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Cryptocurrency in Indonesia: A Sentiment Analysis

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Abstract

This study was carried out to ascertain the opinions of the Indonesian people, particularly Generations Y and Z, about the growth of cryptocurrency. This study used descriptive statistical analysis to analyse sentiment using primary data from 100 respondents through the questionnaire. The SentiStrength software is used to process the data. According to the findings, generations Y and Z in Indonesia tend to have more neutral sentiment (48%), positive sentiment (23%), negative sentiment (28%), and highly negative sentiment (1%). The findings of this research show that most respondents are more sceptical about cryptocurrency in Indonesia. Respondents, with a neutral sentiment, consider that the development of cryptocurrency has not been inclusive. Therefore, there is no positive or negative sentiment. However, this study also discovered that respondents' negative responses dominated the positive responses. As a result, the findings of this study can be used to develop suitable policies or education. The study's implication is to represent the overall perspective and offer a basic understanding of the opinion of the Indonesian Y and Z generations toward cryptocurrency.

Keywords: Cryptocurrency, Sentiment Analysis, Indonesia, Generation Y, Generation Z, SentiStrenth

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1. Introduction

Technological advances in financial management have helped bring the global economy to an unprecedented level since the early implementation of computing hardware. With the invention of blockchain and cryptocurrency, its development has created a new generation of financial assets (Patil, 2019). Blockchain technology is a list of digital records in the form of packages or blocks developed using the science of cryptography (Irma et al., 2021).

While cryptocurrency is a digital asset supported by blockchain technology, 2008 was the beginning of the cryptocurrency era with the discovery of the first cryptocurrency by Satoshi Nakamoto. However, the first cryptocurrency introduced, Bitcoin, started operating as an open-source blockchain (Noh & Bakar, 2020). Cryptocurrencies can perform the essential functions of currency, as it is considered a medium of exchange, store of value, and unit of account, which is also a function of money (Gafar et al., 2021).

The emergence of advanced tools, applications, and algorithms that analyze financial transactions across millions of data points has further pushed the global economy towards consumers. Technology is considered the primary source of economic development. It makes the economy socially and financially advanced, which leads to an increase in the income level of individuals and leads to a better lifestyle (Patil, 2019). The market movement in adopting this technology shows a fantastic way to get rich quickly (Alaeddin & Altounjy, 2018).

At the beginning of the emergence of blockchain, there was a lot of appreciation that emerged for the presence of blockchain, so many of its supporters consider blockchain to be one of the most important inventions of today. Some research shows that more than forty-three percent of Millennials are leveraging cryptocurrencies quickly, leading to thousands of other alternative currencies (Gainsbury & Blaszczynski, 2017). The Millennial Generation (Around 1977 and 1995) is characterized by specific behaviors such as adopting technology quickly (Patil, 2019).

They are the generation that helped usher in the global technological evolution. They are not new to trying the untested. They are quick to adopt cryptocurrencies despite security concerns and a lack of support from governments. Similar behavior has been evident in the implications of investing and money in general (Patil, 2019). Besides that, generation Z, also known as the hyper-connected generation, is also close to the development of this technology (Alaeddin & Altounjy, 2018).

After the first cryptocurrency, Bitcoin, was officially launched and continued to grow in quantity and demand, cryptocurrency became an instrument that was considered a threat to the existence of conventional finance. Along with the World Bank, governments are also monitoring the unstoppable evolution of the world's financial system. The COVID-19 pandemic has become a catalyst for forcing the entry of all financial and banking industry sectors into the digitalization era. The concept of finance without physical currency is positive for some parties where money will be eliminated and replaced with a digital currency system, but not for others.

Based on this background, this study aims to discuss the public's perception of the development of cryptocurrencies, especially among generations Y and Z in Indonesia. Some of the benefits that can be obtained from this research are knowing the extent of the portrait of the development of cryptocurrency perceptions through the opinions of the Indonesian people in responding to the current development of cryptocurrencies. In addition, this study looks at sentiments related to the perception of cryptocurrencies.

This research is structured as follows—the second part reviews, in general, the literature review. The third section explains the method. The fourth section presents the result and discussion of descriptive research. Then the fifth section is the paper's closing, which contains a conclusion of the research and recommendation.

2. Literature review

2.1 Generation Y and Z

Generation Y is commonly referred to as the millennial generation, born in the 1981s until 1994s (Mohr & Mohr, 2017). It consists of individuals who were usually raised in a safe and goal-oriented environment. Millennials like to work in teams and have an organized, integrated, and growth-oriented culture. They believe that they will more easily achieve their goals than work individually (Viswanathan & Jain, 2013). Generally, millennials are reluctant to read and reject text-oriented messages, but they read messages and texts in digital media and prefer rich visual messages over pure text communication (Viswanathan & Jain, 2013).

Meanwhile, Generation Z, who was born in the 1995s and grew up in the 2000s (Mohr & Mohr, 2017), is the generation that immediately felt the most significant changes in this century where the world has been equipped with the web, internet, smartphones, laptops, freely available networks, and various very sophisticated digital media. Generation Z grew up on social networks. They are digital-centric, and technology is their identity. They are also referred to as Generation I, Gen Tech, Digital natives, Gen Wii, etc. They were born and raised in the digital world and what distinguishes them from other generations is that they are more connected to the electronic and digital world. Generation Z is used to interacting and communicating in a world that is connected at all times (Turner, 2015).

In addition to psychographic profiles, Generation Y's activities or daily habits have various media used to achieve their goals. Still, they are very skeptical of traditional activities. But now with the advent of the internet has accelerated the life cycle by giving them space to find out about the latest trends to widen their minds to existing and developing knowledge (Valentine & Powers, 2013).

The characteristics of Generation Z are the most ethnically diverse and technologically advanced generations. Generation Z has an informal, individual, and straight way of communicating, and social networking is an essential part of their lives. They are the Do-It-Yourself generation. Generation Z tends to be more entrepreneurial, trustworthy, tolerant, and less motivated by money than Generation Y. They are more realistic about their job expectations and optimistic about the future (Singh & Dangmei, 2016).

Generation Z is very concerned with environmental issues, very aware of the dire shortages and shortages of water, which shows a high sense of responsibility towards natural resources. Generation Z wants to be heard regardless of their young age. Technology is part of their identity. They are technologically savvy but lack problem-solving skills and have not demonstrated the ability to see situations, put them in context, analyze and make decisions. They also appear to be less likely to vote and participate in their community than previous generations, such as Generation Y (Singh & Dangmei, 2016).

2.2 Cryptocurrency

In John Vincent Siquian's research in 2020, it was explained that cryptocurrency is a digital asset used as a medium of exchange that uses cryptography as security in the transaction process and for the manufacture of additional units to clarify these assets (Siquian, 2020).

Previous research (Giudici et al., 2020) explained that cryptocurrency is part of a more comprehensive financial asset without involving third-party institutions to certify the transactions it does. In its publication, judging from the purpose, crypto assets are categorized into several sub-categories. Here are some categories of crypto assets; (1) Cryptocurrencies are assets on the blockchain that can be exchanged or transferred between network participants and therefore used as a means of payment—but offer no other benefits, (2) Crypto securities: are assets on the identical blockchain, in addition to offering prospects for future payments, for example, profit sharing. (3) Crypto utility assets: are assets on the identical blockchain, in addition to being exchangeable or providing access to some predefined products or services.

This classification of crypto assets is crucial for global regulators, as they need to determine whether certain crypto-assets should be regulated as electronic money, as securities, or as other forms of financial instruments, especially in light of the potential concerns of investors (Giudici et al., 2020).

Cryptocurrency can be used as a means of paying for goods and services online. Not many countries have legalized it, but many companies have issued their type of cryptocurrency. Often called tokens, and are explicitly traded for the goods or services their company provides. In Indonesia, cryptocurrencies are defined as crypto assets that can only be traded on futures exchanges (Irma et al., 2021).

Currently, the issue of cryptocurrency development leads to a blockchain system that consumes too much electricity to damage the environment and is considered environmentally unfriendly. Blockchain systems on cryptocurrencies such as bitcoin still use proof of work then there are some coins such as Ethereum that use a more environmentally friendly proof of stake system (Siquian, 2020).

A study conducted by The Tokenist magazine gives information on how people worldwide are reacting to cryptocurrencies. In a 2020 poll conducted in 17 countries, 60% of respondents feel cryptocurrencies are a positive innovation in the new financial technology system. This number is increased by 27% from a similar poll performed in 2017. Furthermore, 47 percent of respondents were more confident in using cryptocurrency than well-known banks throughout the world. Another statistic shows that 78 percent of millennials now trust digital currencies more than traditional currencies that we use today.

This fact indicates how the global financial situation is evolving toward digitization. Based on blockchain technology, cryptocurrency has the opportunity to significantly alter the way people do business and make even worldwide transactions faster and more frictionless. Transactions on the blockchain will become more straightforward and more accessible to ordinary citizens as technology advances.

This study examines how the perception of the Indonesian people, which is a developing country and the majority Muslim population, views the development of cryptocurrency. Research on cryptocurrency sentiment is mainly done with a focus on price changes. Not many researchers have found out about how the community responds to the development of cryptocurrency, even though their point of view about the positives and negatives of cryptocurrency is significant to know, primarily to determine policy or development of appropriate innovations.

The urgency of discussing cryptocurrency sentiment in Indonesia is because many Indonesian people can achieve a demographic bonus, so many people of productive age will make more financial transactions and investments. They have the potential to become users of this digital currency in the future.

3. Methodology

Sentiment analysis is the act of recognizing and classifying computational views represented in a piece of text, particularly to establish whether the author's attitude toward specific topics, products, and so on is positive, negative, or neutral.

Sentiment analysis monitors public opinions via social media or direct interviews, allowing an institution to get insight into how users or the broader public feel about specific issues and discover problems before they become more serious. The findings of this study are often utilized as the foundation for developing a policy that follows the facts and conditions.

This study uses primary data from questionnaires distributed to people of various ages from the Y and Z generations in Indonesia. Using a survey approach, 100 respondents were found domiciled in West Java Province, the province with the largest population in Indonesia. There are many metropolitan cities in the region, such as Depok, Bogor, and Bekasi. Respondents consist of men and women with the age range of 20 to 30 years dominating, while those over 30 years are the minor respondents. The respondents have various activities ranging from students, homemakers to academics, and practitioners in the financial sector. The methodology used in this study is a qualitative method approach with descriptive statistics. The qualitative research method is based on the philosophy of postpositivism, which is used to examine the condition of natural objects (as opposed to experimentation) where the researcher is the critical instrument (Giudici et al., 2020).

The non-random sampling technique did the data collection technique. The Non-random sampling technique is a data collection technique based on selecting a characteristic by obtaining a relevant sample to achieve the objectives of a study (Tansey, 2009). In this study, the author uses purposive sampling, which is a technique from non-random sampling. In the purposive sampling technique, the emphasis is on the consideration of specific characteristics or characteristics. Purposive sampling takes data sources by determining the sample with specific considerations (Sugiyono, 2010). The characteristics of the respondents in this research are those who fall into the categories of generation Y and Z with domicile in West Java. To measure the sentiment map on the results of the cryptocurrency perception questionnaire, the researcher used SentiStrength software which is widely used in sentiment analysis research.

Sentiment analysis is a research approach commonly used to measure public opinion on a theme. Sentiment analysis is done by analyzing particular text in special software for word processing and not processing numbers. Sentiment analysis consists of three subprocesses: classification of subjectivity, orientation detection, and opinion of target holders & detection.

Until now, most of the research in sentiment analysis was intended for English because of the tools and sources for English. Some sources often used for sentiment analysis are SentWetchnet and Wordnet. The essential task in sentiment analysis is to classify the polarity of text in the level of documents, sentences, or features and aspects, whether the opinions expressed in documents, sentences, and feature entities have a positive, negative or neutral aspect. Furthermore, sentiment analysis can be emotionally expressed, happy, or angry to produce an analysis that can be a reference for the development of cryptocurrency.

4. Results

In early July 2021, the author distributed questionnaires to 100 respondents of generation Y and Z in Indonesia. The research was conducted to obtain primary data, which is used to calculate the sentiments of the Indonesian people towards the issue of cryptocurrencies. As well known, sentiment analysis is research commonly used to measure public sentiment towards a theme. In this case, the analysis will be used to analyze the cryptocurrency theme. This study will use SentiStrength to process data from distributing questionnaires to generations Y and Z in Indonesia.

Based on the data of questionnaires distributed to generations Y and Z in Indonesia, the results of the opinions of the respondents were classified into five types of category: namely opinions with high positive values (very good), positive (good), neutral (neutral), negative (bad) and high negative (very bad). The results of the analysis of sentiment towards cryptocurrencies in Indonesia which are divided into five types of categories, can be seen in the following figure:

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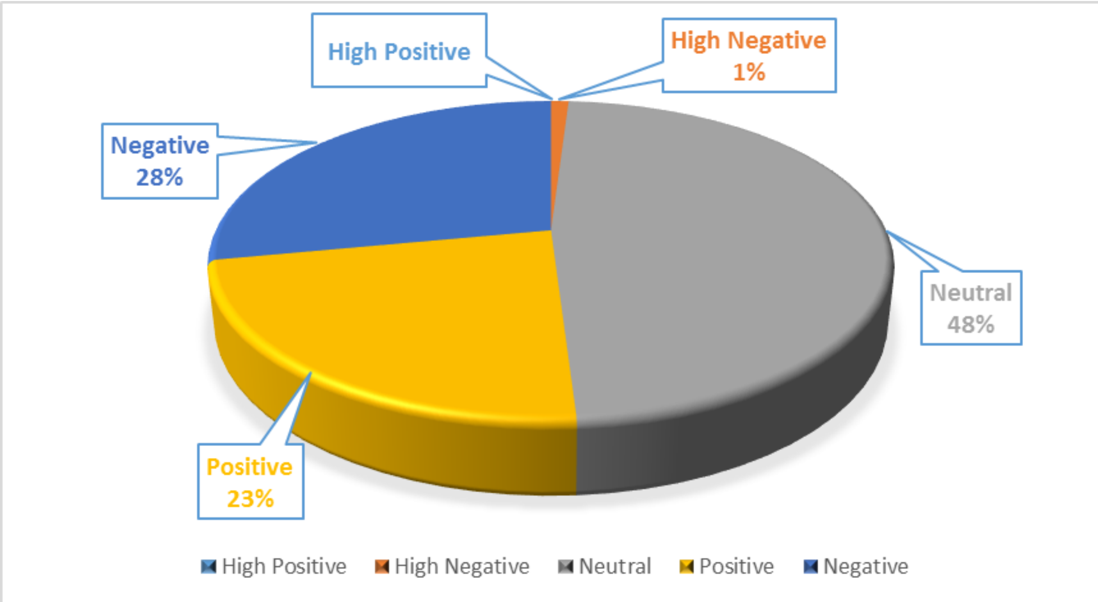


Figure 1. Sentiment Analysis of Cryptocurrency in Indonesia
Source: Author

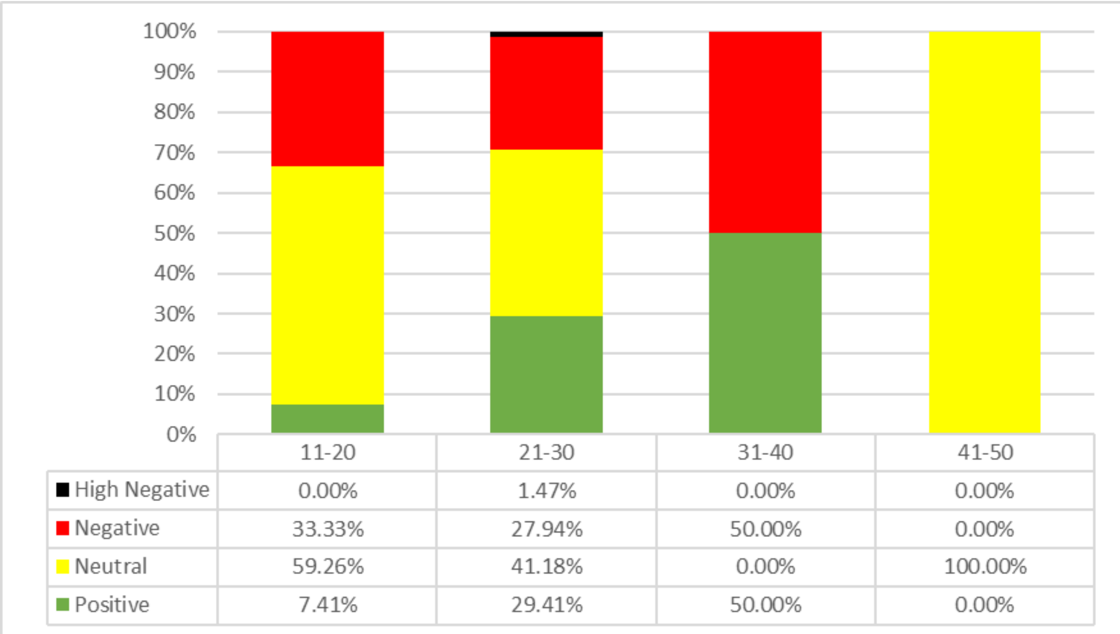
Figure 1 showed that the development of cryptocurrencies in Indonesia has perfect sentiment (high positive) of 0%, then good very good (positive) of 23%. In comparison, bad sentiment (negative) of 28%, very bad (high negative) is 1 %, and the rest have a neutral sentiment of 48%.

The results of the sentiment above are obtained from the opinions expressed by the respondents in the questionnaire. The words conveyed in the written text are ranked from very negative intervals (-5) to very positive (5), with 0 being neutral. The opinion score of the sentence submitted by the respondent is calculated by adding up the sentiment score of each word listed in SentiStrength.

The good sentiment (positive) is the opinion of the questionnaire respondents who are positive and tend to be optimistic in dealing with the existence of cryptocurrencies in Indonesia and support the development of cryptocurrencies. Meanwhile, negative sentiment is a negative opinion in the questionnaire regarding the development of cryptocurrencies in the financial world, especially Islamic finance in Indonesia. It states that cryptocurrencies cannot be applied inclusively for various reasons.

This data shows that most people are more neutral in responding to the existence of cryptocurrencies in Indonesia. In addition, the negative response is more than the positive response. Therefore, this situation must continue to be optimized appropriately by the relevant parties. Sharia financial and economic education needs to be facilitated with a system following the community's conditions.

Respondents in a neutral position expressed many answers that they did not know much or did not know about the issue of cryptocurrency developments. Respondents in a positive position state that this is one of the latest investment instrument innovations that has developed quickly. The existence of cryptocurrencies supported by the current industrial system makes it easier for people to reach their existence. As for the respondents on the negative side, many states that the development of cryptocurrencies has price fluctuations that are very risky to be used as investment instruments. In contrast, the current cryptocurrency working system, considered non-sharia, receives negative opinions from respondents of generations Y and Z in Indonesia.



	11-20	21-30	31-40	41-50
High Negative	0.00%	1.47%	0.00%	0.00%
Negative	33.33%	27.94%	50.00%	0.00%
Neutral	59.26%	41.18%	0.00%	100.00%
Positive	7.41%	29.41%	50.00%	0.00%

Figure 2. Intertemporal Sentiment Analysis of Cryptocurrency in Indonesia per Age
Source: Author

Based on the figure above, it can be seen that the composition of perception is divided by age range. Respondents with an age range of 11 to 20 years were found to have good (positive) sentiments of 7.41%, while bad (negative) sentiments were 33.33%, very bad sentiments (high negative) 0%, and the rest had neutral (neutral) sentiments. by 59.26%. As for respondents with an age range of 21 to 30 years, it was found that positive sentiment was 29.41%, while bad sentiment (negative) was 27.94%, very bad sentiment (high negative) was 1.47%. The rest had negative sentiment—neutral (neutral) by 41.18%. Meanwhile, respondents with ages above 31 to 50 years each have a sentiment of 50% positive and 50% negative for 31 to 40 years and neutral (neutral) for 41 to 50 years.

Based on the results above, it can be seen that respondents with an age range of 11 to 30 years have more diverse sentiments than those whose age range is above 30 years. A scientific study explained that Bitcoin, which is one type of cryptocurrency, is widely used by those in their 20s. The findings have also been published in "bitcointalk.org." Likewise, in one of their studies on Generation Z, the Generational Kinetics research study center stated that they are more competent in viewing the money work system. Besides that, they are more receptive to new technology (Alaeddin & Altounjy, 2018).

5. Discussion

A cryptocurrency is a form of payment for goods and services that can be done online. Many companies have issued their currency, often called tokens, and explicitly traded for their company's goods or services. Blockchain technology can be implemented in various elements, including financial services, blockchain government IoT, blockchain identity, etc. In Indonesia, cryptocurrency is defined as a crypto asset that can only be traded on a futures exchange. There are 229 cryptocurrencies recognized in Indonesia (Irma et al., 2021).

Along with age differences in the perception of cryptocurrencies, the number of sentiments differs from each age category. The most significant number of respondents came from the age category with a range of 21 to 30 years. They have good sentiment (positive) of 29.41%, while bad sentiment (negative) is 27.94%, very bad sentiment (high negative) is 1.47%, and the rest have neutral sentiment (neutral) of 41.18%.

As for all respondents, the age range of 31 to 40 years has the most significant positive sentiment. Their positive opinion is because they think that cryptocurrencies can now be an investment asset choice. At the same time, the research found very bad sentiment (high negative) by 1.47% of respondents with an age range of 21 to 30 years. They argue that the development of cryptocurrencies has been very rapid lately, but they are worried that it is an asset that will become an economic bubble.

Blockchain, including cryptocurrency systems, has unlimited possibilities and can continue to be developed depending on needs because it is open source. Examples of actual use in several Indonesian companies, the Closed System Blockchain used by iGrow, for tracing and recording, also store essential company data and many more examples of Indonesian companies that use the blockchain system but create a closed system or are still explicitly used for the company.

If cryptocurrency is officially a global currency, the risk is that the government loses control of its monetary policy and the tools used by the central bank to oversee inflation and financial stability.

Cryptocurrency is a safer alternative for the physical currency currently used, especially with the advantage of encrypting sensitive data transfers using cryptographic protocols, which are very complex code systems.

The widespread use of cryptocurrency is not impossible in the era of digitalization. It is uncertain that cryptocurrency will be a transaction tool, but the development will continue. Financial and digitization technology development moves towards an infinite era, and the national border no longer has dimensions when people are used to transacting without cash.

Cryptocurrency as an unprecedented innovation in today's financial world does bring benefits. However, it is still in its early stages of development, with its proven disadvantages based on user activity and not just system weaknesses. Previous research found that the losses or *mafsadat* owned tended to be more precise than the positive reasons that agreed to make cryptocurrency the primary currency from the *Maqashid Al-Syariah* view (Noh & Bakar, 2020).

The issue of cryptocurrency, which is currently being used as a medium of exchange, is a meaningful discussion, especially for Muslims, who make up a large part of the world's population. In big countries like China and Russia, cryptocurrencies are banned for reasons such as security and risk. In Muslim countries, which apply Islamic teachings, the permissibility of cryptocurrencies needs to be studied from an Islamic perspective. So far, not a single Muslim country has allowed cryptocurrencies for legal transactions because it has speculative motives for profit. Another thing that needs to be clarified is supply quantity, online merchants, and stability because cryptocurrencies do not have flexible characteristics, so they cannot be intervened by the government (Siswantoro et al., 2020).

On the other hand, cryptocurrencies are based on a blockchain platform to process all financial transactions. This technology enables faster, cheaper, and more secure transaction processing compared to traditional transaction models. Since transactions use digital assets, these assets can be consumed and traded digitally through crypto service platforms for various financial transactions (Alam et al., 2019).

