide a feasibility assessment of the business in just hours. With the use of artificial intelligence, it is hoped that the development of Islamic banks in Indonesia will be faster and more efficient in terms of time and cost, allowing them to compete with conventional banks.

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