6. Conclusion

This study found the results of sentiment calculations for the Indonesian people to the development of cryptocurrency. The results show that Indonesians who belong to the Y and Z generation categories have a very good (high positive) sentiment of 0% and a good (positive) sentiment of 23%. In comparison, 28% bad sentiment (negative), very bad sentiment (high negative) 1%, and the rest have a neutral sentiment (neutral) 48%. These results indicate that Indonesian society, especially the Y and Z generations, still tends to negatively endorse cryptocurrency by showing a lack of interest in its development. They see that cryptocurrency is a new financial instrument with a considerable unsafe risk that refuses to use it.

It should be noted that the purpose of this study was to present an overview of the perceptions of the development of cryptocurrency among the people of Indonesia. Still, the limitations were only for the Y generation and generation Z with a limited one-year study time, 2021. Recommendations for academics were to continue to conduct related research on the theme of the development of cryptocurrency and how it impacts the financial sector, especially from the sharia side, and produces innovation that can increase public literacy. Furthermore, recommendations for the central bank as regulators need to pay more attention to the development of cryptocurrency and establish regulations to control their development in Indonesia.

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The Significance of Ijtihad in Takaful Business: Case Study in Malaysia

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Abstract

Takaful businesses have to be run according to Shariah. In takaful operations, many shariah issues have arisen based on operations, activities, products, investments, etc. In Malaysia, under the Islamic Financial Service Act (IFSA 2013), takaful operators are required to form a Shariah committee to advise and resolve these Shariah issues. This study will examine the significance of ijtihad that has been done by the Shariah Advisory Council (SAC) in solving the Shariah issues faced by the industry. The study is qualitative-based research that used various documents related to takaful business in Malaysia. The study results show that the ijtihad issued by SAC influences the takaful legal framework in Malaysia, particularly when it comes to shariah issues. Other countries could learn from this to implement Islamic law in legal and regulatory frameworks, especially in the Islamic finance industry.

Keywords: Takaful; Islamic Finance; Ijtihad; Malaysia

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1. Introduction

The Shariah Advisory Council of Bank Negara Malaysia (hereinafter referred to as "SAC") was established in May 1997 as Malaysia's highest Shariah authority for Islamic financial institutions. The Central Bank of Malaysia Act of 2009 (CBA 2009) reinforces the tasks and responsibilities of the SAC as the authority for determining Islamic law for the purposes of Islamic financial operations, which is under the Bank's supervision and regulation. The shariah rulings by the SAC function as the main reference for Islamic financial industry to ensure all the activities related with it are in line with shariah. According to the CBA 2009, any shariah-related issues that are brought up in court or during an arbitration shall be referred to the SAC for clarification and certainty.

Insurance is one of the most important tools for mitigating the risk of financial loss. However, due to the fact that insurance entails prohibited elements of *riba* (interest), *gharar* (uncertainty) and *maysir* (gambling), Muslims should avoid taking out insurance and should opt for takaful cover instead. On the other hand, takaful must also operate according to shariah. In

Malaysia, the requirement for a takaful operator to adhere to Shariah in all their activities—including product offerings, marketing, underwriting, investment, claims and actuarial valuation—has been emphasized through law in the Islamic Financial Services Act 2013 (hereinafter referred to as "IFSA 2013"), subsection 28 (1). Failure to comply with this legislation may result in a fine not exceeding RM25 million, imprisonment for up to eight years or both, as provided in subsection 28 (5) of the act.

Takaful operates quite different from conventional insurance, even though, in general, they both give assistance to members in the event of misfortune. Although the concept of takaful business is taken from the conventional insurance industry, its implementation must and should comply with Shariah. Nevertheless, there are universal concepts accepted by both conventional insurance and takaful, such as complete honesty or the concept of utmost good faith (Shariah Resolution in Islamic Finance, 2010–2012). Central Bank of Malaysia (hereinafter referred to as "BNM") has taken systematic steps to establish a legal structure to ensure that takaful practices are in accordance with Shariah principles. In order to strengthen Malaysia's financial environment, BNM has introduced laws and guidelines to promote the stability and growth of Islamic finance (Hamat & Ghazali, 2019).

Takaful operates in accordance with Islamic Shariah (Daghi, E. Q., 2006). Masud (2010) stated that the set of rules extracted from the Quran (The Holy book) and Sunnah (sayings and actions of Prophet Muhammad) is known as Shariah. The Shari'ah which provides the framework for a set of rules and laws to regulate business, determines whether a transaction or economic activity is permissible or not. In order to make it legal, Shari'ah requires that all transactions must be free from prohibited elements such as *riba* (interest), *gharar* (uncertainty), and *maysir* (gambling).

Furthermore, there is a dynamic secondary source of common law rulings and scholarly interpretations known as fatwa. Fatwa are the outcomes of how humans have interpreted the texts, principles or combination of the two. In practice, when applying shariah in the takaful industry, it requires *fiqh* to understand the *nusus* that can be found from the Quran and hadith (Yusof & Alias, 2008). *Fiqh* is needed as to determine on how this *nusus* should be applied in handling on such related operations. Based on the above introduction, does ijtihad contribute to the establishment of the rules and regulations governing takaful operations?

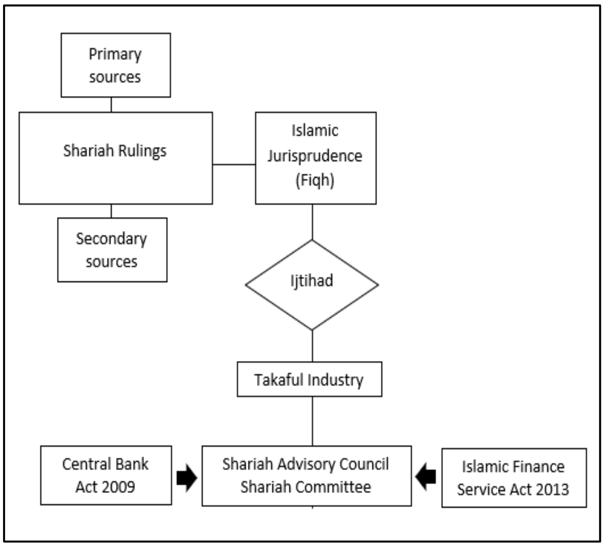

Figure 1: A Brief Overview of Islamic Jurisprudence in Takaful
Source: Constructed by researcher

Since the fundamental sources of Islamic law are general in nature, fresh issues that occur in the operation of takaful without previous rulings or specific texts must be handled through an ijtihad process. Ijtihad is an important continuous process in the history of Islamic law and is seen as an important weapon for Muslim society's survival (Man, 2014 & Hasan, 2003). Changes in financial legislation and industry standards may necessitate a re-evaluation of ijtihad in order to ensure that Islamic finance stays compliant with both Sharia principles and legal obligations. Despite the fact that ijtihad's concept has been covered in many studies, its vital role has not received as much attention. It is crucial to explain this since the ijtihad ruling also becomes a legally binding regulation. This study contributes to give understanding the significant of ijtihad in the establishment of governance, policies, and documentation in order to develop industry.

2. Literature review

In ancient Arab periods, takaful was found in the "*Aaqilah*" system, which involved mutual assistance. Takaful is an Islamic finance system where people collectively share financial losses, in accordance with Islamic principles promoting mutual support and risk-sharing (Khan et al., 2011). Takaful is an Islamic alternative to traditional insurance based on the Islamic principles of trusteeship, brotherhood, and cooperation. Takaful originally comes from the Arabic term *kafala*, which means "to guarantee." It~~'s~~ also refers to a party's agreement to indemnify another for a pre-agreed liability. Takaful is a shariah-compliant insurance product which differ concept from conventional insurance due to the presence element of usury (*riba'*), uncertainty (*gharar*) and gambling (*maysir*) that prohibited in Islam (Sharifuddin et al., 2016).

The incompatibility of conventional insurance with Shariah principles prompted Muslim scholars to recommend takaful as a Shariah-compliant substitute. Takaful is a scheme that provides disaster protection in the same way that traditional insurance does. In general, takaful is an extension of the concept of mutual assistance practised by Arabs (Haron and Wan-Azmi, 2009) and in this period, it has been grounded by the idea of *taawun* (mutual collaboration) and *tabarru'* (donation) (Billah, 2003, Lahsasna, 2016) and (Abdul Rahman and Redzuan, 2009). *Ta'awun* is defined as mutual protection and guarantee among participants (Borhan, & Saari, C., 2003). Meanwhile the term *tabarru'* refers to a mutual agreement among participants to contribute a certain amount of money to the fund that will provide financial assist to any participant who suffers a loss (Mohd Sadad, M., & Radiah, K., 2012).

In order to ensure that all takaful activities are in line with Shariah, SAC have been appointed as advisors to Islamic financial institutions (IFIs), as stated in IFSA 2013, section 30. SACs play an important role in advising IFIs to ensure that all activities comply with Shariah. BNM's new "Shariah Governance Policy 2019" requires a majority of at least five SAC members to be Shariah-qualified. At the national level, SAC for Bank Negara Malaysia (BNM)—Malaysia's central bank—was established as an advisor and reference point for all matters relating to Islamic financial as well as other matters requiring resolution in accordance with Islamic law.

Since the primary sources of Islamic law are general in nature, new issues that arise in the operation of Islamic insurance without previous rulings or explicit texts must be addressed through a process of ijtihad (Weiss, 1978). According to Imam Ghazali (2005), ijtihad means to maximise one's capacity in a specific matter. Ijtihad is defined as the whole amount of effort expended in obtaining a legal opinion. It also means striving to the utmost to extract the law from the texts using all valid interpretation methods (Nyazee, 2002). Ijtihad can be defined as the creative and comprehensive intellectual effort to derive legal rulings on specific issues from the sources of Shariah in the context of the prevailing circumstances of Muslim society.

Ijtihad in modern Islamic finance is the result of the intellectual endeavours of Shariah scholars to legally apply Islamic economic principles in the context of an evolving banking and financial system (Jobst, 2007). Addition, Rafikov & Akhmetova (2020) insisted that, a combination of experts in various fields is essential to help produce effective ijtihad and appropriate to the current situation. Monodisciplinary approaches tend to misrepresent the realities of this complicated life and, as a result, offer answers that lead to crisis. This corresponds with a depiction articulated by Hassan A. (2003), in order to ensure that ijtihad is conducted properly, it must be done by someone with knowledge relevant to the issue at hand.

Foster (2007) observation on the ongoing ijtihad debate highlights the need for continuous interpretation of Islamic law to maintain financial flexibility within Islamic financial principles. Failure to incorporate Ijtihad in Islamic finance may risk the misapplication of the law and the adoption of rigid interpretations, as warned by Codd in 1999. This, in turn, could impede the legal system's ability to effectively address modern challenges. Therefore, efficacy and inadequate performance should not be present in the ijtihad process because they can lead to unethical behaviour and then affect the status of shariah compliance (Ahmed, 2015). This means ijtihad cannot be practised arbitrarily until undermine its authenticity (Abd-Allah, 2006). It contradicts with the practice of ijtihad in earlier times (Najmaldeen, 2014).

Ijtihad in Islamic finance can potentially deviate from the proper tools of ijtihad (Abozaid, 2016). Therefore, there have been calls for standardisation of Islamic legal principles and structures in order to avert this deviation. Standardization of regulations and regulatory in takaful can provide clear and consistent guidelines. This can help to eliminate ambiguity and assure Sharia conformity. According to Bakar (2002), standardization is not a bad thing as long as it does not limit the diversity of opinions that exist in the practice of ijtihad. However, concerns about ijtihad's flexibility are often raised (Ahmed, 2015) and scholars may be less motivated to engage in future ijtihad. A flexible codification system in Islamic financial law will be able to provide a great and much-needed solution in the balance of ijtihad in Islamic finance (McMillen, 2011). Although ijtihad is certainly designed to be flexible and adaptable, its practical application may differ once it has been incorporated into a legally binding legal system and can make it challenging to enforce rigid standards on ijtihad.

This study aims to highlight the significance of ijtihad in Malaysia's legislation regarding the takaful business. In Malaysia, the takaful regulatory framework has been provided by BNM with full guidance and explanations for practices in the takaful industry. Furthermore, the existence of acts, policy documents and guidelines regulating businesses and financial activities in Malaysia give comfort and safety to the community to conduct business activities in full certainty. While this law is man-made,

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it can be used as current *uruf* since it protects the community's interests and can prevent potential drawback (Ahmad Sufyan & Ab Mumin, 2008), such as fraud, leakage of funds and tyranny. As long as this law does not conflict with Shariah, then this legislation must be followed to safeguard the welfare of society. To the authors' best knowledge, there are limited studies in Malaysia that discuss about the embedding of the ijtihad made by the SAC into legal documents. Despite opposing viewpoints on the ijtihad practises, it is a crucial instrument nowadays. This study is expected to fill a gap in ijtihad literature and provide insight into how ijtihad affects the takaful legal system when it comes to shariah-related issues.

3. Methodology

This paper focuses significant on qualitative research method in discussing the of ijtihad in shaping the takaful framework in Malaysia by using library research approach. To be more specific, this study used a two-stage procedure to investigate ijtihad and its relationship to Malaysia's takaful framework. Data collecting is a process that involves the design and execution of data collection strategies to obtain information about the subject being researched (Idris Awang, 2001).

Firstly, in data collection, the literature on ijtihad and takaful are obtained from secondary data that included academic journals, books, conference papers and other periodicals documents. Almost the entire study employs this method to collect data on the notion of ijtihad, the history of takaful, Islamic finance issues, a collection of Islamic financial shariah resolutions, acts, policy documents, and so on. Secondly, in term of data analysing, the method utilised to analyse this research is content analysis. According to Bryman (2012), documentation analysis is the most used qualitative methodology. This research analyse document related to takaful industry such as Risk-Based Capital Framework for Takaful Operator, Takaful Operations Framework, Shariah Governance Framework 2019, Investment-Linked Business Guidelines, New Product Introduction, Operational Risk, Islamic Financial Service Act 2013 and others related documents.

This study aims to investigate the shaping direction of ijtihad in takaful industry. Once data was gathered from documents pertaining to the takaful industry, a thorough analysis has been conducted to determine the relevance of ijtihad and the governance documents issued by BNM. This study is significant for giving an overview and insight into how ijtihad can affect regulations, particularly in the takaful industry.

4. Regulatory Framework for Takaful Business Malaysia

The takaful industry in Malaysia started with the enactment of the *Takaful Act 1984*. This act was the reference for the industry for nearly 29 years before being revised in 2013, when it and the *Islamic Bank Act 1983* were consolidated to become the *Islamic Financial Service Act 2013*. IFSA 2013 was enacted to regulate and supervise IFIs, payment systems and other related entities, as well as overseeing the Islamic money and foreign exchange markets (Mat Zain et al., 2020). In general, there are more than 70 policy documents in regulations related to the takaful industry. It can be classified as in Figure 2. However, the researcher will explain a number of policy documents in this section.

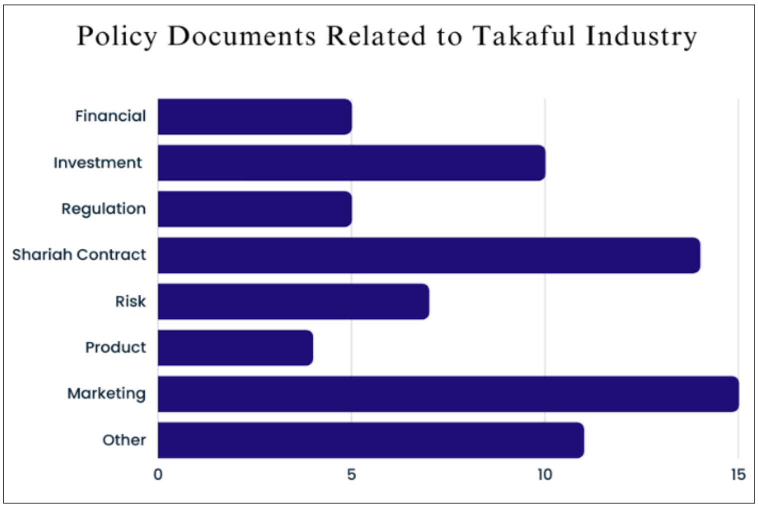

Figure 2: Number of Policy Documents Related to Takaful Industry in Malaysia
Source: Central Bank of Malaysia

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BNM issued comprehensive guidelines to improve the standard of Shariah governance in 2010, the "Shariah Governance Framework for Islamic Financial Institutions". This framework specifically requires IFIs to ensure the effectiveness of their Shariah governance processes in their operations, arrangements and business activities (Arif & Markom, 2017). It was revised in 2017 to increase the efficiency of Shariah governance for IFIs due to the increasing complexity of Islamic financial business by developing new policies on governance, compliance and risk management. In 2019, the revised version of the Shariah Governance Framework was published by BNM: the "Shariah Governance Policy 2019." This policy document is particularly focused on strengthening the roles and responsibilities of the SAC and other units involved in compliance with Shariah governance policy.

In ensuring the efficiency of takaful businesses in Malaysia, BNM also issued the "Takaful Operational Framework" (TOF) as a guideline for *t*akaful operators, especially for managing takaful funds and shareholders' funds. The requirements in this policy document were developed in accordance with IFSA 2013, whereby a takaful operator acts as the manager and administrator of takaful funds on behalf of participants. TOF basically provides a guideline for takaful operators for establishing and maintaining takaful funds, product structuring, underwriting takaful risks, re-takaful, investment, payment and charges on surrender of a takaful certificate, claims management, remuneration for the management of takaful funds, management of operating costs, management of surplus in the participants' risk fund, and deficiency and loss rectification.

For new product offerings by takaful operators, BNM also provides the guideline "Introduction of New Product". This policy document sets out the applicable regulatory procedures for the management and control of risk related to the development, offering and marketing of new financial products and services by financial institutions. It also addresses financial institutions' responsibilities to consumers to ensure that products offered or recommended are acceptable, and that consumers are clearly and fully informed of the nature and risks associated with these products. More specifically, this policy covers product risk management, business conduct requirements, reporting requirements and supervisory and administrative actions.

BNM also issued "Operational Risk" as a guideline for strengthening governance, frameworks and processes in managing risks in financial institutions. It emphasizes the effectiveness of coordinating the management of operational risk with that of other risks to provide a comprehensive and integrated approach to a financial institution's overall risk management strategy. This policy document also addresses the need for greater scrutiny /oversight of larger and more complex institutions due to the higher inherent operational risks they face and the potential dilution of operational risk issues at the level of the board and senior management.

To ensure that the capital adequacy of takaful operators is commensurate with their risk profile, BNM issued a "Risk-Based Capital Framework for Takaful Operators". A primary consideration in this framework's development was the fiduciary duties of the takaful operator to the participants to ensure the appropriate management of the takaful funds and overall takaful business operations, in line with Shariah. The objectives of this framework are the fulfilment of all obligations under a takaful contract, providing flexibility to the takaful operator to operate at different risk levels in line with their business strategies, and ensuring the development of a strong takaful industry that promotes public confidence and contributes to the overall stability of the financial system.

Due to the uniqueness of investment-linked takaful certificates, BNM introduced "Investment-Linked Business". The principal objective of this policy document is to ensure that consumers are given fair treatment by licensed persons in preserving the value of consumers' investment-linked policy/takaful certificates. Accordingly, it sets out requirements for licensed persons to promote and maintain a high level of corporate governance and professionalism in the management of investment-linked businesses, ensure that the sales and marketing of investment-linked policies/takaful certificates are done professionally and properly, and enhance product transparency and disclosure to protect the interests of policy holders/takaful participants. To achieve these objectives, this policy document sets out requirements for approving operating an investment-linked business, the management of investment-linked funds, product design, fees, charges and expenses, disclosure, investment, and the valuation of asset and liabilities of investment-linked funds.

In addition, the growth of the takaful industry in Malaysia led to the establishment of the SAC, as Malaysia's top authority on matters of shariah relating to Islamic finance. The SAC has been mandated with determining Shariah compliance in areas like Islamic banking, Takaful, Islamic financial business, and any other businesses that are based on shariah principles. As the reference body and advisor to Bank Negara Malaysia on shariah matters, SAC is also responsible for validating all Islamic banking and takaful products to ensure their compatibility with shariah principles. The authority of SAC is also established by IFSA 2013, which empowers BNM to determine its position on shariah matters; the bank may follow the decisions of its SAC in respect of businesses, affairs or activities which require shariah rulings.

BNM is authorized to establish shariah-related standards based on SAC decisions or rulings. This describes the ijtihad performed by SAC will be incorporated into the standards. The IFSA 2013 emphasized the Central Bank's power to prescribe shariah standards under section 29, which states as follows:

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29. (1) The Bank may, in accordance with the advice or ruling of the Shariah Advisory Council, specify standards—
(a) on Shariah matters in respect of the carrying on of business, affair or activity by an institution which requires the ascertainment of Islamic law by the Shariah Advisory Council; and
(b) to give effect to the advice or rulings of the Shariah Advisory Council.

This means Islamic financial institutions must adhere to shariah standards established by the Central Bank in accordance with the SAC's advice. The standards issued by BNM on Shariah compliance, as specified in subsections 29(1), shall always be followed by every takaful company, its director, chief executive officer, senior officer, or member of its shariah committee (Rusni & Safinar, 2017). All parties must at all times follow the institution's internal policies and procedures in order to implement the standards specified by BNM in subsection 29(1). If ~~fails~~ to comply with any shariah-related standards established by BNM, may be imprisoned for not more than eight years, fined RM 25 million, or both as stipulated in subsection 29(6).

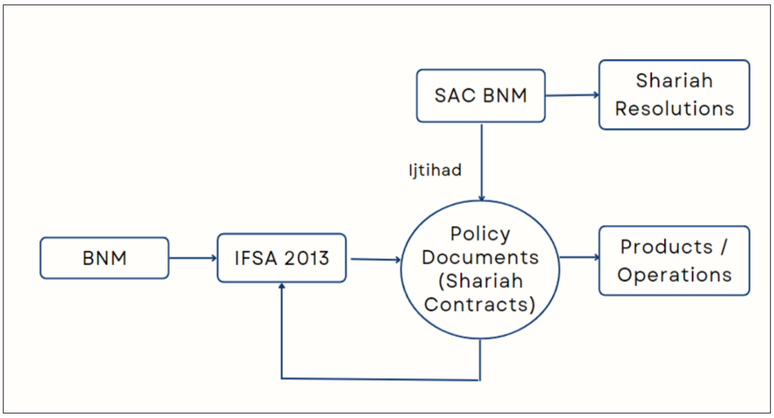

Figure 3: Policy Document Binds All Industry Players in the Application of Shariah Contracts in the Product
Source: Constructed by researcher.

BNM issued 14 policy documents on shariah contracts (Table 1) and these policy documents ~~binds~~ industry participants to execute this contract in their products and operations. The operation of the takaful industry is based on shariah contracts such as *wakalah* (guarantee), *qard* (loan), *mudharabah* (profit sharing), *hibah* (gift), etc.; it must comply with all the structure and not violate shariah criteria as specified in these policy documents. When a problem arises, the SAC needs to do ijtihad, they should first resort to these documents.

No.	Shariah Contract
1.	Tawarruq (Monetization)
2.	Rahn (Pledge)
3.	Qard (Loan)
4.	Bai' al-Sarf (Currency Exchange)
5.	Ijarah (Lease)
6.	Kafalah (Guarantee)
7.	Wa'd (Promise)
8.	Hibah (Gift)
9.	Wadi'ah (Safe-keeping)
10.	Wakalah (Agency)
11.	Istisna' (Manufacturing sale)
12	Mudharabah (Profit sharing)
13.	Musyarakah (Profit and loss sharing)
14.	Murabahah (Mark-up sale)

Table 1: Policy Documents of Shariah Contract
Source: Central Bank of Malaysia

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For example, in a bid to ensure the credibility and ethical foundation of Islamic financial products and services, BNM issued the "*hibah*" policy document. This document serves as a comprehensive guide for takaful operators, outlining the Shariah rulings and operational criteria essential for the implementation of *hibah* within the framework of takaful practice. To achieve these goals, this policy document provides shariah requirements, operational requirements, the arrangement of *hibah* with other shariah contracts and also outlines the responsibilities of the board of directors, shariah committee and senior management in overseeing and ensuring that this policy is adhered to by all parties. The set requirements within this policy document are in accordance with IFSA 2013 Section 29(1), as highlighted in the policy itself:

The requirements in Part B of this policy document are specified pursuant to–
(a) section 29(1) of the IFSA;

Likewise, other policy documents *Qard*, *Wakalah*, *Mudharabah*, etc also fulfil requirement in the IFSA 2013. Therefore, the SAC must give priority to what is stated in this policy document when there are diverse viewpoints on a subject. If the information in the policy document is unclear or incapable of providing a legal decision, they will do ijtihad. It is important to emphasize that the SAC's ijtihad remains their primary point of reference and it has been embedded in takaful business's regulation in Malaysia.

5. Discussion

BNM has published the Takaful Operational Framework (TOF) guideline, which has a specific role in the management, determination and distribution of surplus. According to the TOF, takaful operators are required to have their own internal policies for surplus management with the consent of the SAC and their respective board members. This policy must comply with Shariah principles and it should include the conditions respecting the use of surplus and its distribution to eligible recipients, as well as the level of surplus that must be maintained to protect takaful funds for future use. Accordingly, at its 42nd meeting (25 March 2004) and 59th meeting (25 May 2006), SAC decided that the distribution of surplus to participants and takaful operators is permissible. For takaful operators using the *wakalah* model, surplus distribution to takaful operators is considered a performance fee for the efforts of takaful operators in managing takaful funds. For takaful operators who use the *mudarabah* model, surplus distribution is given according to the agreed partnership ratio between participants and takaful operators (BNM, 2010).

There is also a description of re-takaful in the TOF. A licensed takaful operator must not cede risks to an insurer or reinsurer except under unavoidable circumstances, as per applicable rulings by SAC BNM. The legal provisions on re-takaful were discussed at its 47th meeting (14 February 2005), which decided that takaful operators should not cede risks to insurance or reinsurance companies where avoidable, unless there is no existing takaful or re-takaful operator that will accept a particular risk, or there is no existing such operator with the capacity or expertise to accept a particular risk.

Section 95 of IFSA 2013 specifies that a licensed takaful operator shall provide *al-qard* or other financial support to the takaful fund in the event of a shortfall in the takaful fund. Based on the decisions at its 38th, 46th and 62nd meetings held in 2006, the SAC determined the mechanism to be implemented: the provision of *al-qard* to meet the liability requirements of the fund in case of a shortage of assets in the participant risk fund. This indirectly demonstrates that decisions by SAC BNM have legal authority under Section 95, IFSA 2013. Therefore, the practice of *al-qard* contracts or the provision of assets from shareholders' funds should occur in the event of a shortage of funds.

In addition, the implementation of insurable interests was certified by SAC at its 52nd (2 August 2005), 76th (9 June 2008) and 118th (29 November 2011) meetings with the provision that the insurable interest protected should exist when the contract commences and when the benefit claim of the takaful is made. The existence of this protective interest is the main condition in the implementation of the payment of takaful benefits. This Shariah resolution should be accepted as a form of ijtihad and recognized as Shariah-compliant and in line with the provisions of IFSA 2013. Therefore, if takaful participants in family takaful contracts that do not have a protective interest against the person covered while the contract is sealed, then the contract is invalid.

Table 9, IFSA 2013 provides for disclosure obligations in takaful contracts to prevent any manipulation of the takaful contract or moral risk. Accordingly, participants are required to perform pre-contract disclosure and representations to takaful operators starting from the application process, claiming takaful benefits, after the contract is made, and modifying and renewing the takaful contract. In fact, the 25th SAC meeting (2 August 2005) also allowed the obligation to disclose this information to apply in the takaful industry. IFSA 2013 has divided the takaful contract into two types: consumer contracts and contracts other than consumer contracts. For consumer takaful contracts, participants must answer questions submitted by the takaful operator; for takaful contracts other than consumer contracts, participants must disclose information they know and expect that this information will affect the decision of the takaful operator as to whether to accept the risk or not, as well as its rates and terms. In addition, participants must also take reasonable care to not make an incorrect statement to a takaful operator

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when answering the questions. To ensure that takaful operators and participants carry out their responsibilities according to the principle of "full trust", the SAC at its 122nd meeting (27 March 2012) decided a number of conditions: takaful operators should ask specific questions relevant to the underwriting decision and participants should also take reasonable steps by not falsely answering questions asked by takaful operators.

Table 10 of IFSA 2013 provides for the payment of takaful benefits under certificates of family and personal accident cover. Takaful benefits will be given to individuals named as beneficiaries through conditional *hibah* upon the death of the takaful participant. In this situation, the benefits of takaful should not go to the estate of the deceased participant and not be subject to his debts. The practice of conditional *hibah* and paying takaful benefits was discussed by BNM SAC at its 34th (21 April 2003) and 52nd (2nd August 2005) meetings, then gazetted under the provisions of IFSA 2013.

In addition, SAC's 102nd meeting (22 June 2010) decided that payment of the surrender value from the participant risk fund is allowable and does not contradict the concept of *tabarru`*. The TOF clearly provides for payment and charges upon surrender of a takaful certificate. A licensed takaful operator must ensure that the amount payable to takaful participants upon surrender is made from the appropriate funds, they must determine the value of the surrender, including the expense of any applicable surrender fee, in a manner consistent with the equal treatment of the participants and in compliance with actuarial standards.

Section 91 of IFSA 2013 obliges the separation of the takaful and shareholders' funds. This separation should also be divided according to the type of takaful contract, such as family, general and investment-linked takaful. Based on section 92 of IFSA 2013, all takaful funds received should be managed and maintained by the takaful operator. SAC, at its 62nd meeting (4 October 2006), suggested that separating takaful funds by the types of takaful business and investment purpose is allowed. This is one of the efforts towards improving the efficiency of fund governance and safeguarding the rights of the parties involved.

Pursuant to section 204, IFSA 2013, the Companies Act 1965 (CA 1965) applies to the winding up of takaful operators. In this event, the termination of takaful certificates will cease from the date of winding up. Participants are entitled to claim as debts payable, depending on the types of takaful certificates, if the certificate is terminated. SAC referred the order of priority for claims on takaful and shareholders' funds. At its 75th (23 April 2008) and 114th (28 July 2011) meetings, SAC suggested the order of priority for the sequence of the fund. IFSA 2013 lists matters relating to this sequence, which are also defined in CA 1965. In the case of the shareholder fund series, SAC proposed that preferential debt—under section 292(1) of CA 1965—and debt to the government—under section 10 of the Government Proceedings Act 1956—be given priority.

No	Issues	BNM SAC Shariah Resolution in Islamic Finance	Statutes and Policy Documents
1.	Management of surplus	42nd meeting (25 March 2004) 59th meeting (25 May 2006)	TOF
2.	Re-takaful	47th meeting (14 February 2005) 113th meeting (23 June 2011) 114th meeting (28 July 2011).	TOF
3.	Deficiency of takaful funds (*qard*)	38th, 46th and 62nd meetings (2006)	*IFSA 2013*, section 95, TOF 19.1
4.	Surrender of takaful certificate	102nd meeting (22 June 2010)	TOF (14), *IFSA 2013,* schedule 8, section 140
5.	Separate funds in takaful industry	62nd meeting (4 October 2006).	*IFSA 2013*, section 91
6.	Permissible takaful interest	52nd meeting (2 August 2005) 76th meeting (9 June 2008) 118th meeting (29 November 2011)	*IFSA 2013*, schedule 8, section 140.
7.	Disclosure requirement	25th meeting (2 August 2005) 122nd meeting (27 March 2012)	*IFSA 2013*, schedule 9, section 141, part 2
8.	Nomination and payment of takaful benefit (conditional *hibah*)	34th meeting (21 April 2003) 52nd meeting (2nd August 2005)	*IFSA 2013*, schedule 10
9.	Winding up	75th meeting (23rd April 2008) 114th meeting (28 July 2011)	*IFSA 2013*, division 3, section 204.

Table 2: Mapping of Shariah Issues with Islamic Resolutions, Statutes and Policy Documents
Source: Researcher analysis

BNM as a body of authority strives to ensure the stability and development of the takaful industry by providing rules to regulate its operations in accordance with the method of *fiqh* which is “Acts of those with authority over people must take their interests into account”. It refers to the responsibility of the leader to ensure that administration and governance meet the interests of the community, where legislation is developed to benefit the people. This is because Shariah is established based on *maslahah* and rejects harm in this world and hereafter. The approach taken by BNM’s governance, in issuing various laws and guidelines, is to safeguard the welfare of the people and avoid harm. In addition, it can also ensure that the affairs of community life are guaranteed to be efficiently based on Islamic law through the standards and rules it sets.

Similarly, the legal maxim "Averting harm takes precedence over achieving benefit" means that avoiding harm is prioritized over gaining benefit. This legal maxim explains government efforts to determine the necessary legislation that emphasizes the damage or *mafsadah* that will occur against something which could cause great problems compared to the benefits that will be achieved. Thus, priority should be given when refusing something bad is greater than the benefits that may accrue. For example, guidelines for investing in the takaful industry have been introduced to avoid institutions conducting investment activities that may violate the law of Islamic transactions. This demonstrates that the act of referring to the legal framework in the process of ijtihad is important for safeguarding the interests of all parties in accordance with human life and amidst constant change.

As mention before, IFSA was introduced in 2013 and the SAC's discussion of the above matters was done before that. In the table above, there is some ijtihad in the legal framework for the takaful sector which is used as a guideline to be implemented in the takaful industry. This means SAC'S ijtihad have been coded in this legal framework and show that Shariah compliance and governance in the takaful industry is given recognition and authority in legislation and civil law in Malaysia. It also demonstrates that the results of ijtihad in the takaful industry have influenced the framework of financial law in Malaysia. This can be seen by the promulgation of the legal framework and statutes which have provided full clarification and guidance for practice in the takaful industry in line with existing Shariah resolutions.

6. Conclusion

Ijtihad plays a role in establishing of rules and regulations for the takaful businesses. These regulations have given takaful businesses a structure for carrying out Sharia-compliant business practices. The purpose of this study is to examine the significance of ijtihad in Malaysian takaful businesses. Based on current government legislation, it emphasises compliance with Islamic law in the implementation of takaful businesses, ensuring that the legislation is more systematic and aligned with the Islamic financial system practiced in Malaysia. Administrative and management matters should be guided by Islamic texts and the proper process of ijtihad.

The findings of this study point in the direction of investigating ways to develop takaful business to be more competitive with implementation of law that are compliant with Islamic principles. Generally, shariah has been included into the takaful law through ijtihad, and these regulations contain some ijtihad that are used as guidelines for the takaful industry. Ijtihad which has been codified in the legal framework, demonstrates that Shariah compliance and governance in the takaful industry are given recognition and authority in Malaysian legislation and civil law. This can be observed from the legislation that has been enacted, which was fully clarified and even provided guidelines for practice in the takaful industry in accordance with the ijtihad conducted by SAC.

The paper also records the following results:

- Ijtihad that has been incorporated into takaful business regulation assists in creating a structured framework for scholars to interpret Islamic law while adhering to certain guidelines.
- Legal decisions related to religious matters must be addressed by experts. Therefore, in this case the Malaysian Islamic financial law system applies the legal ruling that resulted from ijtihad scholars.
- Codification of Islamic law is required to achieve uniformity. In fact, it upholds essential elements of legality like providing notice of what is prohibited and establishing uniformity to address the similar issues.
- Laws and regulations should refer to current reality and needs in accordance with the concept of ijtihad which is flexible (*murunah*) and practical. It allows that legal decisions may change according to circumstances and the changing *maslahah* of society throughout the ages.

Finally, this study can contribute to future studies as new knowledge about the significance of ijtihad which has been embedded in takaful business's regulation in Malaysia. Furthermore, the existence of such a legal framework related to Islamic finance demonstrates the proactive nature of BNM in developing Malaysia’s legal framework in line with shariah.

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Insolvency and bankruptcy based on Islamic principles within China – a data-driven analysis and framework

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Abstract

Islamic bankruptcy law and finance have taken on a growing role in modern economies, with several governments aiming to align the economic system with Islamic principles and solve some of the shortcomings of existing financial regulations related to bankruptcies. Within the last 40 years, China has become a major economy with significant development of its legal system. With the increasing growth and engagement with the Muslim world, challenges have arisen with speculative business practices and rising defaults. Furthermore, the growing engagement with Muslim countries has fostered a growing focus on providing Shariah-compliant legal frameworks to encourage trade and ensure the protection of corporations. Insolvencies and bankruptcies are natural in an economy. However, Islam emphasizes the importance of there being no distinction between balance sheet insolvency and cashflow insolvency, as well as the importance of personal responsibility for the debts incurred. The article has presented a solid outline of the Islamic and Chinese bankruptcy laws and how Islamic principles can be integrated into the Chinese legal system. The arising system in the form of either a separate legal system or one integrating these principles into the existing bankruptcy regulations can significantly strengthen debtor responsibility and recovery rates and encourage fairer business practices.

Keywords: Bankruptcy law; Islamic Law; Chinese Bankruptcy law; data-driven analysis; bankruptcy framework

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1. Introduction

Insolvencies and bankruptcies are a natural part of any economy, ensuring that resources are best utilized and that businesses in distress or those not viable have an exit strategy.

Bankruptcy and insolvency in Islamic law are well covered. The Arabic word *Iflas* refers to bankruptcy and covers both balance sheet insolvency in addition to income and cashflow statement insolvency. In the case of a balance sheet insolvency, the entity's assets are less than its liabilities. Given the equality of the asset side and the liabilities and stockholder equity, this implies that the stockholder equity has to be negative (Jan, et al., 2019). The income statement or cashflow insolvency is when the entity does not have sufficient liquidity or monetizable assets to cover the debt that comes due. The associated Arabic word *muflis* refers to a bankrupt entity irrespective of whether it refers to a male or female person or an enterprise. The challenge is that once one becomes a *muflis*, then one either has to fully repay all the debts that are unforgiven or face death.

The main text relating to bankruptcy is the Quranic verse 2:280, which emphasizes that for any person in distress, there should be respite until the person recovers. Furthermore, it emphasizes that one should not boast about forgiving debt but rather see it as a sign of gratitude. This puts social responsibility and charity at the heart of Islamic law, but given that it is solely a recommendation, it has to be seen in the light of other Quranic verses that compel Muslims to repay debts. Not repaying makes this a sin and not just a legal obligation (Ismal, 2012).

This implies that both creditors and debtors are compelled to be honest, ensure fairness, and fulfil their contracts. The prophet emphasized that without a just cause, delaying the payment of a debt or an obligation is unjust. Debt is frowned upon for Muslims based on ethical and moral perceptions. Specifically, there have been comments by the prophet that emphasized that one's soul will be suspended with debt and freed only upon the repayment of all debt (Jan, Marimuthu, Shad, Zahid, & Jan, 2019).

2. Literature Review

Islamic bankruptcy law and Islamic financial law are closely related. These two are connected in terms of economic equality and social responsibility. This means that the scriptures mandating Muslims to do charity immediately follow the ones declaring that all types of riba are prohibited. A strong heavenly need to be benevolent and compassionate is intertwined with lending and repaying. Additionally, the fixed idea that money is only a medium of trade and a storage method with no inherent worth affects both ideas (Kilborn, 2011).

This implies the consistent insurance of fair treatment and the punishment of economic hardship caused the inability of a debtor to fulfil their obligations. Another key part is that Islamic law does not equate to the discharge of debts within Islamic rule. The main reason for this is that Muslims are supposed to fulfil their obligations and promises and should not rely on charity or the benevolence of others unless necessary. Furthermore, this aligns with the lack of interest in money or the increase in debt over time, so the debtor may have sufficient time to settle their debt. This implies that the amount of debt, in both real and economic terms, goes down over time, requiring an individual to pay back the debt at any time in one's life. This requires Muslims to fulfil their promises and obligations to God and man (Devi & Firmansyah, 2018).

This suggests that Islamic law's core normative principles—no discharge and societal responsibility—are crucial to its application. The primary distinctions are entity shielding, the time and risk worth of money, and intangible and non-possessive assets and rights.

When looking at the time value of money, this is commonly measured via the inflation rate, which indicates the opportunity cost of having control over and the use of the money within the specified period. On the other hand, the risk value is considerably more complex, consisting of the risk of not being paid back and not being paid for circumstances outside the scope for which it was provided. The latter risk is not considered in Islamic law, given that money may be quantified as either a commodity or be regarded as a universal unit of exchange.

A critical part of Shariah law is that no value is attached to the ability to utilize money. Riba states that being paid back the nominal amount is unethical and sinful. The main difference is that in Islamic finance, the time value of tangible assets is different from that related to inflation alone and consists of the asset's market value. For example, precious metals as commodities are permitted to increase in value. This supports the harmonization of repayment obligations and bankruptcy requirements (Ata, 2019).

Another key aspect is that in Islamic law, the charging of interest on money is rejected. However, entity shielding and forms of limited liability partnerships have never been incorporated into Shariah law and corporate forms never developed in Islamic law. Personal and economic activities must be conducted via direct proprietary ownership or one of the nominated forms of partnership.

Non-possession liens and security interests were not included in classical Islamic law. Property rights are restricted, and personal possessory liens are only recognized in common contexts. There is an exception, which concentrates on the ability to demand the seller recover items that a debtor was never given on credit for or that were not paid for (Jan, Marimuthu, bin Mohd, Isa, & Shad, 2019).

Notably, numerous Roman rules, which did not appear in English common law until the 15th century, were integrated into Shariah law. The usufruct of real estate and leaseholds (Ijara) was recognized by Shariah law, and shared ownership through a partnership was allowed.

Individuals who have more debt than assets or whose current expenses are more than their current incomes are referred to be muflis. This suggests that there is no difference between insolvency on the balance sheet and insolvency on the liquidity front. The temporal value of money and intangible assets are not considered in sharia law because it is assumed that tangible goods may be sold easily. This suggests that there is no need to differentiate between an asset and cash flow shortages since the debtor's assets may be utilized to pay off the obligations.

This suggests that when a debtor defaults after the creditor requests payment of the obligation, the debtor becomes a muflis. Islamic law grants both men and women the complete legal power to enter into contracts, possess property, generate money, and inherit, hence the rules are the same for both sexes. Businesses are subject to the same rules, and there is no difference between company and individual bankruptcy. Given that Islamic law did not create the idea of limited liability companies, the majority of economic interactions were in the form of partnerships and joint ventures (Awad & Michael, 2010; Hermawan, Sari, Biduri, Rahayu, & Rahayu, 2023).

This suggests that an organization's liabilities are the debts of each owner or partner in a partnership. One must distinguish between the various kinds of partnership structures to address this further. The most typical type is an inan partnership, a restricted investment vehicle with restrictions on the project's scope and lifespan. This suggests that the sum each partner contributes to the partnership is a component of the partnership's assets. The partnership does not own any of the other properties. The partners are each personally responsible to third parties but are not each other's guarantors. It follows that the third party must request payment directly from the partner with whom they have negotiated. After paying the claim, the partner is then permitted to ask the other partner for contributions (Graham, 2011).

No debt that exceeds the agreed-upon assets of the partnership may be assumed by the partners. The other partner is not responsible for anything beyond the initially agreed-upon contribution to the partnership fund if one of the partners incurs one of these debts without permission. If the partnership becomes liable for debt above its assets due to unforeseen circumstances (such as a partner's death), and none of the partners have voluntarily taken on the excess obligations or debt, then the other partners will be responsible for making up the shortfall by their interests in the partnership. Although it is possible to distribute earnings excessively, liabilities cannot be treated in the same way (Islam, Semeen, & Farah, 2013; Serra, Lemos, & Matins, 2021).

Another sort of partnership is a mufawada partnership, in which the parties to the agency contract operate as one another's and the guarantors' agents. The capital investment and profit-sharing responsibilities of each partner must be distributed equally. Any liabilities not met by the mufawada assets are jointly and severally accountable by all of them (Awad & Michael, 2010).

Similar to earlier, if an obligation requires one of the partners to contribute more than their personal investment in the mufawada assets, they can ask the other partners for repayment. The other partners are not responsible for unlawful behavior, theft, or any other duties that are solely personal or not related to the partnership. Marriage, divorce, and exclusively personal assurances for other parties can all result in these duties.

One of the most significant partnerships where one partner may only provide finance and other resources is the Mudaraba partnership. There are no constraints on the type of funding used; the mudarba was first intended to support caravans and marine trade. The Mudaraba structure is meant to restrict the investors' responsibility to their initial investment. In the traditional mudaraba, the mudarib (manager) accepts the rabb al-mal's (investor's) cash under the terms of the contract and distributes a portion of the earnings to them for the mudarib's services. The contract specifies the percentage of share (Kilborn, 2011).

The mudaraba differs from a limited partnership in that the investor maintains technical administration while maintaining legal ownership of their contributed funds. This develops a concept in Shariah law that differs in that the asset's owner is not a buyer, lessee, or agent. This suggests that the investor is solely responsible for any losses. However, personality liability is conceivable if the management goes beyond their scope of responsibility. Credit may be used up to the stipulated capital; any additional credit acquisitions require specific authorization. If not, they risk being held personally accountable.

All relationships must end at the partner's will, death, insanity, or destruction of the capital to be considered valid under Islamic law. A mufawada relationship is also dissolved if the partners sense an imbalance in their respective financial interests, such as when one spouse contributes more to the repayment of debts than the other. Additionally, receiving property as part of the partnership as a gift or inheritance might lead to an imbalance. Additionally, if one partner falls bankrupt, the other partners' assets cannot be managed or sold, which might endanger the partnership. As a result, the requirements for insolvency for a person are identical to those that apply to partnerships (Steele, et al., 2018).

According to Islamic law, bankruptcy procedures are started by the creditor who asks the judge to order encumbering or distaining the debtor. The creditor is responsible for providing documentation of the debt and its due date. If the court finds enough assets to cover the obligation, she or he will order that the payments be made without infringing on the debtor's rights. However, if the debtor must be restrained while the court examines the debtor's solvency, the debtor's assets will essentially be frozen until the court issues another order. Distraint orders are quick preliminary injections that prevent debtors from controlling, selling, or encumbering assets.

The creditors' rights are connected to the debtor's property, and the debtor is not allowed to sell or manage the property, two of the four legal repercussions that follow the distraint order. Additionally, the creditor is entitled to more money than the other creditors, and the debtor's assets are sold to pay off the obligations (Jan, Marimuthu, Shad, Zahid, & Jan, 2019).

The creditors' rights are attached to the property, which provides the legal authority for the distraint order. This implies that the person in distraining is regarded as like a minor, insane or incapacitated person. The court then appoints a person of trust (rajul thiqah) to deal with the assets and the business affairs of the bankrupt entity. This then will wind down the affairs of the debtor, gather and value all the assets and then liquidate the assets.

If the other debts of the debtor are not due, then the distraint order will not accelerate the due date of the debt. This is based on the argument that the debtor is entitled to additional time to satisfy the debt at the due date. If it is not due, then no inclusion in the bankruptcy proceedings is warranted.

The liquidation is happening in an auction-like setting to ensure that the highest price is realized. Similarly, the rajul thiqah is appointed to take responsibility for the fulfilment of open contracts and the operation of the business as long as the creditors agree.

When it comes to the rights of the creditors, the creditors and debtor have the option to settle the debt. This leads to the withdrawal of the request for the distraint of the debtor. This enables both the debtor and creditor to enter negotiations and settle the respective claim. Such a settlement resolves any disputes and leads to an end of the litigation. Generally, settlements are highly recommended in Islamic law given the strong focus on social harmony. The settlements can be divided into two separate ones. The first type is the settlement where the debtor denies the claim. This is a situation where the person claims from the debtor a debt but does not possess cognizable proof of the claim. Such a settlement is based on a compromise to avoid litigation, but the creditor has to ensure that the claim is valid and in good faith. There are discrepancies in terms of whether such claims are accepted (Jan, Marimuthu, bin Mohd, Isa, & Shad, 2019).

The second kind of settlement is one in which the debtor acknowledges that he owes the claim while the creditor asserts a right. The creditor then agrees to a compromise in which a smaller payment is made to instantly resolve the claim. Whether such a settlement is legal depends on the legal school, and if the creditor willingly gives up his claim to the debt, the settlement should be viewed as a gift.

The creditors can be classified into receivers, reclamation creditors and lessors. The receiver is the first in line to receive the fees, expenses, and other compensation for the management of the bankruptcy proceedings. This includes transportation expenditures, notices to the public, and any other associated expenditures related to the operation of the business. The fees can be forfeited by the receiver if desired.

Given that the debtor is in possession of their property, the reclamation creditors are ranked second in priority. The creditor has the option to keep the asset or divide it with other creditors. However, five conditions must be met to reclaim the property. The debtor must still be alive when the creditor asks for the restoration of the property, which is the first requirement. The creditor forfeits the right to demand the return of the property if the debtor dies before it is done. After the property has been liquidated, the creditors must band together and divide the proceeds according to their individual debts. The second element is that the property has to be in the same state as when the creditor sold it to the debtor.

This implies that the property shall be undestroyed or undamaged. The third element is that the property of the creditor is possessed or controlled by the debtor. If the debtor sold, gifted, or pledged it, then the creditor solely joins the other creditors in proportion to the debt. The fourth element is that in the case that the debtor paid an instalment or downpayment, then the creditor does not have the entitlement to take back that property. There is the option to pay back the money the creditor has received in return for the property or share proportionally the debt. The fifth element is that if the property value increases or transforms into one with added value, then the creditor either joins existing creditors or takes the property back to the original state (Ata, 2019).

Lessors come in third, with a lease known as Ijara being the main recognized intangible asset. Therefore, the lessor has the right to revoke the agreement and seize his property if the lessee-debtor declares bankruptcy, provided that the lease date has not yet begun. The lessor is also a creditor for the unpaid rent if the lease term has already ended. The lessor is not allowed to terminate a lease that has already started, and the lessee-debtor is the only owner of the property. Additionally, the usufruct is a component of the bankrupt debtor's assets, and the unpaid rent is one of the requests made by the creditor (Graham, 2011).

The next party is the secured creditor, who has precedence over the collateral. Creditors who have a secured interest come next. Other than the lessor's ownership right, many intangible assets and rights are not recognized under classical Islamic law. As a result of this understanding, the owner of real property is now allowed to draw up a contract that creates the residual ownership rights up until the debt is entirely repaid, cementing the distinction between ownership and possessory rights. The Murabaha is a term used to describe such a deal. The Rahn, a real possessory pledge, is the only vehicle left after Murabaha and Ijara. Considering this, a creditor who has pledged collateral is entitled to reimbursement from that collateral (Steele, et al., 2018).

The protection of family assistance and appropriate living expenditures from creditors is a crucial aspect of Islamic law. For the wife, kids, and parents, this includes both clothing and food, and there should be enough money to live on. Usually, the house is protected from creditors so that the family has a place to live.

The creditor can follow the debtor into their company to see if there are any assets that can be sold and prevent their travel, or they can ask for the muflis to be imprisoned until all debt is paid (Awad & Michael, 2010).

Imprisonment or enslaving debtors has a long history, but Islamic law distinguishes between those debtors experiencing a force majeure and those willingly default. Those that can demonstrate that they do not have the funds but are willing to pay their debts, will not be imprisoned. There may be a limited prison sentence to determine the credibility and veracity of the claims of the debtor. The duration of such imprisonment will depend on the judge (Devi & Firmansyah, 2018).

The second approach is to permit the creditor to follow the non-paying debtor to determine whether there is any property that may be liquidated. This also implies that the creditor can publicly announce that the debtor owes a debt and may not be a person of trust.

Finally, the debtor may be restricted from travelling outside the town or city to prevent the debtor from dissipating or hiding the assets. Travel may be permitted based on reasonable grounds, such as health, pilgrimage, family obligations and other associated circumstances. If the debtor cannot pay the debt in question and this can be validly confirmed, then the travel restrictions cease.

3. Methodology

China has a unified and comprehensive bankruptcy system that covers all types of enterprises., including foreign investment vehicles and state-owned enterprises. China does not have a personal bankruptcy law. The key concepts within bankruptcy law are voluntary and involuntary bankruptcy and an independent administration. Furthermore, the creditors are heavily involved in administrating the bankruptcy, restructuring, and settlement (Jiang, 2013).
Additionally, the principle of extraterritoriality applies to all properties outside China and potentially voidable transactions. A major component of the legislation relates to protecting workers' rights whose claims rank ahead of the unsecured creditors but behind any secured creditors.
The Chinese bankruptcy law consists of 136 articles that are separated into 12 chapters and apply to any type of insolvent enterprise, irrespective of whether it is state or privately owned and includes financial institutions as well as foreign investment enterprises. The law does not apply to individual natural persons. Hence, regulations concerning individual natural persons are separate from the Chinese bankruptcy law, but there is currently no personal bankruptcy law that individuals can refer to. Additionally, the legislation solely applies to PRC entities but also incorporates the debtor's overseas properties (Rapisardi & Zhao, 2010).
An insolvency test has to be conducted to determine whether bankruptcy is permitted. Qualifying for bankruptcy, restructuring or settlement requires that the enterprise cannot meet its debt obligations and that the assets do not cover the liabilities or can pay off debts.
To commence the proceedings for bankruptcy, an application in the People's Court where the enterprise is domiciled is needed. This can be initiated by either the creditor or the debtor. However, if the debtor is a financial institution, then regulatory authorities under the State Council have to file such an application.
The court assigns the case to a bankruptcy administrator as soon as the bankruptcy application is accepted. The administrator may be a recognized member of any legal, accounting or specialized bankruptcy firm or has the necessary relevant professional expertise and qualification. Both the selection and the remuneration are determined by the Supreme People's Court (Parry & Long, 2020).
These administrators are reporting to the People's Court and are supervised by the creditors. Specifically, the meeting of the creditors can replace the creditor if needed or request the removal of the administrator in case the duties are not performed accordingly. Specifically, if the administrator does not act lawfully and impartially, or if the administrator may not perform the duties competently, then there may be a removal (Mrockova, 2021).
The administrator has several powers and duties, such as taking control of the debtor's property, seals and accounting records, documents and any other material. Furthermore, the administrator investigates and reports the financial status of the debtor. Additionally, decisions are made related to management and daily expenditures.
The administrator also decides on the continuation or suspension of the debtor's business operations and the properties' management and disposal. The administrator also represents the debtor during litigation, arbitration and associated proceedings, and presides over the meeting with creditors and any other necessary functions.
If the administrator fails to act with due diligence and care, then the administrator may be subject to personal liability or face fines. This arises if the administrator caused the loss to a creditor, debtor or any additional third party.
An important part of the claim filing is that the creditors have only a limited period to commence proceedings against the debtor. This period commences with the date of the publication by the People's Court upon the acceptance of the bankruptcy petition and the period has to be between 30 days and three months (Tomasic & Zhang, 2012).
These claims include the debts arising at the bankruptcy application date and any unmatured debts. Additionally, any conditional debts, time-limited debt obligations, and any claims arising from pending litigation and arbitration. Finally, indemnity obligations and damages under a contract are included, in addition to the debt owned by joint creditors.
The creditors have the right to get information and participate in the process through creditors' meetings and committees for creditors. This entitles the creditor to both attend and vote in the meeting. This requires that the claim is determined and accepted. Any resolutions of the meeting are taken by a simple majority of the voting rights, and the majority has to be at least 50 % of the value of the debtor's unsecured debt. The meeting is also responsible for verifying the claims of the creditor and applying to the court for the replacement or removal of the administrator. Furthermore, the meeting also supervises the administrator and selects the committee members. Additionally, it decides on the suspension or continuation of the business

operations and approves any restructuring or settlement agreements. Finally, both the management and distribution of the properties of the debtor are handled by the meeting (Arsenault, 2011).

4. Results

An important part of the bankruptcy process is that any creditor that has debts to the debtor may request that the claims are set off against their claims. However, if the creditor incurred the debt knowing that the debtor cannot cover their debt, then this is not permitted.

Any contracts before the bankruptcy application's acceptance and not fully performed can be terminated or continued based on the administrator's judgement. However, the administrator has to notify the counterparties of the decisions within two months after the acceptance or 30 days after receiving a reminder. If this is not performed, then the contract will be terminated. When the contract is continued, the counterparty has the entitlement to a guarantee by the administrator. Failure to provide will terminate the contract as well.

Following this establishment of contracts, the priority of debt cover is determined. This incorporates bankruptcy expenses and common interest debts that are incurred after the acceptance of the bankruptcy petition. Furthermore, employee claims, and social insurance premiums in addition to outstanding taxes are to be reimbursed. Finally, unsecured claims in bankruptcy are to be covered. If the bankruptcy does not satisfy the discharge requirements, then the allocation will be done on a pro-rata basis. This implies that secured creditors generally prioritise the value of the secured properties, and any shortfalls of these amounts are treated as unsecured claims.

Rescue options play a critical role in Chinese bankruptcy laws, and the Bankruptcy Law permits the debtor and creditors to apply for restructuring or reorganization of the business. The legislation permits a compromise or settlement of the debts even if the bankruptcy application was accepted already (Lin, 2018).

The debtor has to submit a draft restructuring plan to the court and meeting of the creditors within six months after the court permits the restructuring request. Within the restructuring period, the debtor may apply for approval from the court to manage the properties and business under the administrator's supervision.

The voting groups are classified by the type of creditor. The first group are those with secured claims of the specific properties. The second group incorporates employees with claims on salaries and medical/disability subsidies. Furthermore, creditors subject to outstanding taxes and common claims are separate voting groups.

4. Discussion

The growing diversification of the Chinese economy and active engagement with many Muslim countries has presented a considerable opportunity for China to pivot new forms of finance adhering to Islamic principles and integrate more readily the systems of these countries. Given the growing trading and economic relationship, Islamic bankruptcy principles may provide both a domestic and international opportunity for fairer financial transactions and responsible business practices. Recent large-scale bankruptcies such as the HNA group, the economic struggles of the Evergrande group and other real estate developers that went into bankruptcy, such as Risesun Real Estate Development Co., Ltd. with more than 37 billion USD in liabilities, represent significant challenges (Goldberger & Vague, 2021). In several of these instances, excessive leverage and the shielding of the assets of the owners are major cornerstones of these instances.

The number of bankruptcies in China has increased significantly within the last several years. As demonstrated in Figure 1, the number of bankruptcies has increased from around 3,000 per year to more than 10,000 within the last four years. This significant increase makes sound bankruptcy proceedings essential and ensures that creditors are protected and the businesses engage in sound business activities. While increasing bankruptcies are caused by a variety of factors, such as economic hardship and growth restrictions, bankruptcy-supporting regulations may cause corporations to prefer to declare and get rid of their debt, instead of the owners supporting the corporation and focusing on repaying the loans to creditors.

To integrate Islamic bankruptcy principles within Chinese law, there are generally two options. The first option is to integrate Islamic principles into general bankruptcy law with a particular focus on ensuring that the concept of limited liability is restricted to ensure greater responsibility of decision-makers. The second alternative is to create a separate bankruptcy law based on Islamic principles and apply this to specific Islamic entities.

Integrating Islamic bankruptcy principles into Chinese bankruptcy law may be in various forms. The first and foremost option for integration is the abolishment of interest paid on outstanding debts. Given that an enterprise or partnership is in distress, the charging of interest on the debt will make it harder for the corporation or managing individuals to recover and repay these amounts. Furthermore, they may be encouraged to actively seek to repay debtors and be prudent in their business activities. Conventionally, the increasing debt amounts arising from interest puts the defaulting entity under massive strain and will make the debtor more likely to try to default as compared to attempting to find an amicable solution and pay off the debt. Specifically, debts should generally not be forgiven unless the individuals want to make a good deed. If the debtor is in real hardship due to

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circumstances that are beyond his control, then debt forgiveness if the credit-bearing entity can afford it, should be encouraged. In return, the creditor may receive a preferential mention and positive support from the government. Furthermore, if a debt is forgiven, the debtor should be obliged to contribute to charity or support others as a condition for any debt relief by creditors. This is explicitly emphasized by Islamic principles of doing good and supporting society.

The second approach is to establish an Islamic bankruptcy law that adheres to Islamic principles and applies to Islamic-compliant corporations. The benefit of such an approach is that it would encourage the formation of a strong Islamic financial system, and also enable foreign enterprises to set up Islamic-compliant entities that adhere to their faith. Furthermore, it creates a dual system with separate legal forms that may be easier to be implemented and can be in conjunction with a strong Islamic financial regulatory system. This helps in strengthening the Islamic finance system within China and encourages its growth may align with the objectives of the government for greater common prosperity and sound financial management.

Figure 1: Chinese business bankruptcies from 2007 to 2022 (source: World Bank).

5. Conclusion

Islamic bankruptcy law and Islamic finance have taken on a growing role in modern economies with several governments aiming to align the economic system with Islamic principles in addition to solving some of the shortcomings with existing financial regulations related to bankruptcies. China has within the last 40 years become a major economy with significant development of its legal system. With the increasing growth and engagement with the Muslim world, challenges have arisen with speculative business practices and arising defaults. Furthermore, the growing engagement with Muslim countries has fostered a growing focus to provide Shariah-compliant legal frameworks to encourage trade and ensure the protection of corporations.

Insolvencies and bankruptcies are natural in an economy. However, Islam emphasizes the importance that there should be no distinction between balance sheet insolvency and cashflow insolvency, as well as the importance of personal responsibility for the debts incurred.

The article has presented a solid outline of the Islamic and Chinese bankruptcy laws and how Islamic principles can be integrated into the Chinese legal system. The arising system in the form of either a separate legal system or one integrating these principles into the existing bankruptcy regulations can significantly strengthen debtor responsibility and recovery rates, as well as encourage fairer business practices.

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The Effects of Interest Rates on Islamic and Conventional Banks: A Comparative Study of Monetary Policy Transmission Channels

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Abstract

This academic article focuses on analysing the transmission mechanism of monetary policy in a dual banking system composed of Islamic and conventional banks. The main objective is to identify the factors that influence the behavior of banks in response to monetary stimuli and to examine the hypothesis of an asymmetric transmission of monetary policy. To achieve this goal, a methodology based on the Vector Autoregression (VAR) model was used to analyze the relationship between interest rates and macroeconomic variables. The results of this study showed that the transmission of monetary policy is confirmed in a dual banking system through the channel of bank loans and that Islamic banks are more sensitive to changes in interest rates than conventional banks. These findings have important theoretical and methodological implications for understanding the mechanism of monetary policy transmission in a dual banking system and for monetary policy in general.

Keywords: Islamic Finance; Dual banking system; Monetary policy; Banking transmission channel

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1. Introduction

A few decades ago, Islamic finance emerged as an innovative financial system integrating an ethical dimension into financial transactions. However, despite its advantages, such as financial transparency, it has not been exempted from challenges and limitations that could question or weaken its success. In summary, as the sole authority responsible for formulating and implementing monetary policy, the central bank must consider the country's overall economic conditions while adapting its framework to incorporate Sharia-compliant monetary policy instruments. This task becomes even more intricate for economies with a dual banking system, like Turkey, Malaysia, Oman, and Indonesia, where the central bank must pursue a monetary policy that pertains to both conventional and Islamic banking systems to effectively impact the broader macroeconomic landscape. Although interest rate-based monetary policy is deemed crucial for achieving global macroeconomic objectives, the emergence of Islamic banking, which prohibits interest usage, has piqued the interest of policymakers, researchers, and academics, urging them to explore issues related to Islamic finance within the formulation of monetary policy in a dual banking system.

Within this context, this research aims to scrutinize how monetary policy is transmitted within a banking system that combines conventional and Islamic banks, with particular emphasis on the transmission of monetary policy through bank credit. Additionally, the effects of factors like bank liquidity and market structure will be considered to comprehend how banks respond to the transmission of monetary impulses on interest rates, using Indonesia as a case study.

This study addresses an urgent need by examining the intricacies of monetary policy transmission within a mixed banking environment, encompassing the distinctive features of Islamic and conventional banks. It aims to bridge a notable research gap, as existing literature lacks comprehensive exploration. The study strives to assess the effective transmission of monetary policy impulses to interest rates for banks in this context. To achieve this, the study compares the effects of monetary policy shocks—represented by fluctuations in interest rates—on the balance sheets of Islamic and conventional banks. This research introduces a fresh perspective to evaluate the impact of monetary policies in a dual banking system, setting itself apart from predominantly conventional monetary policy-focused literature. The findings from this study will not only enrich the existing literature but also aid in evaluating the stability and viability of Islamic financial instruments for implementing monetary policy.

The subsequent sections of the article are structured as follows: Section 2 delves into a literature analysis concerning monetary policies within a dual banking system alongside the evolution of the Islamic banking sector in Indonesia. Section 3 outlines the methodology employed for this study, utilizing a Vector Autoregression (VAR) model to examine the correlation between interest rates and macroeconomic variables. Empirical findings, presented in Section 4, validate the transmission of monetary policy within a dual banking system through the conduit of bank loans. Furthermore, it is revealed that Islamic banks exhibit greater responsiveness to fluctuations in interest rates compared to their conventional counterparts. The section concludes with a discussion of the study's principal takeaways.

2. Literature review

The coexistence of Islamic and conventional banks in a dual banking system has become common in many countries, particularly in Muslim-majority countries. In this context, the transmission of monetary policy is a crucial subject for the central bank, as it may be affected by differences between Islamic and conventional banks in terms of financing structure, risk management, and other characteristics. In this literature review, we examine several studies investigating the role of monetary policy in dual banking systems and the monetary policy instruments that central banks can use to ensure a smooth transmission of monetary policy across both types of banks.

2.1 Comparative study of Islamic and conventional banking

Islamic and conventional banks diverge in their financial operations and resource management approaches. Conventional banks primarily operate on the interest principle, using interest rates as remuneration for loans and deposits. Conversely, Islamic banks adhere to Sharia principles, avoiding using interest (Riba) and emphasizing risk-sharing and profit-sharing with their clients (Archer et al., 2006). This conceptual difference leads to distinct characteristics in their range of financial products. Conventional banks offer a diverse array of products, including interest-bearing loans, whereas Islamic banks focus on Sharia-compliant products such as Mudarabah (partnership) and Murabaha (profit sale) (Hendar, 2015).

Beyond product offerings, governance and oversight also differ significantly. Conventional banks adhere to traditional financial standards, while Islamic banks are subject to Sharia-specific regulations (Hendar, 2015). Moreover, Islamic banks must establish Sharia advisory committees to ensure the conformity of their operations to ethical and legal Islamic principles (Ibrahim et al., 2008).

These operational disparities are also reflected in how these two types of banks transmit monetary policy from the monetary sphere to the real economy. Conventional banks influence the economy by adjusting interest rates and managing the money supply, whereas Islamic banks, due to their ethics-driven nature, apply financing and investment mechanisms compliant with Sharia principles. This distinction may have implications for the transmission of monetary policies (Kashyap and Stein, 2000).

In summary, Islamic and conventional banks differ in their underlying philosophies, financial approaches, and governance structures. The provided comparative table highlights these differences, showcasing their operational bases, profit and loss treatments, financial products, attitudes toward interest, social and environmental orientations, regulatory frameworks, and governance.

Table 1: Comparative Operational Analysis: Islamic Banks vs. Conventional Bank

Feature	Islamic Banks	Conventional Banks
Operational Basis	Sharia Compliance	Based on Conventional Financial Norms
Deposit Remuneration	No Interest Rates	Interest Rates Offered on Deposits
Loan Financing	Sharia-Compliant Mechanisms	Loans Granted with Interest
Profit and Loss Sharing	Principle of Sharing with Clients	Clients Don't Share Profits and Losses
Sharia-Compliant Financial Products	Mudarabah, Murabaha, etc.	Loans, Mortgages, Investment Products
Interest (Riba) Prohibition	Strictly Prohibited	Common Use of Interest (Riba)
Governance and Supervision	Sharia Advisory Committees	Compliance with Conventional Financial Regulations
Socially Responsible Investment	Encouraged and Taken into Account	Variable Based on Bank and Choices
Ethical Orientation	Adherence to Islamic Ethical Principles	Variable Based on Bank and Choices

Source: Authors' elaboration

This table provides a general comparison of operational characteristics between Islamic and conventional banks. Details may vary based on jurisdiction, bank policies, and other factors.

2.2 Comparative study of Islamic and conventional banking

On an empirical level, numerous studies have attempted to identify the effects of monetary policy on credit supply. The results of these studies formally underscore that monetary policy has additional effects on the interest rate channel, given that any change in the central bank rate would affect the cost and availability of credit to a greater extent than a simple reduction in the risk-free rate. This is the bank lending channel (Iqbal and Mirakhor, 2007).

In the context of a dual banking system, the sensitivity of financial intermediaries to monetary shocks varies, as revealed by studies conducted in this area. Empirical investigations, such as those initiated by Chapra (1983), demonstrate the role that monetary policy should play in achieving economic and socio-economic well-being within a dual banking system. Moreover, these studies illustrate how such policies can be effective without relying on interest-based tools such as the policy rate and open market operations for government securities with interest (Bikker and Hu, 2002).

Another study by Khan, M. S., & Mirakhor (1989) aimed to analyze the effectiveness of monetary policy transmission in an Islamic financial system by examining the effects of monetary policy on macroeconomic variables. The results concluded that there would be no significant difference in how monetary policy affects economic variables in an Islamic banking system (Hendar, 2015).

The question of asymmetry in the transmission of monetary policy between Islamic and conventional banks in Indonesia has attracted the interest of numerous researchers in recent years. Hanifa and Fahrurrozi (2018) examined the role of Islamic banks in the transmission of monetary policy within the Indonesian context. Their study revealed significant differences in the transmission mechanisms between the two types of banks (Ehrmann et al., 2001). Similarly, Mustofa (2017) delved into the monetary transmission mechanism in a dual banking system in Indonesia, emphasizing aspects specific to Islamic banks [42]. In 2016, Damar and Pirmana explored the issue of banking heterogeneity and its impact on monetary policy transmission in Indonesia [26]. The comparative role of conventional and Islamic banks in the monetary transmission mechanism was investigated by Hendar (2015), who highlighted notable differences in transmission channels. Lastly, Hakim (2014) examined monetary policy transmission in a dual banking system in Indonesia, underscoring the importance of considering the specificities of both types of banks in the analysis of monetary transmission (Ferrouhi, 2014).

This significantly impacts the overall efficacy of monetary policy. Awad underscores the significance of crafting Islamic financial instruments that adhere to sharia law principles and can be effectively employed to execute monetary policy within a dual banking framework. The paper also discusses the challenges and limitations of using these instruments, such as the lack of a well-developed secondary market for Islamic financial products and the potential for increased complexity in monetary policy implementation. Overall, the paper provides valuable insights into the potential role of Islamic financial instruments in promoting a more inclusive and effective monetary policy framework in countries with dual banking systems (Arnould, 2011).

The instruments adopted by the CBS to achieve the objective of price stability include the reserve requirement ratio (SRR), profit margins, profit-sharing ratios, liquidity, and investment windows, as well as open market operations based on various Islamic certificates, such as the Ijarah certificate, the Islamic development certificate, and the short-term Bai Salam (deferred delivery purchase) certificate.

The interest rate is one of monetary policy's most frequently utilized tools. However, Islamic banks adhere to the prohibition of interest, rendering conventional interest rates ineffective for controlling credit demand. Nevertheless, certain empirical studies have revealed that conventional interest rates can impact interest rates on deposits and loans within Islamic banks. In this regard, we can cite the studies carried out by Ariff (2008), Ayesha and Imran (2012), and Aysan et al. (2013), who found that interest rates on deposits in Islamic banks were positively correlated with conventional interest rates, suggesting that Islamic banks can transmit monetary policy effectively. However, Islamic banks are limited in their ability to participate in open market operations because they are prohibited from dealing with financial instruments based on interest. In a study conducted by Abdul-Rahman and Nor (2016), it was found that the effect of open market operations on Islamic banks was weak, suggesting that this instrument may not be as effective in dual banking systems.

Indeed, Islamic and conventional banks have different reactions to the transmission of monetary policy due to their differences in structure and operation. Conventional banks are subject to interest rate requirements to maximize their profits and have interest rates as their primary tool to influence deposits and loans. On the other hand, Islamic banks must adhere to Sharia principles that prohibit interest. Therefore, Islamic banks use financing techniques based on profit and loss-sharing contracts such as Mudaraba, Musharaka, and Murabaha. Consequently, monetary policy can yield distinct outcomes for the two bank categories. Numerous studies have investigated variations in monetary policy transmission between Islamic and conventional banks. This divergence could be attributed to their adoption of financing methodologies grounded in profit and loss-sharing contracts. These contracts entail direct investment in tangible projects instead of extending loans at fixed interest rates. Furthermore, a study conducted by Alam et al. (2016), found that Islamic banks have a lower sensitivity to interest rate fluctuations than conventional banks, as they rely less on funds borrowed from the money market. In another study, Muhammad Farooq Akhtar (2018) demonstrated that Islamic banks were more resilient to economic shocks than conventional banks due to their financing structure and diversified business model [40]. However, it is important to note that the sensitivity of Islamic banks to interest rate fluctuations may vary depending on factors such as the bank's size, capitalisation level, and its exposure to market risks. A study conducted by Basher et al. (2017) demonstrated that Islamic banks are more sensitive to monetary policy than conventional banks in Malaysia, as Islamic banks tend to rely more heavily on higher interest rates to attract deposits, while conventional banks use other instruments to influence deposits and loans. This asymmetry in the transmission of monetary shocks can have important implications for overall monetary policy transmission. For example, Al-Muharrami (2013) demonstrated that Islamic banks are more resilient to monetary shocks than conventional banks due to their different financing and investment structure.

This conclusion is significant as it implies that Islamic banks may play a vital role in financial and economic stability in countries where they are present. Furthermore, some authors have demonstrated that Islamic banks can stabilise the economy during crises (Al-Muharrami, 2013; Basher et al., 2016). The authors employed regression analysis to examine the relationship between economic growth and Islamic banking development. They found that economic growth was positively correlated with the development of Islamic banking in Malaysia. The results suggest that Islamic banking can be an important driver of economic growth, particularly in predominantly Muslim countries.

In essence, disparities in financing structures, investment approaches, and risk-sharing mechanisms between Islamic and conventional banks elucidate the contrasting responses when transmitting monetary shocks from the financial domain to the real economy. Research in this realm has demonstrated that Islamic banks hold the potential to assume a significant role in fostering economic stability, particularly in times of crisis.

Financial and monetary relationships in a dual financial system must be organized and conducted to consider the distinct nature of this finance, especially regarding the transmission of monetary policy. Indeed, the differences between Islamic and conventional banks have significant implications for the transmission of monetary shocks to the real economy (Chapra, 1983). Islamic banks operate based on principles of risk sharing and sharia compliance, which can affect their ability to adjust interest rates in response to changes in monetary policy (Demirgüç-Kunt and Huizinga, 2010). Indeed, due to their adherence to Shariah-compliant risk-sharing principles, Islamic banks may face challenges in adjusting their interest rates in response to changes in monetary policy. Additionally, the financial products offered by Islamic banks may differ from those offered by conventional banks, which could impact the transmission of monetary shocks. Therefore, an adapted approach is needed to ensure effective monetary policy transmission in a dual banking system comprising both Islamic and conventional banks.

In this context, our study aims to empirically explore monetary policy transmission in a dual banking system by analyzing banks' reactions to monetary shocks through the bank lending channel. To do so, we compare the behavior of conventional and Islamic banks concerning the variability of monetary policy to justify the asymmetry of their reactions to monetary shocks. This asymmetry will be examined using autoregressive models, particularly the estimation of VECM models, to analyze the behaviour of Islamic banks and conventional banking groups in response to monetary shocks. This study will thus provide a better understanding of the differences in behavior between Islamic and conventional banks regarding monetary policy transmission in a dual banking system.

3. Methodology

3.1 Data description and collection

The econometric model examined in this study establishes links between selected macroeconomic, financial, and structural variables to evaluate the behavior of Islamic and conventional banks. This comparative analysis aims to identify the factors that influence variations in the money market rates and their impact on borrowing rates for these two types of banks. The interest rate, representing the monetary policy variable, is measured by the overnight interbank rate (ON). The use of this variable for Indonesia is justified by the fact that empirical studies analyzing the transmission of monetary policy in a dual banking system prioritize the interbank market as a proxy for evaluating monetary rates.

The objective variables in this study include balance sheet elements of both Islamic and conventional banks, such as total financing of Islamic banks (CTI) and total borrowing of conventional banks (CTC), as well as total loans of the banking sector (CT). The Consumer Price Index (CPI) and Industrial Production Index (IPI) are objective variables. This analysis aims to understand the impact of these variables on the transmission of monetary policy in a dual banking system, specifically regarding the reactions of Islamic and conventional banks to monetary shocks.

The impact of the banking industry structure on the transmission of monetary policy has often been studied through the effects of monetary shock on interest rates and credit quantity. To measure banking concentration at the national level, the Herfindahl-Hirschman Index (HHI) was selected as the indicator, which is often used to obtain comprehensive information on the market shares of all banks in the sector (Beck and Webb, 2003; Choudhury and Haque, 2018; Demirgüç-Kunt and Huizinga, 1999).

Two different indicators are considered to measure the liquidity of conventional and Islamic banks. To measure the liquidity of conventional banks, the option Asset Liquidity Ratio appears to indicate the liquidity available to meet expected or unexpected cash demands noted (CI). Regarding the liquidity of conventional and Islamic banks, two different indicators are considered. To measure the liquidity of conventional banks, the Asset Liquidity Ratio option appears to indicate the liquidity available to meet expected or unexpected cash demands noted (CI). In the case of Islamic banks, Vazquez and Federico (2015), Ferrouhi (2014), and Saqib (2019) proposed a short-term liquidity measure that can be used for Islamic banks, the Short-Term Funding Ratio (STFR) noted (IL). We constructed a monthly database for the period 2007-2015 from aggregated banking sector data for both Islamic and conventional banks to examine differences in banks' responses to monetary shocks. Data collection on the banking sector, monetary policy guidelines, and macroeconomic variables is based on statistics, annual reports from central banks, and reports from the International Monetary Fund.

3.2 Research design

In econometric modelling, time series analysis relies on two essential conditions to avoid any spurious regression: verifying the normal distribution assumption of the variables and their stationarity. To meet this methodological requirement, the study used the improved Dickey-Fuller test to examine the stationarity of each variable by retaining the t-statistic of the test and its probability. The results indicate that the CPI, IPI, CTC, ITC, CL, IL, ON, and HHI variables are stationary in the first difference, while the CT variable is stationary in the second difference at a threshold of 1%. The Jarque-Bera tests, as well as the Skewness and Kurtosis coefficients, were used to test for the normality of the variables. The normality test results revealed that the normality assumption is invalidated except for the IPI and HHI variables whose coefficient is negative.

The second step is to examine the direction of the time series evolution of variables related to Islamic and conventional banks. This examination involves checking whether the evolution remains stable in the long run. From an empirical standpoint, cointegration analysis identifies several linear combinations that can be interpreted as possible long-term equilibrium relationships. In other words, cointegration analysis allows for the study of non-stationary time series, but for which a linear combination is stationary. It enables the specification of stable long-term relationships while simultaneously analyzing the short-term dynamics of the variables under consideration.

The lag length of all models is selected based on information criteria such as the Akaike criterion, the Hannan-Quin criterion, the Schwaz criterion, and the prediction error criterion. The test results indicate that the number of lags retained for conventional banks is 3, while the number of lags defined for Indonesian Islamic banks is 2.

4. Model estimation

4.1 Econometric modeling of Indonesian conventional banks

After specifying the different models and the number of cointegration relationships for each, it is time to identify the long-term and short-term relationship between bank rates captured by both the interest rate for conventional banks and the financing rate for Islamic banks and the investment tool. The monetary policy is presented by the monetary rate, balance sheet variables (bank liquidity ratio), and market structure captured by the Herfindahl-Hirschman concentration index. The results of the coefficient estimation are presented in the table below.

Indeed, once the models are specified, it is essential to test the relationships between the variables to analyze their long- and short-term behaviour. The objective is to understand how bank rates are affected by various factors such as monetary policy, bank liquidity, and market structure. To achieve this, we estimated the coefficients of each variable using econometric modeling. The results of this analysis are presented in the table below, where the coefficients of the different variables are shown for each model. These results provide a better understanding of the impact of each factor on bank rates and help identify the long-term and short-term relationships between these variables.

Table 2: Econometric estimation of the model for Indonesian conventional banks

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.049847	0.020049	-2.486278	0.0150
C(2)	-0.040807	0.012220	-3.339524	0.0013
C(3)	0.008835	0.107295	0.082339	0.9346
C(4)	0.219372	0.085442	2.567499	0.0122
C(5)	0.161887	0.082387	1.964967	0.0530
C(6)	0.062091	0.094215	0.659037	0.0118
C(7)	-0.024082	0.091396	-0.263495	0.0229
C(8)	-0.067493	0.089939	-0.750432	0.0453
C(9)	-3.43E-10	5.77E-10	-0.594701	0.5538
C(10)	-3.41E-10	5.83E-10	-0.585271	0.5601
C(11)	-3.01E-10	6.02E-10	-0.500864	0.6179
C(12)	-1.39E-09	6.92E-10	-2.006498	0.0483
C(13)	-1.29E-09	6.77E-10	-1.899078	0.0313
C(14)	-1.42E-09	5.58E-10	-2.543049	0.0130
C(15)	-0.016534	0.007452	-2.218656	0.0294
C(16)	0.041379	0.009980	4.146196	0.0001
C(17)	0.005961	0.010447	0.570620	0.0199
C(18)	-1.81E-05	1.66E-05	-1.090504	0.0288
C(19)	-7.93E-07	1.58E-05	-0.050321	0.0600
C(20)	-3.06E-06	1.09E-05	-0.280795	0.0496
C(21)	-0.002818	0.003114	-0.904901	0.3683

C(22)	0.016977	0.003065	5.538226	0.0000
C(23)	0.007065	0.003202	2.206052	0.0303
C(24)	-0.000185	0.019784	-0.009348	0.9926
C(25)	-0.032166	0.020031	-1.605841	0.1124
C(26)	0.009452	0.019839	0.476453	0.6351
R-squared	**0.049848**	**Mean dependent var**		-0.032308
Adjusted R-squared	0.527041	**S.D. dependent var**		0.154481
S.E. of regression	0.106240	**Akaike info criterion**		-1.433913
Sum squared resid	0.880382	**Schwarz criterion**		-0.772816
Log likelihood	100.5635	**Hannan-Quinn criter.**		-1.166083
Durbin-Watson stat	1.895540			

Source: Authors' elaboration from Eviews

Therefore, the equation that describes the long-term relationship between conventional interest rate and the different variables is as follows:

d(ic)=-0.0498466022463*(ic (-1) +6.61766498395e-10*ct(-1) +1.44665039305e-09*ctc(-1)+0.101159897974*cl(-1)-0.000255682753494*hhi(-1)-0.0734826422217*ipi(-1) + 0.0697559328772*cpi(-1) - 4.61996297148) (1)

4.2 Results' analysis: Illuminating study conclusions for conventional banks

The first comment we can make about this model pertains to its quality and robustness. From a quality perspective, the analysis of these results indicates that the model is statistically robust, as evidenced by an R-squared value exceeding 60%. In other words, the error correction relationships embody the joint combination of the long- and short-term relationships. During these two relationships, the feedback coefficient emerges, equal to -0.049847 in Equation (1) of the model. This value represents the speed of adjustment of the bank interest rate following a monetary shock. The negative feedback strength A = (-0.049847) < 0 also implies that when a variable at time t deviates from the long-term equilibrium, the speed of return after this deviation (shock) is 0.049847. Put simply, if there is a shock to the long-term equilibrium, it would take exactly 20.06 months (1/0.049847) to return to the stable long-term equilibrium situation. It should be noted that this period of deviation from the occurrence of a shock to the return to the stable long-term equilibrium is relatively shorter compared to conventional banks.

As for the short-term dynamics, these are established using the Wald test to verify the existence or absence of a short-term relationship between each variable and IC. According to the displayed table, the conventional interest rate maintains a short-term relationship with variables such as the monetary rate, total conventional credit, liquidity of conventional banks, and the market concentration index. Indeed, the probability of accepting the null hypothesis is 5%.

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Table 3: Wald Test Results: Short-Term Relationship between Conventional Interest Rate and Model Variables

The variables	The conventional interest rate of Indonesian banks, denoted as IC	Probability
ON (monetary rate)	There exists a short-term relationship between the variables ON and IC	0.0047
CTC (total conventional credit)	Our analysis shows that there is no short-term relationship between the variables CTC and IC	0.8773
CL (the liquidity of conventional banks)	There exists a short-term relationship between the variables CL and IC	0.0368
HHI (concentration of the banking market)	There exists a short-term relationship between the variables HHI and IC	0.0370
IPI (index of industriel production)	There exists a short-term relationship between the variables IPI and IC	0.0322
CPI (consumer price index)	There exists a short-term relationship between the variables CPC and IC	0.0400

Source: Authors' elaboration from Eviews

4.3 Econometric modeling of Indonesian Islamic banks

The same approach is taken for the Islamic banking sector, where the resulting model is as follows:

Table 4: Econometric estimation of the model for Indonesian Islamic banks

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.056729	0.018885	3.003947	0.0038
C(2)	-0.402408	0.134928	-2.982387	0.0041
C(3)	-0.165656	0.141947	-1.167029	0.2476
C(4)	0.194722	0.467367	0.416636	0.0378
C(5)	0.142824	0.456846	0.312631	0.0255
C(6)	-3.78E-09	2.30E-09	-1.642158	0.1055
C(7)	-5.52E-09	2.14E-09	-2.579125	0.0123
C(8)	4.65E-06	3.10E-06	1.498253	0.0139
C(9)	-3.81E-07	3.34E-06	-0.113800	0.0398
C(10)	-0.033639	0.034826	-0.965922	0.0338
C(11)	0.041521	0.031214	1.330205	0.0188
C(12)	0.004641	0.080976	0.057314	0.9545
C(13)	0.047135	0.085414	0.551840	0.5830
C(14)	-0.010862	0.011330	-0.958737	0.3414
C(15)	0.004507	0.010406	0.433110	0.6664
C(16)	-3.96E-05	6.17E-05	-0.642085	0.0231
C(17)	0.000106	5.92E-05	1.786038	0.0389
C(18)	0.214207	0.106561	2.010182	0.0487
R-squared	**0.537998**	**Mean dependent var**		**-0.030123**
Adjusted R-squared	**0.184759**	**S.D. dependent var**		**0.456997**
S.E. of regression	**0.412626**	**Akaike info criterion**		**1.260578**
Sum squared resid	**10.72637**	**Schwarz criterion**		**1.792677**
Log likelihood	**-33.05340**	**Hannan-Quinn criter.**		**1.474063**
F-statistic	**2.066499**	**Durbin-Watson stat**		**2.001224**
Prob (F-statistic)	**0.019718**			

Source: Authors' elaboration from Eviews

The equation for the long-term relationship between the Islamic financing rate and the various variables is as follows:

d(if) = - 0.056728572466*(if (-1) - 2.68336509844*on (-1) + 5.16459609661e-10*ct (-1) - 6.48675400879e-05*itc(-1) + 0.851397675615*il(-1) + 1.18533424525*cpi(-1) - 0.0261077062999*ipi(-1) + 0.0002876567297*hhi(-1) - 5.87431005532) **(2)**

4.4 Results analysis: Illuminating study conclusions for Islamic Banksometric Modeling of Indonesian Islamic Banks

The first observation about this model concerns its quality and robustness. From a quality standpoint, the analysis of the results demonstrates that the model is statistically robust, as evidenced by an R-squared value that exceeds 50%. In other words, the variables in this specification explain 50% of the variation in the endogenous variable.

The error correction relationships embody the joint combination between the long and short-term relationships. In the middle of these two relationships, the coefficient of feedback, which equals (-0.056729) in equation 2 of the model, is established. This value represents the speed of adjustment of the Islamic financing rate following a monetary shock. The negative feedback coefficient A = (-0.056729) indicates that when a variable at time t deviates from the long-term equilibrium, the return speed after this deviation (shock) is 0.056729. In simpler terms, if there is a shock to the long-term equilibrium, it would take 17.62 months (1/0.056729) to return to the equilibrium situation. It should be noted that this deviation period between the occurrence of a shock and the return to the stable long-term equilibrium is relatively shorter compared to conventional banks.

Table 5: Econometric estimation of the model for Indonesian Islamic banks

The variables	IF Islamic financing rate	Probability
ON (monetary rate)	There exists a short-term relationship between the variables ON and IF	0,0218
ITC (total Islamic credits)	There exists a short-term relationship between the variables ITC and IC	0,0330
IL (the liquidity of Islamic banks)	There exists a short-term relationship between the variables IL and IC	0.0226
HHI (concentration of the banking market)	There exists a short-term relationship between the variables HHI and IC	0.0236
IPI (index of industrial production)	Our analysis shows that there is no short-term relationship between the variables IPIC and IC	0.7535
CPI (consumer price index)	Our analysis shows that there is no short-term relationship between the variables CPIC and IC	0.4407

Source: Authors' elaboration from Eviews

5. Variance decomposition and impulse analysis

As part of our study, it is important to understand the impact of changes in the money market rate on borrowing rates, as this will help explain our model and provide it with predictive power. The most common methodology for analyzing short-term dynamic relationships between the monetary rate and other financial or real variables is to examine the autoregressive vector's dynamic response following a shock simulation. This involves simulating a monetary policy shock on the banking conditions of the countries under study. This simulation compares the impulse response of Islamic and conventional banks following a monetary shock. The values of the impulse response functions provide information on the extent and timing of the transmission of central bank decisions to banks, considering factors that amplify or limit the bank's reaction process following a monetary policy shock. This approach helps to better understand how central bank decisions affect bank lending rates and financing conditions in different economic and financial contexts.

In this study, the impulse response function (IRF) reflects the extent and timing of the responses of the objective variables (IPI, IF, and IC) to a shock in the monetary policy variable (ON). This allows for comparing the extent of the objective variable responses to policy shocks for conventional and Islamic banks. Therefore, it involves simulating a monetary policy shock on banking conditions, whether for Islamic or conventional banks in the Indonesian banking system. To obtain the impulse

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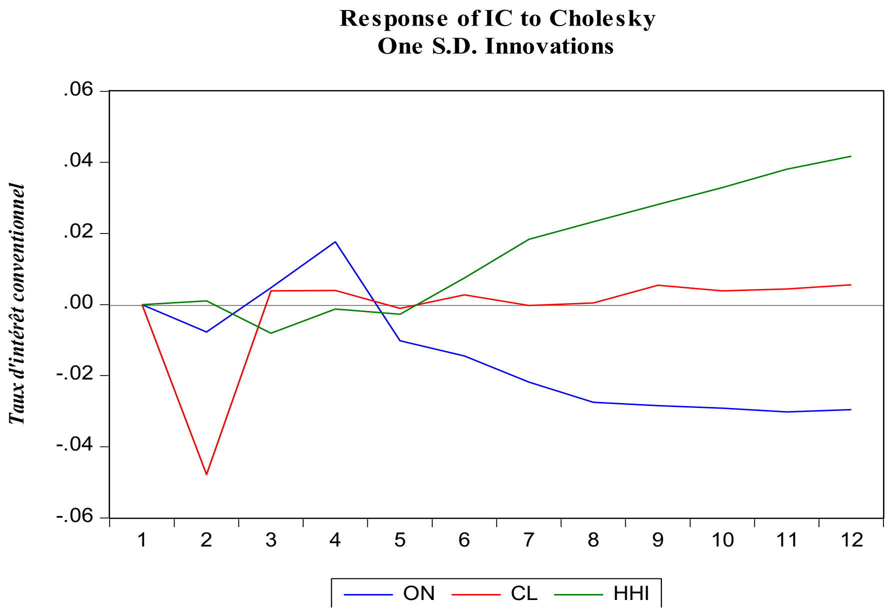
response functions, it was necessary to use the error correction of the model already estimated for each bank. The VECM representation of the resulting model is used to calculate the impulse response functions. This approach helps to better understand how monetary policy shocks affect objective variables in the context of Islamic and conventional banks and allows for evaluating the effectiveness of monetary policies in different economic and financial contexts.

Figure 1: Simulation of the Indonesian Banking System Interest Rate Response

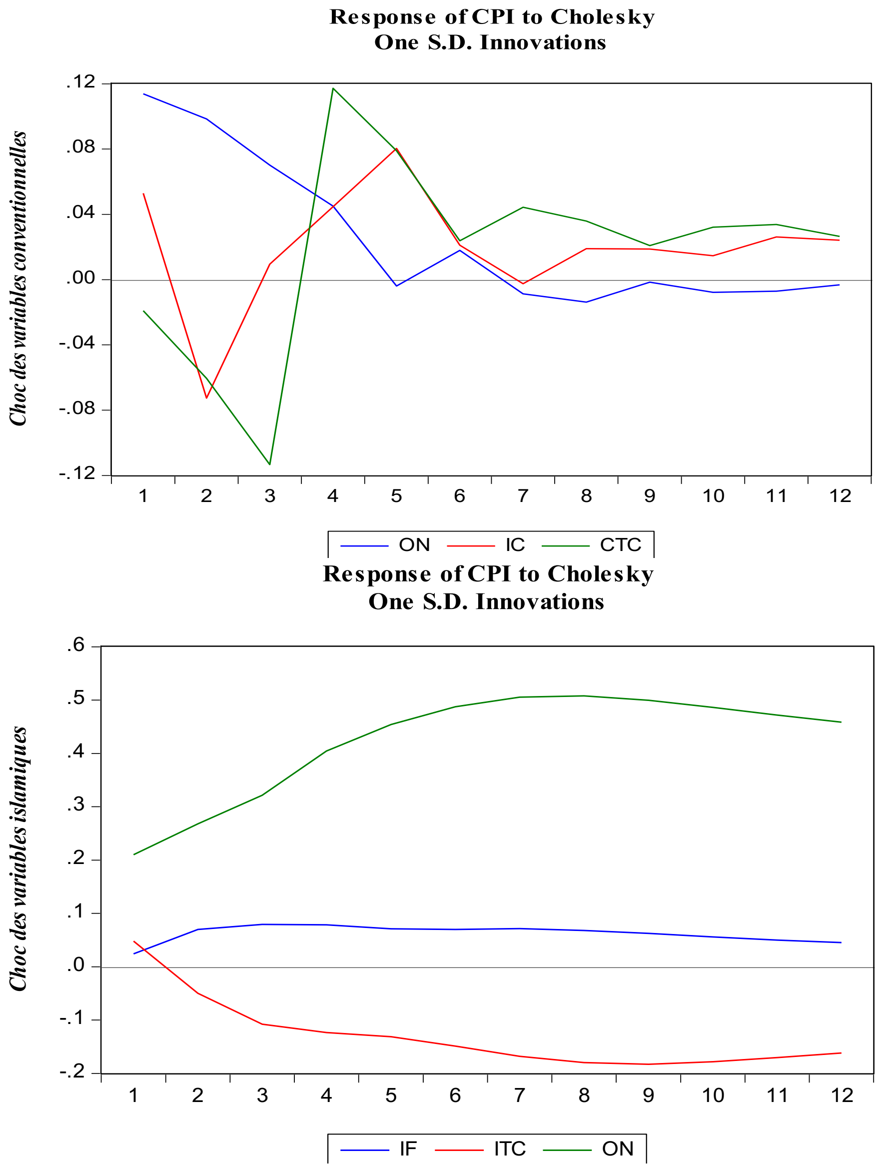


Source: Authors' elaboration from Eviews

Islamic banks respond differently to monetary shocks than conventional banks, with a notably cyclical response of their financing interest rates. This relationship can be explained by weaker demand for Islamic loans during periods of high-interest rates, as consumers are reluctant to take out loans at high-interest rates. In the study Bikker and Hu (2002), the authors examined the relationship between Islamic financing interest rates and monetary interest rates using data on Indonesian banks. They found a significant negative correlation between the two, suggesting that Islamic banks lend pro-cyclically. The authors proposed an explanation for this relationship, namely that consumers avoid taking out loans at high-interest rates during periods of high-interest rates, leading to a decrease in demand for Islamic loans and a decrease in Islamic financing interest rates. This study provides empirical evidence for the relationship mentioned in the initial paragraph.

Regarding bank characteristics, namely liquidity and market power, conventional banks increase their interest rates while maintaining stable liquidity positions. On the other hand, for Islamic banks, the level of liquidity appears to be sharply declining, showing a negative correlation with financing rates. In this context, another interesting study is that of Beck et al. (2013), which compared the business models, efficiency, and stability of Islamic and conventional banks. The authors found that Islamic banks tend to be less profitable than conventional banks, but they are also more resilient to economic shocks, which can be attributed to their different financing structures and risk aversion. Furthermore, the authors found that Islamic banks are more efficient in terms of resource utilization, including capital and labour than conventional banks. This study highlights the importance of considering the distinctive characteristics of Islamic banks and their impact on their behaviour and performance compared to conventional banks.

Figure 2: Simulation of the reaction of the credit volume in the Indonesian banking system



Source: Authors' elaboration from Eviews

The impulse response function of credit volume reflects the negative response of conventional credit supply to monetary rate shock. However, Islamic financing appears to be more affected by monetary shock, as the decline in credit supply is simultaneous with the shock, whereas, for conventional banks, the impact of the rate shock had a gradual effect on the credit supply. Credit supply also depends on liquidity position and market power, leading to different reactions from banks. In fact, for conventional banks, the interest rate does not immediately affect credit supply until the fifth month following the shock.

The combination of liquidity level with the non-competitive and concentrated nature of the Indonesian banking system largely explains the credit behavior of financial institutions. On the side of Islamic banks, market concentration and low liquidity levels amplify the reaction of credit supply to the monetary rate shock. Furthermore, liquidity and market power are among the structural factors behind this asymmetry in the transmission of monetary policy in a dual banking system.

Several studies have confirmed that monetary policy transmission is asymmetric in banking systems worldwide, particularly in dual banking systems. The results of these studies indicate that market concentration and liquidity level significantly impact the dynamics of credit supply (Flannery and Rangan, 2006; Damar and Pirmana, 2016; Anggraeni and Wardhani, 2019). Indeed,

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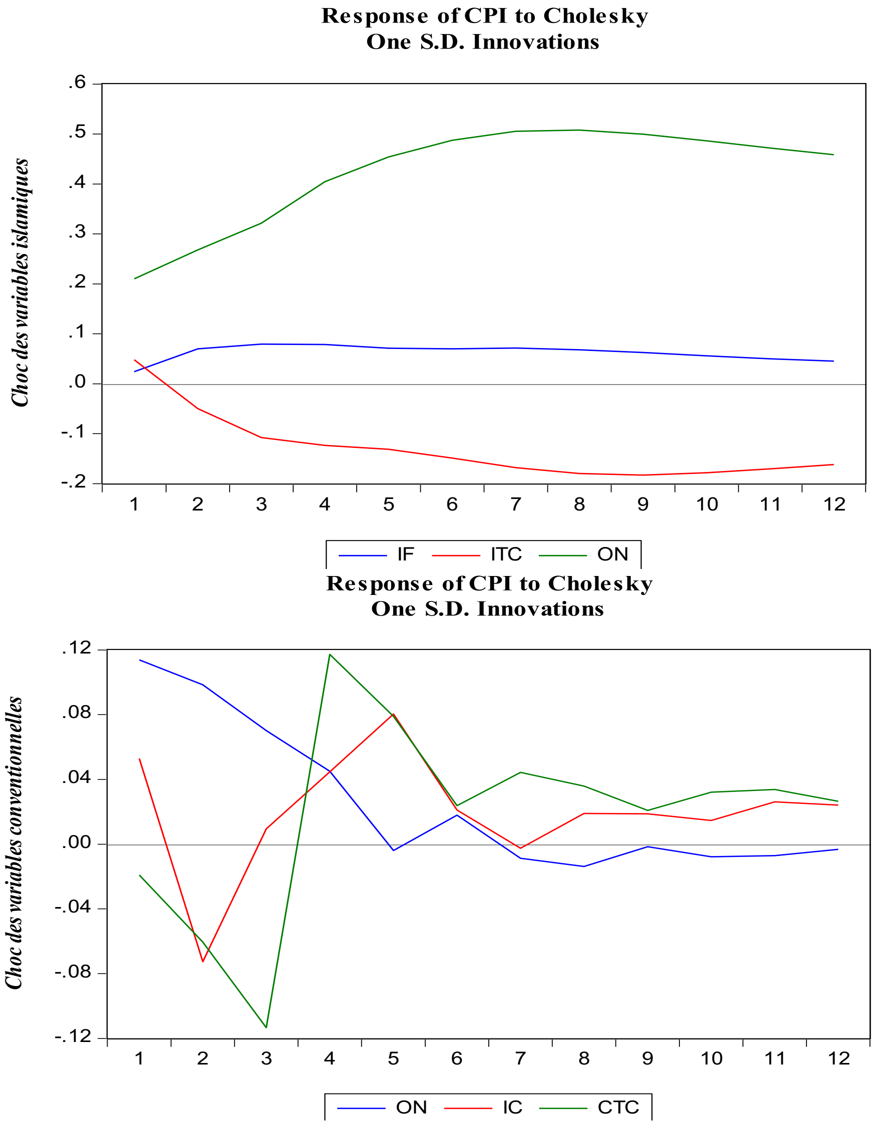
a study conducted in Indonesia on the reaction of Islamic and conventional banks to rate shocks from the Bank of Indonesia found that Islamic banks are more sensitive to rate shocks than conventional banks, with a greater and more immediate reaction (Ahmad et al., 2020).

Figure 3: Simulation of the response of the Consumer Price Index (Indonesian banking system)



Source: Authors' elaboration from Eviews

Upon examining the industrial production index, it was observed that an increase in the Islamic financing rate during the second month led to a tightening of Islamic credit, resulting in a marked decline in production growth (-1.37%). In comparison, for conventional credit, the impact on production growth was less severe, with a decrease of 0.05% over the same forecast horizon. These results suggest that in the context of monetary policy transmission through the bank lending channel, the prolonged impact of the monetary interest rate, by causing an increase in the Islamic financing rate, generates a contraction of Islamic financing that affects real production, as evidenced by the significant negative response of the industrial production index to Islamic financing. Moreover, the responses of the objective variables to monetary policy shocks are consistent with the predictions of the bank lending channel of the monetary transmission process, such that a restrictive monetary policy limits the banks' ability to provide credit, resulting in a contraction effect on the real economy. Islamic banks, having limited access to other funding sources than deposits, have a more sensitive credit volume to a monetary shock than conventional banks.

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Similar studies have been conducted in other countries, confirming the results of this study. For example, a study by Basher et al. (2016) in Kuwait showed that Islamic financing is more sensitive to interest rate shocks than conventional financing. Likewise, a study by Abdul-Majid et al. (2018) in Malaysia showed that Islamic banks are more affected by changes in interest rates than conventional banks. These results reinforce the need to consider the specificities of Islamic banks in implementing monetary policy.

6. Discussion of study findings: Insights and implications

At the level of this analysis, the study focused on the mechanism of monetary policy transmission in a dual banking system, highlighting factors that may impact this transmission process. To achieve this objective, an analytical study was necessary to address the key questions concerning the effectiveness of monetary policy transmission and the potential effect of asymmetry in the transmission process.

Within this analysis, the research focused on the monetary policy transmission mechanism in a dual banking system. To achieve this, the study sought to answer the key questions regarding the effectiveness of monetary policy transmission and the potential impact of asymmetry in this transmission process. An analytical approach was adopted to achieve this objective.

Indeed, the results of the econometric study show that monetary policy is effectively transmitted to bank conditions through the channel of bank lending in the case of a dual banking system composed of both conventional and Islamic banks. These results appear to be consistent with those found by previous empirical studies such as the works of Kutan and Wyzan (2005), Ibrahim et al. (2008), Hakim (2014) and Awad (2015).

Furthermore, the bank credit transmission channel is an important channel through which monetary policy can affect the economy. This channel relies on the impact of the variation in the supply of bank financing on the behavior of economic agents following a monetary shock. It makes sense in an environment where information is asymmetric, and the arbitrage between credit and securities is characterized by imperfect substitutability.

In this context, non-financial agents dependent on bank credit, such as households and new businesses, are directly affected by the rationing (increase) of borrowing opportunities due to an increase (decrease) in refinancing conditions of banks with the central bank. Moreover, when a tightening of monetary policy is initiated, it is observed that loans granted for economic activity decrease due to both price and volume effects. In the former case, banks pass on the increase in their financing costs to their interest rates. This discourages some potential borrowers for whom the cost of capital seems too high. In the latter case, banks prefer to cap loan interest rates at a given level.

Thus, the bank credit transmission channel constitutes an important vector for the transmission of monetary policy in an environment characterized by asymmetric information and imperfect substitutability between credit and securities. Households and businesses dependent on bank credit are particularly sensitive to changes in refinancing conditions of banks with the central bank, which can lead to credit rationing in case of a tightening of monetary policy.

Monetary policy also impacts the behavior of banks in terms of credit distribution, which proves that banking intermediaries play a central role in the transmission of monetary policy since the effects of monetary policy depend on its impact on these banking institutions. The results of this study also support the impact of the market structure of the banking sector on the transmission process of monetary policy to banking conditions for a dual banking system. Indeed, according to the Structure-Conduct-Performance (SCP) model, the degree of competition and concentration in the banking sector affects the behavior of banks in terms of the impact of changes in market interest rates on their lending rates. Banks with a large market power can absorb changes in monetary policy to protect their profitability. Thus, a monetary shock will have less impact on interest rates. This conclusion is consistent with the results found by other empirical studies, such as that of Beck and Webb (2003), concerning the influence of monetary policies and institutional characteristics of a country on life insurance consumption. Cukierman (1996) highlighted the importance of the market structure of the banking sector for the transmission of monetary policy. Demirgüç-Kunt and Huizinga (2010) also found that banks' financing and activity strategies affect their risk and return. Finally, Ehrmann and Fratzscher (2004) analyzed central bank communication during press conferences to explain their monetary policy.

Within this context, the concentration of various banking systems may partially explain the differences in monetary policy transmission modes, particularly in countries with a dual banking system. Furthermore, several studies support these findings, including the research conducted by Ehrmann et al. (2001), Khan and Mirakhor (2010).

Bank liquidity can always be a source of disruption in the transmission of monetary policy. The results indicate that less liquid banks respond more strongly to a monetary shock than those with a very high level of liquidity. In the case of restrictive monetary policy, the most liquid banks can easily respond to loan demands without being forced to tighten their credit supply. The impact of the monetary shock is more significant on the lending function of less liquid banks. In this analysis, Islamic banks can better transmit monetary shocks to their credit supply due to their lower liquidity than conventional banks. These results are supported by previous empirical studies indicating that the level of bank liquidity alters the transmission of monetary policy, such as Deyoung et al. (2004), Ferrouhi (2014), and Altunbas et al. (2010).

7. Conclusion

In conclusion, Islamic finance has emerged as a relatively new financial system integrating ethical considerations into financial dynamics. Although Islamic finance is more transparent than conventional finance, it is not exempt from flaws and limitations. One of the main challenges of Islamic finance is implementing a monetary policy by Sharia principles, especially in economies that have adopted a dual banking system such as Turkey, Malaysia, and Indonesia. The central bank must conduct monetary policies that influence conventional and Islamic banking systems to effectively impact the overall macroeconomic situation, while remaining faithful to Sharia principles.

Thus, the main objective of this research is to identify and analyze the process of monetary policy transmission via the bank lending channel in a dual banking system. In addition, this research examined key factors that determine the banking sector's resilience to monetary shocks, such as liquidity and the structure of the banking market. These factors are advanced in the literature as potential influences on transmission channels by affecting bank behavior regarding the impact of monetary impulses on their rates. The results also support the contribution of these factors in explaining the difference in reaction of conventional banks versus Islamic banks to a monetary shock, justifying the asymmetry of monetary policy transmission in a dual banking system.

After building a theoretical framework based on the literature review, the empirical study focused on a sample of three countries that adopted a dual banking system from 2007 to 2015. The empirical method used was the vector autoregressive model, particularly estimation with the cointegration model.

According to the results obtained from the empirical study, the transmission of monetary policy is confirmed in the case of a dual banking system via the bank lending channel. The long-term relationship and dynamic adjustment of bank rates following a monetary shock are confirmed. Furthermore, the hypothesis of asymmetry in monetary policy transmission in a dual banking system is confirmed. Islamic banks show a higher degree of sensitivity than conventional banks regarding the impact of monetary rate changes on their rates.

This comparative analysis of the behaviour of Islamic and conventional banks regarding the transmission of monetary impulses through banking conditions offers a more scientific and in-depth perspective on the mechanism of monetary policy transmission in a dual banking system. The main factors influencing bank sensitivity to rate adjustment in response to a monetary shock are also identified.

Considering the growing importance of Islamic finance in the global financial landscape, this research provides valuable insights for policymakers in countries with dual banking systems. They can use these insights to develop more effective monetary policies that promote economic stability and growth while adhering to Sharia principles.

In addition to this study, it is noteworthy to highlight inherent limitations in analyzing the asymmetry of monetary policy transmission between conventional and Islamic banks using vector error correction models (VECM). Firstly, data availability and quality, particularly for Islamic banks, could pose constraints. Additionally, the operational diversity of Islamic banks might introduce some heterogeneity in the findings. Regional and contextual variations and market-specific nuances could restrict the generalizability of outcomes to other contexts. Moreover, the causal relationships and directionalities among variables are not explicitly established by VECM models. Furthermore, the sensitivity of results to model specifications, lag selections, and included variables could impact conclusions. Lastly, the relatively brief study duration might limit the observation of long-term trends. Despite these limitations, this study offers significant insights into how monetary policy is transmitted within these two bank categories.

Furthermore, this study paves the way for several promising avenues for future research. Extending the analysis period could shed light on longer-term trends in monetary policy transmission. Exploring regional variations in transmission mechanisms and incorporating additional economic variables could enhance understanding. Investigating the behavioural aspects of banks' responses, as well as their implications for financial stability, presents valuable opportunities. Comparative studies across different regulatory contexts and the effects of innovation and digitization on transmission are worthy of exploration. Lastly, analyzing how regulatory changes influence transmission dynamics introduces an intriguing realm of investigation. These potential avenues promise deepening insights and contributing to a broader comprehension of monetary policy transmission across banking sectors.

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ASSESSING THE ROLE OF ISLAMIC MICROFINANCE: A WOMEN EMPOWERMENT CASE STUDY

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Abstract

The main objectives of this paper are three-fold. First, to identify the barriers to financial independence of female vegetable producers in the Gambia. Second, to assess the potential use of Islamic financing modes as enablers that can capacitate women in the Gambia's horticultural sector. Finally, it proposes an inclusive financing mode to empower women in the country's horticultural sector. To achieve these three objectives, different methodological approaches were used, drawing on various data collection techniques, including primary and secondary data collection methods. The results from the study indicate that lack of irrigation and storage facilities, access to markets and farming inputs (seeds, fertilisers) are the main challenges women encounter in their gardening activities. The study further found that the benefits of accessing and using microfinance services are impeded by these challenges, thereby preventing women vegetable producers from upscaling their horticultural activities. However, it is established in the paper that microfinance has great potential for promoting the financial independence of women in the Gambia, particularly women who engage in the horticultural sector. Based on these findings, the paper recommends using Parallel Salam Contract to tackle the problems of irrigation, storage facilities and market access. Murabahah/Musawamah contracts are also suggested to tackle the issue of the lack of farming inputs used by women in the horticultural sector. We further recommend that Islamic financial institutions educate the public about their business activities and for the regulators, including the Central Bank of the Gambia, to establish a Central Shari'ah Board to ensure the unification of fatwahs in the emerging Islamic finance sector in the Gambia, thereby ensuring transparency in the activities of the financial institutions participating in this sector and thus encourage more investors to partake in this burgeoning part of the Gambian economy.

Keywords: Economic empowerment, Women empowerment, Islamic microfinance, Women vegetable producers, Gambia.

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1. Introduction

Top on the agenda of the United Nations (UN) Sustainable Development Goals (SDGs) and the African Union (AU) Agenda 2063 is to end poverty, inequality and hunger in all its forms everywhere. While overall poverty rates have improved in the past decades, some countries still experience a rise or no reduction in poverty rates, particularly sub-Saharan African countries. As of 2018, 696 million people live in extreme poverty, and more than 430 million of these people live in sub-Saharan Africa, where more than 40% of the people live in extreme poverty, the majority of whom are women. Economically empowering women is key to achieving the SDGs' priority goals and the AU Agenda 2063[1]. Previous research suggests that increasing women's ability to control resources significantly impacts development outcomes[2]. In particular, such studies in the case of Ghana conclude that women's share of assets, including farmland in particular, is positively related to household budgets on food expenditure (Doss, 2006). This is because women tend to spend more on the household than men. As argued by the Nobel Peace Prize winner Muhammad Yunus, giving credit facilities to women have a greater multiplier effect than giving it to men. According to Yunus, this is simply because men tend to spend by marrying more wives, buying cigarettes and alcohol or spending on other non-household related items.

In the context of The Gambia, the agricultural sector is the second main driver of the country's economy, accounting for 20.4 per cent of its Gross Domestic Product (GDP) as of 2017. The sector employs 70 per cent of the country's population. Of these, women are the main players in the sector, accounting for 54.27 per cent of the total sector's labour supply, who depend on agriculture for their survival[3]. Despite this, women continue to face several constraints, including a lack of access to finance and adequate irrigation and storage facilities, traditional farming techniques, etc. These challenges have led to low productivity in the agriculture sector in the Gambia, which critics blame on the country's patriarchal power relations.

Women's empowerment requires challenging patriarchal power relations that result in women having less control over material assets and intellectual resources. Kabeer (2001) mentions that women's empowerment requires system transformation, especially in institutions that support patriarchal structures. Patriarchy is a problem in most developing countries, and the Gambia is no exception (National Development Plan of The Gambia, 2018-2021).

The evolution of the microfinance industry has been accompanied by a significant transformation in low-income individuals' access to financial services. According to Ernst and Young (2014), more than 80 per cent of the poorest clients of the microfinance industry are women. However, access to formal financial services is still a major challenge for them. According to the 2017 Global Findex Report published by the World Bank Group, more than one billion women cannot access the formal financial system. Moreover, the International Finance Corporation also reports that an estimated USD 300 billion financing gap exists for formal women-owned small businesses, and more than 70 per cent of women-owned small and medium enterprises (SMEs) have inadequate or no access to financial services[4]. According to Demirguc-Kunt et al. (2017), the gender gap in account ownership both at global and in developing country levels has been stagnant at 7 per cent and 9 per cent, respectively, for the past six years (i.e. 2011-2017). The same report reveals that women represent 56 percent of the total unbanked population.

Poverty rates in The Gambia have been stagnant at 48 percent for the past decade (Budget Speech of The Gambia, 2018), 70 percent of the population depends on agriculture for their survival, majority of whom are women (The National Development Plan of The Gambia (2018-2021). Although women are the main players in the Gambian

1 https://www.worldbank.org/en/news/press-release/2020/05/28/investing-in-girls-and-womens-empowerment-in-and-beyond-the-sahel

2 https://www.un.org/womenwatch/daw/public/WorldSurvey2009.pdf

3 https://www.export.gov/article?id=Gambia-Agricultural-Sector

4 https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/bridging+the+gender+gap+in+access+to+finance

agricultural sector, accounting for 54.27 per cent of the total labour force in the sector, they face several constraints, such as access to credit facilities, irrigation, storage and other productive resources, which lead to lower productivity in their farming activities.

Most female farmers in the Gambia are engaged in food production, horticulture, poultry, and small ruminant production. However, the output of their products is mainly used for family survival or sale in local markets (Sanyang, 2008). As a result, they earn less from their farming activities because the produce sold in the market is usually exposed to competition, forcing them to sell their products at heartbreaking prices. This is because farmers depend highly on the rain. As a result, they all approach the market simultaneously to sell their products. Considering the limited market available for their products and the lack of storage facilities, they usually sell their goods at prices less than what they are worth since most products are perishable. According to Sanyang (2008), a massive increase in vegetable production has been experienced in The Gambia for decades. However, the income gained by women is not commensurate with yield gains. On the other hand, women also face marketing constraints, especially in the hotel industry and the export market, due to the presence of large-scale producers.

Therefore, this paper seeks to address two main research questions. First, what are the main obstacles hindering the empowerment of Gambian women in the horticulture sector, and second, is Islamic microfinance a better alternative in solving the existing constraints of Gambian women vegetable producers?

The paper will attempt to extend the literature on Islamic microfinance and its role in promoting women's empowerment within the horticultural sector by addressing these fundamental questions.

In order to achieve this broad objective, the rest of the paper will proceed as follows. We will begin by discussing the challenges faced by women in the horticultural sector in the Gambia, review the relevant recent literature, outline the method adopted for the study, and present the analysis of the key findings and the conclusion and policy implications of the findings of the paper.

1.1 Challenges Faced by Women in the Horticultural Sector

Women in the `horticultural sector in the Gambia face numerous challenges, ranging from lack of productive resources, marketing avenues, low prices, etc[5].

1.1.1 Lack of Productive Resources

The lack of productive resources such as irrigation facilities, farming space (land), capital, storage and processing facilities, marketing facilities and the existing poor farming techniques, etc are the main hindrances affecting the productivity of these women farmers. Most of the irrigation facilities utilized are traditional wells, which are very deep and gets dry during the dry season. Sadly, most of the vegetables they grow during the dry season cannot withstand dry conditions, which poses a serious challenge to these women in watering their gardens. The few gardens that are lucky to have boreholes also battle with high cost of electricity to keep the boreholes running as well as the exhorbitant cost of maintaining these borehole facilities in the event of break down, and so forth.

1.1.2 Lack of Marketing Avenues

Lack of marketing opportunities for the women farmers keeps them in the dark to answer important economic questions such as what to produce? Who to produce for? When to produce? And how/where to distribute the products? This lack of marketing opportunities serve as a barrier that impedes the utilization of the full potential of the sector, and might perhaps be one of the causes of the low prices these women receive for their outputs. If the marketing

[5] https://www.fao.org/gambia/news/detail-events/en/c/335099/#:~:text=The%20women%20farmers%20cited%20lack,vegetables%20production%20in%20the%20country

avenues are provided for them perhaps women will know what their end users want and when it is needed in other to plan accordingly. However, the growing tourism sector characterized by the establishment of more hotels and restaurants creates opportunities for the marketing of vegetable products in the Gambia. Moreover, the steady demand of fruits by consumers in the UK is also another opportunity that needs to be exploited.

1.1.3 Low Prices

As mentioned earlier, most of the outputs of these women are used to feed the family and if there is any excess, they sell them in the local markets at very heart breaking and disappointing prices. The fact that their farming activities are subsistence in nature reduces the income that these women can generate from agriculture. In addition, the little they sell in the local markets are sold below their desired prices. Because their outputs are most of the time perishable and they grow almost the same products, and at the same time makes their positions even more precarious. They all harvest their outputs at ones and approach the market at the same time, providing excess supply of what is needed by the consumers. The lack of storage facilities and access to international markets leave these women with no options other than to sell their products at low prices. These and other challenges affect the income generated by Gambian women from their farming activities.

1.2. ISLAMIC MICROFINANCE AS A TOOL FOR EMPOWERING WOMEN.

Family empowerment is what is more advocated for in Islamic finance as opposed to women empowerment[6]. Due to the Islamic code of ethics regarding co-gender interaction, it could be a valid point to focus more on family empowerment than women empowerment. However, this might require additional work from IMFIs such as thorough screening of spouses to assess their credit worthiness. If this rule is strictly confined to involve both parties in the contract, it might exclude some portion of the population from accessing finance through Islamic microfinance institutions. For example, if a widower/unmarried lady needs financing and these requirements are preconditions to accessing finance, they might have to resort to other means which might not be in their best interest and the interest of the microfinance institution as well. We totally agree with the basis of family empowerment but if IMFIs should implement it,there should be room for flexibility to consider extreme cases when such might not be suitable for family financing. In addition, considering the nature of the job that women do, family financing might not be an ideal option. Taking for example women in the agricultural sector, we find that most of the time, their farming activities are done as group or at community level. So, if empowering them should be done at family level as mentioned earlier, it might not be fitting in such situations.

For the purpose of this paper, two of the projects funded by the Bank of Khartoum (BOK) Sudan in collaboration with the Islamic Development Bank (IDB) and International Finance Group, will be used as reference points on how Islamic microfinance could be a better alternative in empowering women economically when compared to conventional microfinance institutions. Despite the fact that these projects did not focus mainly on women, a replica of the above-mentioned projects could be done for women in the agricultural sector or any other productive sector that women are actively engaged in. This has the potential of enhancing the financial independence of women as they become more and more self-reliant, which is a virtue espoused by Islamic scholars. It is worth mentioning that both projects were successfully implementd.[7]

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[6] (Obaidullah, 2008) ”One of the potential benefits of microfinance in Muslim societies is the empowerment of Muslim women. While the ability of microfinance institutions to deliver financial services to rural women in gender-segregated societies is commendable, working with Muslim women is a sensitive issue that often raises accusations of meddling with social codes. Some Islamic microfinances seek to overcome this through a shift in focus from “women empowerment” to “family empowerment”.

[7] https://www.worldbank.org/en/news/video/2014/08/05/bank-khartoum-profit-sharing-farmers

"According to Az Zubayr ibn al-Awwām (may Allah be pleased with him), the Prophet (may Allah's peace and blessings be upon him) said: "That one of you takes his rope, goes to the mountain, cuts some firewood, carries it on his back, and sells it, thereby Allah saves his face (his dignity) is better for him that to ask people and they either give him or deny him."[8]

1.2.1. The Moringa and Jatropha Project

The Bank of Khartoum, through its partnership with the Islamic Development Bank (IDB) and the International Business Financed Group, funded the localization of the Moringa and Jatropha projects in Sudan. These IDB-financed projects provide electricity and irrigation facilities, farming equipment and inputs (seeds, fertilizers, pesticides), service facilities and living allowances in the form of horticultural inputs needed during planting. Payment of the total funding will be covered by delivering specific amounts of Moringa seeds, Alfalfa and Jatropha seeds (as agreed by the parties), after every harvest throughout the three-year period the projects are being financed. The Islamic Development Bank arranged with Ishraqa Khadra and Co. to buy these products from them after they were delivered by the farmers. The company (Isharaqa and Co.) also agrees to buy the farmers' excess products not delivered to the bank. The Islamic financing modes used in this project are Salam and Murabahah (Table 1) for details of the Moringa and Jatropha projects.

[8] Al-Bukhari; Earning one's living from the labor of one's hand is better than asking people for their money, whether they give him or refuse. That a person takes his rope and goes out to the pastures, farms and forests, collects some firewood, carries it on his back and sells it, thereby maintaining his dignity and self-respect and sparing himself the humiliation of begging is far better for him than to ask people, whether they give him or deny him. Asking people (for money) is a humiliation, and the beliver is honorable, not self-abasing.
https://hadeethenc.com/en/browse/hadith/3785

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Table 1. Funding Details of the Moringa and Jatropha Project by Bank of Khartoum

Title	**Localization of Moringa and Jathropha**
Project Objectives	▪ To empower families and graduates in producing cash crops to improve their livelihood. ▪ To boost the production of cash crops Moringa and Jatropha for domestic consumption and export.
Approved Finance Amount/Limit	USD 3.50 million
Financing Tenor	3-year framework, 9-month grace period for Alfalfa, and 18-month grace period for Moringa and Jathropha. Salam delivery each 6 months for Alfalfa, and 12 months for Moringa and Jatropha.
Target Return on Investment for BOK	20%
Target Returns for Beneficiaries (During Implementation Period)	Monthly- SDG 2,100 per family (SDG 420 per beneficiary)
Target Returns for Beneficiaries (After Implementation period)	Monthly-SDG 2,625 per family+ownership of Moringa and Jatropha farm project assets.
Actual Return on Investment as per the reported date	18%
Targets Groups and Beneficiary	Rural poor villagers. 150 families (approximately 600 beneficiaries), grouped in 10 families per financing
Islamic Financing Modes	Salam (shiraa) with the farmers for Moringa and Jatropha, salam (bay) with buyers- Ishraqa Khadra Co., Murabahah with farmers for buying cows/livestock.
Non-Financing Intervention/Services	▪ Feasibility study- Ishraqa Khadra Co. and Bank of Khartoum ▪ Technical expertise to ensure production quality- Ishraqa Khadra Co. ▪ Support facilities (electricity, water, equipment and implements) is included in salam price ▪ Agriculture inputs (seeds, fertilizers, pesticides etc.) is included in salam price ▪ Living expense (vegetable cultivation and livestock breeding) is included in Salam price. ▪ Marketing of products. Beneficiary pays in commodities to Bank of Khartoum, which will sell the products to Ishraqa Khadra Co.
Stakeholders and partners	Ishraqa Khadra Co.
Guarantees and Collaterals	▪ No Collaterals ▪ Ishraqa Co. provides a technical expertise to ensure quality of the products ▪ Isharaqa Khadra Co. provides a unilateral promise to buy the products of the farmers

	▪ Ishraqa KhadraCo. Provides guarantee of delivery of products by farmers
Identified Risks and Mitigation Measures	Ishraqa Khadra Co. dishonors the promise to buy- the products chosen have been through a feasibility study and qualified as globally traded Farmers' negligence-the salam contract was used, not Mudarabah. In case of non-delivery, the guarantee from Ishraqa Khadra Co. can be exercised

Source: Alsagoff and Surono (2016, Empowering the poor through Islamic Microfinance: Experience of the Bank of Khartoum in Value Chain Project Financing in Sudan.

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1.2.2. Solidarity Group Financing-Farmers to Market (F2M)

The Finance to Market (F2M) program was also funded by the microfinance unit of Bank of Khartoum (BOK) Sudan through its main partners Islamic Development Bank and International Business Finance Group and other collaborators, including Central Bank of Sudan, Ministry of Agriculture, Ministry of Social Welfare, Zakah Chamber, World Food Program, and Government of Sudan's Strategic Food Security Reserve. The bank provided finance in the form of farming inputs and equipments and working capital worth SDG 500 for each farmer. The payment of the funds will be in the form of specific amounts of the harvest which the bank decided with the World Food Program and the Strategic Food Security Reserve to be purchased from the bank after delivery by the farmers.

See Table 2 for details of the F2M project.

Table 2. Funding Details of the Farmers to Market (F2M) program

Title	**Localization of Moringa and Jathropha**
Project Objectives	▪ To support and empower small farmers and link them to markets ▪ To strengthen the food security of farmers and uplift the farmers from the vicious cycle of poverty ▪ To achieve self-sufficiency for farmers and surplus in production for markets
Approved Finance Amount/Limit	USD 8.22 million, each SDG 500 (30% for seeds purchase, 30% for land development, 30% for harvest)
Financing Tenor	Maximum 8 months
Target Return on Investment for BOK	20%
Target Returns for Beneficiaries (During Implementation Period)	Monthly- SDG 2,100 per family (SDG 420 per beneficiary)
Target Returns for Beneficiaries (After Implementation Period)	Monthly- SDG 2,625 per family
Actual Return on Investment to date	18%
Target Groups and Beneficiaries	73,000 smallholders under 878 farmers associations in 7 states (23,677 through direct contract, and 48,396 through mudarabah with other commercial banks)
Islamic Financing Modes	Salam (shiraa) with farmers, Salam (bay') with Governments of Sudan's Strategic Resserve, Mudarabah with commercial banks
Non-Financing Intervention/Services	▪ Technical feasibility study and linking the farmers with other partners (Bank of Khartoum) ▪ Technical assistance for product quality (Min. of Agriculture extension service) ▪ Food for farmers during planting period (World Food Program) ▪ Grouping the farmers to associations (Farmers Union, Bank of Khartoum) ▪ Coordination and monitoring of partners activities (BOK) ▪ Building the capacity of farmers group in management and follow up (Ministry of Agriculture extension, BOK) ▪ Link farmers to local, regional and global markets (BOK)
Stakeholders and partners	Bank of Sudan, 3 commercial banks, World Food Program, Insurance/Takaful Companies, Federal Ministry of Agriculture, Farmers Union, Ministry of Social Welfare, Zakah Chamber, Strategic Inventory Department

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Guarantees and Collaterals	▪ Group reference ▪ Crop Insurance (Takaful Company) ▪ Guarantee (Zakah Chamber)
Identified Risks and Mitigation Measures	▪ Bloated operational expense due to extensive numbers of beneficiaries-Salam is conducted with associations of 50-100 farmers. ▪ Delinquency-non-performance of farmers to conduct failure-Takaful ▪ Business failure-Zakah Chamber ▪ Unfavourable market price-the crops produced are staple and substantial crops (sesame/millet/corn/beans), for which price is determined by the Government of Sudan.

Source: Alsagoff and Surono (2016), Empowering the poor through Islamic Microfinance: Experience of the Bank of Khartoum in Value Chain Project Financing in Sudan**.**

2. Literature review

2.1 Background

Despite the intense debate on women's empowerment, there is no unanimous definition of the term empowerment. However, a widely used definition is given by Kabeer (2001, as cited in Malthora et al. 2002), which is the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them. For Chattopadhyay (2005), empowerment is expanding freedom of choice and action in all spheres (political, economic, and social) to shape one's life. Chattopadhyay (ibid) believes the empowerment process should be multidimensional in that it reflects people's economic, political, legal and social lives.
The feminist views on empowerment emphasise transferring power to women, which they believe will reduce gender differences and limit sex inequality.
Empowerment is further defined as the process and its result whereby the powerless or less powerful members of the society gain access and control over material and knowledge resources, challenging the ideologies of discrimination and subordination, which justify this uneven distribution (Rai, 2016). Additionally, Rai (ibid) further described women empowerment as the process by which women gain greater control over material and intellectual resources and challenge the ideology of patriarchy and gender-based discrimination in all institutions and structures of society.
Despite these differences in the definition of empowerment, emphasis is unanimously placed by most of these authors on an individual's choices, control and power.
As a result, this literature review will cover previous research on economic empowerment in general, empowerment of women in the horticulture sector, Islamic microfinance, and women empowerment, more specifically.

2.2 Economic Empowerment

Economic empowerment is about making markets work for women (at the policy level) and enabling women to compete in markets (at the agency level) (World Bank Group, 2006). The World Bank's definition focuses on four key economic markets, i.e. land, labour, product and financial markets, due to their potential to increase women's productivity and their level of earnings. In a policy guide on empowerment for poverty reduction and growth, the OECD (2011) asserts that economic empowerment is the capacity individuals have to make choices on the kind of productive activities to be involved and invest in, make decisions on how and when to engage in markets and to have an impact on the terms and conditions in which they do so.
Top on the agenda of the Sustainable Development Goals (SDGs) is to "end poverty in all its forms everywhere". Economically empowering women is key towards achieving this fundamental goal. More than half of the world's total poor population are women. Moreover, the United Nations also revealed that "globally, there are 122 women between age 25-35 living in extreme poverty for every 100 men within the same age group. In a study on the economic empowerment of women and poverty in urban Sudan conducted by Elsheikh and Elamin (2016), it was found that women without assets, private business, no level of education and high economic dependency are mostly poor.

2.3 Empowerment of Women in the Agricultural Sector

The prophet said,"Nobody has ever eaten a better meal than that which one has earned by working with one's own hands. The prophet of Allah, David used to eat from the earnings of his manual labor."[9]

The agricultural sector in most developing countries is a key contributor to economic growth; however, the sector usually underperforms due to lack of productive resources, poor farming techniques and over-dependence on rain,

[9] Volume3, Book34, Number 286, Narrated Al-Miqdam,
https://www.iium.edu.my/deed/hadith/bukhari/034_sbt.html#:~:text=Volume%203%2C%20Book%2034%2C%20Number%20286%3A,earnings%20of%20his%20manual%20labor.%22

making it vulnerable to external shocks such as droughts. In addition, women, being the main actors in the sector, face additional challenges in terms of access to and ownership of productive resources due to gender stereotypes. This affects their productivity and earnings from farming activities, affecting the sector's overall performance.

On average, 43% of the agricultural labour force in most developing countries and specifically more than 50% in most African and Asian countries, is made up of women, yet certain discriminatory practices against women exist in the agricultural sector in terms of access and ownership of productive resources (FAO, 2011a). In a more recent report, the United Nations, 2014) further revealed that if these women farmers in developing countries had access to productive resources just like their male counterparts, their output could increase from 2.5 per cent to 4 per cent, which would translate to a drop in global hunger from 17 per cent to 12 per cent.

Thus, it is evident that effective and efficient participation in agricultural activities requires ownership and access to productive resources such as land, farming tools and equipment, access to financial resources, etc., without which activities and productivity in the agricultural sector will be impeded. This point is affirmed by Saraboni et al. (2014) in their paper on women empowerment in agriculture and its role in food security in Bangladesh. In that paper, the authors demonstrated that the ability of women farmers to generate income is severely constrained by their limited use, ownership and control of productive physical and human capital.

Similarly, Doss and Deere (2006) argued that when women farmers own productive resources such as land, they improve their overall welfare.

Some empirical evidence suggests that increasing the ability of women to have control over resources has a significant positive impact on development outcomes (See Doss, 2006). According to Doss (ibid), women’s share of assets in Ghana, including farmland, is positively related to household budgets on food expenditure. Other studies also affirm that the larger the proportion of women's household income, the larger the expenditure on food and other household needs (See Gummerson and Schneider, 2013). This is because women tend to spend more on the household than men. As argued by Mohammed Yunus, the 2006 Nobel Peace Prize winner, giving credit facilities to women has a greater multiplier effect than giving it to men because the latter tend to spend on marrying more wives or buying cigarettes, alcohol or other non-household related expenses.

2.4 Islamic Microfinance and Women Empowerment

Like conventional MFIs, most of the clients of Islamic microfinance institutions are women. However, the reason for giving more attention to Islamic microfinance institutions is quite different from that of the conventional MFIs. Conventional microfinance institutions target women due to the view that women use their funds more efficiently to increase their income levels, increase the welfare of the family by contributing to the children’s education, household items and have high records of loan repayment. Men on the other hand, spend the funds on unproductive items such as cigarettes, marrying more wives, etc., which can spark tension in the homes, resulting in disputes in the family.

According to Ahmed (2002), Islamic microfinance institutions (IMFI’s) have an eco-friendlier approach to empowerment than their conventional counterparts. Instead of targeting women alone, the target group is the family, which involves both the woman and her spouse. This is evident in the nature of the contract between the Islamic Microfinance Institution and the beneficiary, in which the couple sign the contract and are jointly liable for payment of the funds (ibid). Interestingly, most of the non-financial services such as teachings on the Islamic ethical values offered by Islamic microfinance institutions are received by women. This improves their knowledge of the Islamic religion, which in turn is further transferred to other members of the family, especially the children.

Rahman (2007), in his work on Islamic microfinance (IMF) argued that the main goals of microfinance schemes is to alleviate poverty and enable the poor to empower themselves, which is also in line with the Islamic economic principles of justice. Islamic microfinance institutions have huge potentials to cater for the needs of the poor. This will ultimately help in empowering women because more than half of the world’s poor population are women (OXFAM, 2016).

Al-Shami (2016) investigated the effect of Amanah Ikhtiar Malaysia (AIM) microcredit on the empowerment of Malaysian Muslim women in the urban area. His study conclude that access to AIM microcredit services has positively impacted several aspects of the borrower's lives, either socially or economically, which has helped reduce gender inequality to some extent.

In her work on the empowerment of women through Islamic microfinance, Izzani (2018), concludes that women engaging with Islamic microfinance institutions (Beringharjo) agree that they can increase their economic status due to their ability to generate income, which they can use to settle their individual and family needs, or save for the future.

Maierbrugge (2016) reports that Islamic financing modes such as 'Salam' are ideal Islamic finance products for farmers in need of funds perhaps to purchase seeds, fertilizers and other farming tools. The State Bank of Pakistan has also issued some guidelines on Islamic agricultural financing that would focus mainly on four Shari'ah compliant financing modes, i.e.Murabahah, Musawamah, Salam and Istisna, Ijarah, Musharakah and Mudaraba will also be used when necessary (ibid).

This paper builds on the theoretical and empirical findings of the above-mentioned studies by assessing the role of microfinance in promoting financial independence of women in the Gambia with reference to selected women vegetable producers in the country's West Coast Region and Kanifing Municipal Council.

3. Methodology

The sampling technique used in this research is the multi-stage sampling method, which Sedgwick (2015) describes as a sampling technique that entails two or more stages of random sampling based on a hierarchical structure of natural clusters within the population. The initial stage of the sampling was the selection of the regions of the Gambia to focus on. Two regions were identified: Kanifing Municipal Council and the West Coast Region. These two regions were chosen due to the presence of major women's gardens that have been operating for decades. Using a convenience sampling technique, two hundred forty-five respondents were interviewed from four women's gardens (Bakau, Banjulinding, Busumbala and Sifoe women's gardens). Convenience sampling was used due to the researchers' time constraint and lack of enough financial resources. All the garden farmers were given equal opportunities to participate in the research based on their availability and willingness.

The researchers utilized both primary and secondary data. Primary data was collected through face-to-face interviews with female vegetable producers in the sample, using structured questionnaires with closed-ended questions. The broad areas covered in the questionnaire were the respondents' demographic information, their methods of production distribution, access to finance and its impact on their social life, major farming constraints and finally, their knowledge of Islamic finance and motivation to pursue Islamic financial services and products.

The data collection exercise was from December 2018 to January 2019. Microsoft Excel 2016 was used to analyze the data.

Additionally, a key informant interview was conducted with the service providers-Supersonicz "The Microfinance" Gambia Limited, in which the Head of Business Growth and Development spoke on behalf of the company. We thought it wise to use the products and services of this service provider to assess the role of Islamic microfinance institutions in promoting the economic empowerment of women, given its long history in the industry.

Secondary data was also collected from annual reports published by the regulators and microfinance institutions in the Gambia, books, journal articles, working papers, published thesis, etc.

4. Results

This section presents the results and analysis of the study (Table 2).

Table 2. Demographic information of respondents

		Frequency	Percentage
Age	Below 20 Years	4	1.6
	21-30 Years	46	18.6
	31-40 Years	58	23.7
	41-50 Years	83	33.9
	Above50 Years	54	22.0
Religion	Islam	238	97.1
	Christianity	7	2.9
Marital Status	Single	12	4.9
	Married	190	77.6
	Divorced	4	1.6
	Widow	39	15.9
Educational Background	Primary	75	30.6
	Secondary	23	9.4
	Tertiary	2	0.8
	No Formal Education	145	59.2

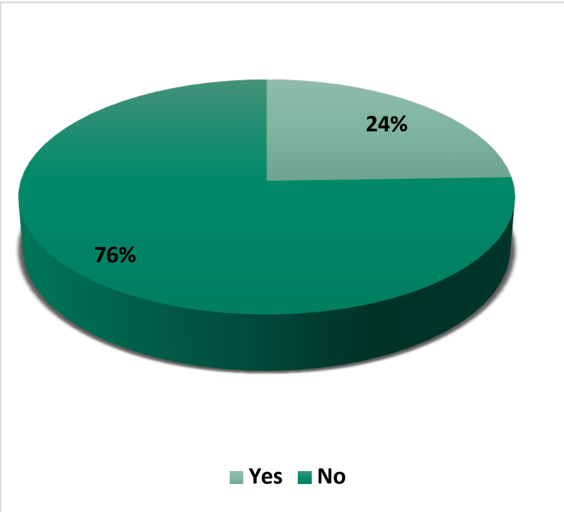
Source: Authors' own estimates

Since the study focuses on women's economic empowerment through Islamic microfinance concerning female vegetable producers in Kanifing Municipal Council and the West Coast Region, all 245 respondents are women engaged in vegetable production within the above-mentioned regions in the Gambia. More than 50 per cent of the respondents are above 40 years old, married, and have received no formal education.

Our research findings reveal that only 24 percent of the respondents have access to finance from external sources such as banks, microfinance institutions, and community organizations, whereas an overwhelming 76% do not have access to such services (Figure 1). This result was highly influenced by the financing of the maintenance of the water tank at

Banjulinding women garden by Supersonicz. Technically, all the members have access to finance due to the nature of the financing mode employed by Supersonicz. This financing was done through a group lending mechanism like that of the Grameen Bank's model in which the responsibility of screening and monitoring the borrowers is passed onto the borrowers themselves, thus decreasing the cost of implementing a lending program. These group-based microlending acts as social collateral and lessens the asymmetric information problem inconventional forms of financial intermediation (Ahmed, 2002). According to Ahmed (ibid), such an innovative approach is suitable for the poor, whose lack of physical collateral disqualifies them from obtaining conventional commercial bank loans.

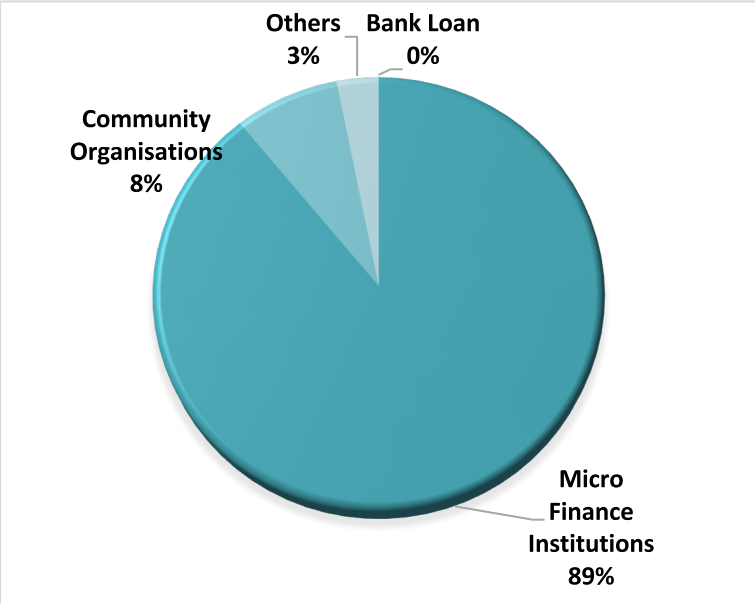
Figure 1. Population of the respondents with access to finance and those without



Source: Authors' estimates

Figure 2 shows the respondents who have access to finance from external sources. The results revealed that microfinance institutions in the Gambia are playing a key role in terms of offering financial services to women vegetable producers, with 89 percent of the respondents having access to financing from microfinance institutions, mainly from Reliance Financial Services, Supersonicz and credit unions. However, most of the respondents complained about the high interest rates. This concern about the high level of interest rates might be because of the high demand for funds, especially from microfinance institutions as the major providers of funds to the unbanked population. However, these high interest rates could discourage the women vegetable producers from borrowing, which in turn could further hinder the economic activities of these women in terms of buying farming inputs, equipments and other related agricultural and farming tools.

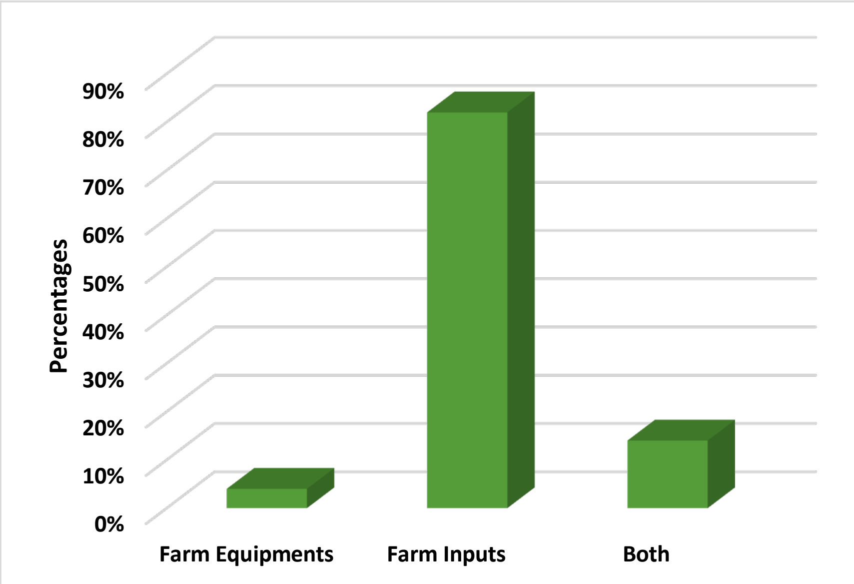
Figure 2. Funds received from different sources



Source: Authors' estimates

Among the respondents who have access to finance from external sources, 75.51 percent use the funds to buy farming inputs such as fertilizers and seeds, 22.04 percent use it to buy both farming equipment and inputs and only 2.4 percent said the funds were used for buying farm equipment only (Figure 3). These results were not surprising since these farming equipment's such as wheelbarrows, hoe, axe etc. are durable goods that they can use for a long period of time. Moreover, all the respondents participate in communal gardens in which some of these equipment's are jointly owned and shared by all the members.

Figure 3. The expenditure of funds on different activities



Source: Authors' estimates

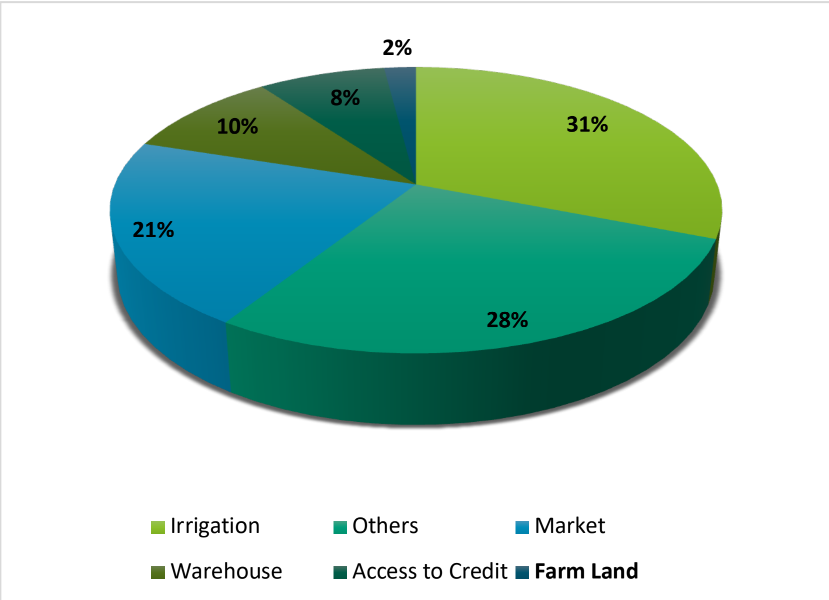
The research findings in Figure 4 reveal that the main hindrance affecting the farming activities of the women who participated in the study is access to irrigation water, which accounted for 31 per cent of the respondents. In all the gardens visited, almost all the respondents complained about water being a major problem that affects their farming activities. Even though some of these gardens, like Bakau Women's Garden and Banjulinding Women's Garden, have water tanks, the cost of running and maintaining these tanks was also a problem.

In the case of Banjulinding Women's Garden, the farmers had to alternate the watering of their gardens every other day due to the limited supply of water by the tanks and the cost of buying electricity to pump the water into the tank. In Busumbala Women's Garden, some women revealed that due to lack of water, they are forced to cultivate certain types of crops, such as lettuce, which do not require much watering. However, this was not profitable since it would eventually lead to an excess harvest supply, forcing them to sell their goods at very low prices.

Other constraints these women face is access to markets and storage facilities, which account for 21 per cent and 10 per cent of the respondents, respectively. All the respondents revealed that they sell their products in the local markets. Considering the population of women engaging in vegetable production, producing almost the same crops and approaching the same buyers, this exposes them to high levels of competition, price and market risks. The presence of warehouses could have minimized the problem of excess supply of these goods in the market and helped the farmers have fair prices for their outputs. Access to farmland was not a main problem reported by women farmers (only 2 per cent) since all the respondents were doing their activities in community gardens. The only issue was the limited space allocated to each woman, especially in Bakau and Busumbala. However, in Banjulinding respondents indicated that they have excess space that they are not utilizing due to the lack of irrigation facilities and the lack of proper fences which allows the animals to get in and destroy their products. Access to credit facility itself was not widely reported as an issue. We believe this is mainly due to their fear of taking loans.

Other constraints that 28 percent of the respondents complained about were the issue of fertilizers, pest and diseases, lack of proper fences to protect their gardens and the supply of vegetables from neighboring countries such as Senegal. According to the respondents', buying fertilizer is expensive, which affects their cost, especially because they need large quantities to mitigate the soil depletion in their gardens. Moreover, they must spray their gardens to protect the crops from pests and diseases, which triggers additional cost. Another heartbreaking problem was the lack of fencing in their gardens, allowing animals to enter and destroy their crops within seconds. This results in social problems among the farmers and the owners of those animals. The lack of fencing also leads to security challenges such as theft. These are problems that need immediate attention to help the farmers scale up their businesses and enhance their economic situation.

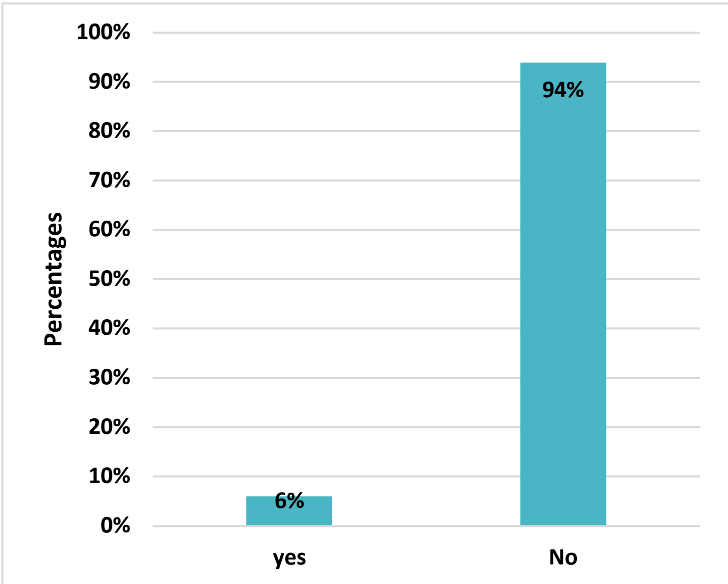
Figure 4. The major constraints the respondents faced in their farming activities



Source: Authors' estimates.

Figure 4.5 illustrates that most of these women have limited knowledge of Islamic finance. The limited number (i.e., 6 per cent of the respondents) who have already heard about the existence of Islamic finance confirmed that it was through radio adverts that they heard the name of Arab Gambia Islamic Bank being mentioned. However, they did not have a clear understanding of Islamic finance companies' activities and business models. This was ironic because in one of the gardens visited, almost all the women there received finance from Supersonicz - a microfinance institution that identifies itself as an Islamic microfinance institution. This implies that the institution's business model is unknown to its clients. Hence, this raises the need to educate the population on Islamic banking and finance in the Gambia. This low level of awareness of Islamic banking and finance could possibly be associated with the fact that the existing Islamic financial institutions in the Gambia are underutilizing the potential gains from the burgeoning Islamic banking and finance sector, particularly given that the Gambia is predominantly made up of Muslims. This assertion is consistent with the conclusion drawn by Ahmed (2002), who, in a study covering three Islamic MFIs operating in Bangladesh, observed that Islamic MFIs have not yet tapped some of the sources of funds, nor have they used the variety of financial instruments at their disposal.
Additionally, the low level of awareness implies that Islamic financial institutions are not educating their existing and potential customers about Islamic banking and finance.

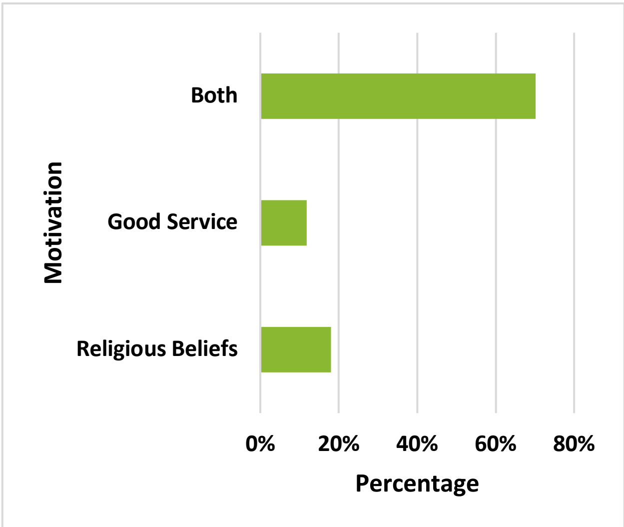
Figure 5. The awareness of women about Islamic finance.



Source: Authors' estimates

Figure 6 shows what motivates the respondents to pursue Islamic modes of financing. The motivation is classified into three categories: religious beliefs, good service, or both. Ninety-eight per cent of the respondents were Muslims. However, their preference to opt for Islamic finance modes was dictated by their religious beliefs and the quality of service they would receive. Only 18 percent of the respondents were fully motivated by their religious beliefs, 11.8 percent prioritise the quality of the service and 70.2 percent recognized both the service and their religion as a factor to opt for Islamic products. This shows that the halal products that Islamic financial institutions offer to their clientele are a key motivating factor that attracts their customers. This challenges Islamic financial institutions regarding whether to offer halal products vis-à-vis the quality of their service. It is worth mentioning that the quality of *halal* products and services provided by Islamic financial institutions could have a significant impact on their customer base. This could cement the relationship with their existing customers and attract new customers. This will also give these Islamic financial institutions an added advantage when compared to their conventional counterparts in markets where both sectors exist.

Figure 6. The respondents' motivational factors for pursuing Islamic finance modes



Source: Authors' estimates

5. Discussion and Conclusion

Women's participation in economic activities has been widely recognized as an important economic growth and development factor. They have a greater role in poverty alleviation, increasing employment opportunities and other social activities. As such, greater attention is being paid to the literature to investigate how women can be empowered to utilize their full potential in developing their nations. The main objective of microfinance institutions has been to provide financial services to those who do not have access to the traditional financial sector, and greater attention is given to women (Shirazi et.al. (2014). Due to microfinance's great potential in empowering women, a lot of research has been conducted to assess its impact on women's empowerment from both empirical and theoretical angles. The overall impression is that microfinance, particularly Islamic microfinance, is a powerful tool that has been empowering women and still has the potential to achieve this objective (Table 3). This paper explored the possibilities of empowering women through Islamic microfinance, focusing on female vegetable producers in the Gambia.
Islamic and conventional microfinance institutions have similar motives, i.e., to reach out to the unbanked population, serve the poor and needy, and provide training and other social services to their clientele. However, both institutions have unique characteristics, mainly in their mode of operations, target group, sources of funds, etc.

Table 3. Differences between Conventional ad Islamic Microfinance Institutions.

Feature	Conventional MFI	Islamic MFI
Sources of Funds	External funds, Savings of Clients	External funds, Savings of clients, Islamic Charitable Sources
Mode of Financing	Interest-based	Shari'ah Compliant Instruments
Financing the poorest	Poorest are left out	Poorest can be included by integrating zakah with microfinancing
Funds transfer (deductions at inception of contract)	Cash given part of the funds deducted at inception	No deduction at inception
Target group	Women	Family

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Objective of targeting women	Empowerment of women	Ease of availability
Liability of the loan (when given to women)	Recipient (Woman)	Family
Work incentive of employees	Monetary	Monetary and religious
Dealing with Default	Group/center pressure and threats	Group/center/spouse guarantee, and Islamic ethics
Social Development Program	Secular (or un-Islamic) behavioral, ethical, and social development	Religious (includes behavior, ethics and social)

Source: (Ahmed, 2002).

Islamic microfinance has a huge potential for empowering women and helping alleviate poverty. It can be an efficient tool to achieve SDG1, which calls for ending poverty in all its manifestations by 2030. The global survey conducted by CGAP on Islamic microfinance concludes that unlocking the potential of Islamic Microfinance could be the key to providing financial access to millions of poor Muslims who currently reject conventional microfinance products that do not comply with Islamic law[10]. Though both Islamic and conventional microfinance institutions are not charitable organizations, they aim to make a profit just like other financial institutions. Islamic microfinance institutions, however, have better tools to tackle the needs of the poor than the conventional ones because they aim to achieve social justice. The institutions of compassion (*Zakah, Awqaf, Sadaqah*) are all resources that can subsidise the cost of Islamic microfinance institutions and enable them to reach out to those living in abject poverty. This could be a more effective and efficient way of distributing the *Zakah*/other charitable funds. For example, if the *zakah* funds are given in cash to the beneficiaries, they might be used without the creation of any income-generating activity that caters to their needs in the long term. However, if they are channeled through microfinance institutions and given in the form of *qard al hassan* together with financial education on utilising the funds efficiently and effectively, it could have a better impact. The financial education aspect could be in the form of entrepreneurial training on starting a new business or expanding existing ones. Such activities will serve as a source of income for the beneficiaries, which might be their exit route from poverty. In addition, these beneficiaries could one day become zakah payers (*Muzakki*)/donors instead of recipients (*Mustahiq*), as experienced in the case of Akhuwat[11].

The research findings in this paper revealed that lack of access to productive resources such as irrigation and storage facilities, access to markets, and farming inputs are the major hurdles affecting the productivity of the women who participated in this study. Lack of irrigation facilities stands out to be the biggest challenge that women in this study are encountering in all the four gardens visited. Based on our findings, we can recommend several Islamic finance products that can be used to finance women's vegetable producers. These recommendations are outlined in the next section of the paper.

5.1 Financial Innovation and Product Development

As outlined earlier in section 1.1, the main constraints encountered by the respondents who participated in this study are irrigation and warehouse facilities, access to markets and farming inputs such as fertilizers and seeds. This could be tackled by offering innovative financial services and products to Islamic microfinance institutions. One type of product might not solve all the constraints but combining a few Islamic products can tackle all the problems these women encounter in farming. To suggest possible Islamic finance products that could remedy these challenges, we propose using parallel Salam contracts by IMFIs, which, in this case, can help tackle the problems of lack of irrigation and warehouse facilities and market access. We propose Supersonicz to be the finance provider, Gambia Horticultural Enterprises (GHE)[12] as the private company that will buy the goods from Supersonicz and the women's community gardens as the suppliers of the goods/the receivers of funds. We also suggest that Supersonicz finances the

[10] https://sadaqa.in/2019/01/18/turning-to-islamic-finance-for-meeting-development-goals-iii/

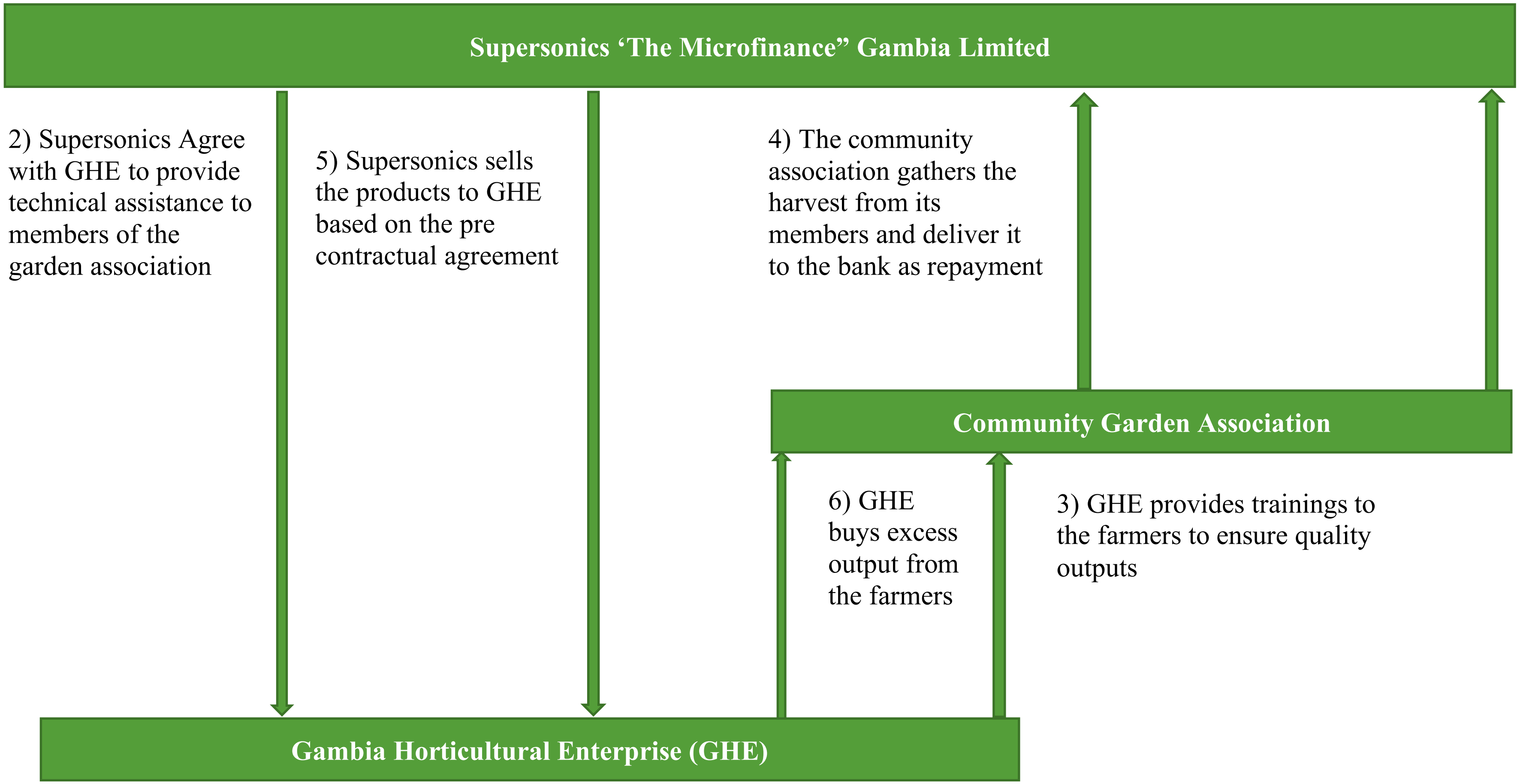
[11] https://iiibf.com/from-zakat-beneficiary-mustahiq-to-zakat-giver-muzakki-2-the-akhuwat-experiment/

[12] GHE "is a multi-purpose agri-business company engaged in the whole horticultural value chain". http://www.gamhort.gm/

infrastructural needs of establishing irrigation systems and their maintenance, like constructing boreholes and installing solar panels. The reimbursement will be done after every harvest with specific amounts of vegetables, depending on the contractual agreement. Supersonicz will agree with GHE to buy the goods from them after delivery by the farmers. The later contract will help the bank to hedge against price and liquidity risks. To ensure that the products are of good quality and can be sold in international markets, Supersonicz can establish an agreement with GHE to provide technical assistance to the farmers.

Finally, to protect the farmers from being exposed to stronger bargaining power by the bank, we recommend that the financing be done at the association level and not through the normal group lending like in the Grameen bank's model. This will allow the association's executive members to negotiate a better deal between the bank and their members. Figure 7 outlines the proposed financing model.

Figure 7. Proposed financing model



Source: Authors' own illustration.

In addition to the above, we recommend using *Murabahah/Musawamah* mode of financing to provide farmers with farming inputs such as seeds, fertilizers, and pesticides. This contract could also be implemented through the main parties suggested above (i.e. Supersonicz, GHE and the Garden Association). We suggest offering the financing at the level of the association. This is because each farmer might need a small portion of the inputs, and it would not be ideal for the bank to buy it in bits and distribute it to the farmers individually. Moreover, since GHE sells these farming inputs and is an expert in pest control, we suggest that the purchasing be done through them.

5.2 Financial Literacy

The survey results revealed that only 13% of the respondents know an Islamic financial institution in the Gambia. This awareness was gained through radio adverts, in which the institution's name (Arab Gambia Islamic Bank) suggests that it is an Islamic bank. When we asked a follow-up question about what they could tell us about the activities of this bank, none of the respondents had a clear understanding of the business model of Arab Gambia Islamic Bank. This, we thought, raises the need for Islamic financial institutions to engage in awareness programs that will educate the people about their modus operandi. This could be done through collaboration with academic institutions (such as the University of the Gambia (UTG) and International Open University (IOU)) in the form of curriculum development that would incorporate practical modules that the industry uses. In addition, internship opportunities could be created for students in the Islamic finance program to prepare them for the Islamic banking and finance market. These students could be largely ambassadors of these Islamic banking and finance institutions. Furthermore, community outreach programs such as TV shows, billboards around the streets, and social media platforms such as YouTube, Facebook and Instagram are all platforms that these Islamic financial institutions can utilize to sell their business model.

5.3 Regulatory Framework/Environment

On the regulatory side, we recommend establishing a Central *Shari'ah* Board, preferably under the Central Bank of the Gambia, that will oversee the activities of all Islamic financial institutions in the country. Such a *Shari'ah* Boards should be fully equipped with the requisite knowledge and skills about Islamic banking and finance to provide final comments and definitive rulings concerning all Islamic products and services provided by Islamic finance institutions in the Gambia. It is also recommended for individual Islamic financial institutions to establish their individual Shari'ah boards. However, the main reason for suggesting a Central Shariah Board is to ensure the harmonization of fatwas and the standardisation of Islamic banking and finance products in the industry. Differences in fatwas can shake the Islamic finance sector, which might lead to a lack of trust in the products and services offered by Islamic finance institutions. Having an independent body, such as a Central Shari'ah Board, that is mandated to oversee the Islamic finance sector could motivate and boost the confidence of investors/individuals to consider Islamic finance products and services.
If the CBG is not willing to establish a Central *Shari'ah* Board, we suggest that the Islamic microfinance institutions set up one that would oversee and ensure that their products and services are Shari'ah compliant.

5.4 Expand the Islamic Finance Sector

Concerning the latter two recommendations (i.e. Islamic financial literacy and the regulatory environment), we believe it could lead to an expansion in the Islamic finance sector. This is because if people are aware of the products and are willing to opt for them, coupled with the favourable regulatory framework, this will attract more investors into the market, leading to competition among them. This will boost the quality of the products they offer since they will all aim to increase their market share and attract more customers. This will also provide the customers with more options to choose from. Overall, we recommend for more research to be done in the field of Islamic finance in the Gambia, covering the following:

- Factors that will enable the development of Islamic Microfinance Institutions in the Gambia.
- Exploring the possibilities of using Charity Organizations as partners in developing the Islamic Microfinance Sector in The Gambia.
- Risk management framework for Islamic Microfinance Institutions in The Gambia.

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