

Smart Sukuks as a tool to stimulate financial markets -The Experience of the Blossom Platform in Indonesia -

Babouri Bouchra ^{*1}, Drid hanane ²

¹ Entrepreneurship and Organization Management Laboratory, Echahid Cheikh Larbi Tebessi University, Algeria, bouchra.babouri@univ-tebessa.dz

² Entrepreneurship and Organization Management Laboratory,

² Echahid Cheikh Larbi Tebessi University, Algeria, hanane.drid@univ-tebessa.dz

Received: 04/06/2024

Accepted: 26/11/2024

Abstract:

This study aims to examine the impact of smart sukuk on financial markets. It discusses the role of innovative sukuk in stimulating and invigorating financial markets and highlights the significant challenges that have hindered the adoption of traditional sukuk. It also demonstrates how blockchain technology has effectively overcome these challenges with the emergence of smart sukuk. To illustrate this point, we present the case study of the Blossom platform in Indonesia. Employing a descriptive-analytical approach to address the research problem, the findings conclude that smart sukuk play a vital role in rejuvenating financial markets by modernizing the sukuk issuance process, enhancing efficiency, broadening market access, increasing market dynamism and liquidity, attracting a diverse range of investors, and promoting financial innovation. The study recommends the adoption of blockchain technology to streamline the sukuk issuance process and suggests the development and implementation of smart contracts capable of automating various aspects of issuing, trading, and settling instruments, resulting in a more efficient market.

Key Words: smart sukuk, Financial Markets, Blockchain Technology, Financial Innovation., smart contracts.

JEL Classification: O33 ,N2

* - Corresponding author: Full name, e-mail: author@mail.com.

1. Introduction

In recent years, financial markets have experienced a significant transformation, largely due to the emergence of blockchain technology. This foundational element of the digital economy has revolutionized the global financial services industry as part of the Fourth Industrial Revolution. It has played a crucial role in reducing costs and providing rapid access to financial products. Numerous companies have invested in the development of blockchain-based applications, offering a promising avenue for startups to engage in financial innovations, such as the expansion of international financial markets and the facilitation of digital securities transactions.

Smart Sukuk leverages advanced technology to improve efficiency, transparency, and accessibility within Islamic finance. This innovative financial instrument merges the principles of Islamic finance with the technological advancements of the 21st century, resulting in a hybrid tool tailored to meet the diverse and digitally oriented needs of the global investment community.

The impact of intelligent sukuk on financial markets is comprehensive and profound. Consequently, various Arab and Western countries have endeavored to adopt this technology and establish platforms for introducing and investing in intelligent sukuk. Among these initiatives, Blossom Finance in Indonesia stands out as one of the pioneering global innovations in this field, offering significant advantages and facing challenges in revitalizing financial markets, financing SMEs, and promoting financial inclusion.

Study problem

The problem of this study can be formulated in the following main question:

How can smart sukuk contribute to the activation of financial markets?

The following sub-questions fall under this problem:

- What is the concept of smart sukuk?
- What are the fundamental aspects of blockchain technology?
- What are the advantages of employing smart sukuk in financial markets?

Study objectives

The research aims to achieve the following points:

- Understand the theoretical aspects of smart sukuk;
- Highlight financial markets that use blockchain technology and address the infrastructure elements necessary for their financial operations;
- Explore the operation mechanism of the Blossom platform, its impact on the Islamic capital market in Indonesia.

Study importance

This study addresses a contemporary issue still under exploration. Its significance lies in demonstrating the role of smart sukuk in activating and revitalizing financial markets. It aims to examine the reality of smart sukuk issuance in Indonesia by Blossom Finance and BMT Bina Ummah, and how the Blossom Platform has actively contributed to the revitalization of Indonesia's capital market. Additionally, the study emphasizes the potential benefits of

applying blockchain technology to create intelligent financial instruments and explores the advantages of this approach. This research also contributes to enriching the field of study within the topic of interest.

Study Approach

The study adopts a descriptive and analytical approach, relying on sources that address various aspects of the subject. It aims to elucidate the fundamental principles of innovative sukuk and to delve into the basic concepts of financial markets based on blockchain technology. Moreover, the study focuses on the role of smart sukuk in stimulating financial markets and examines the challenges encountered, particularly through the lens of the Blossom platform's experience in Indonesia

2. Theoretical Aspects of smart Sukuk

2.1 Islamic Sukuk Issuances, Challenges, and Solutions

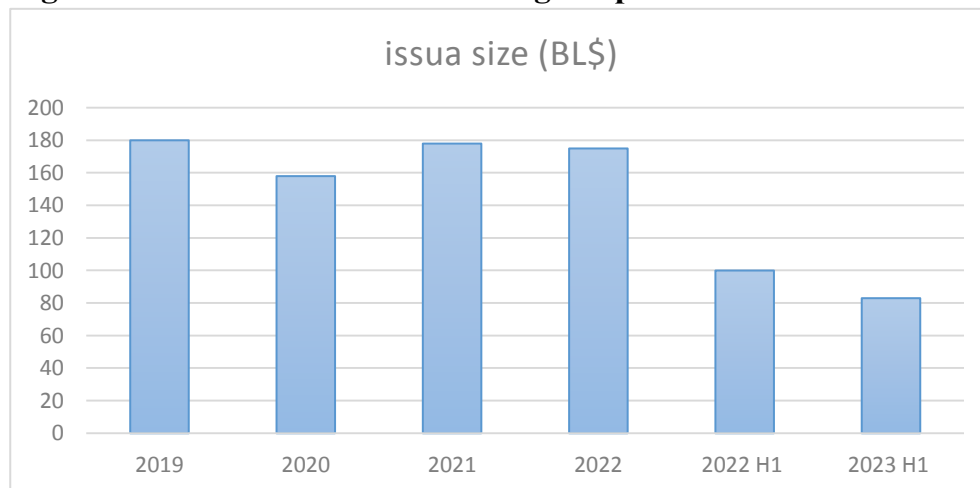
– Definition of Islamic Financial Sukuk:

Sukuk, stemming from the Arabic plural form of "sakk," refers to certificates of equal value that signify shared ownership in tangible assets, usufructs, services, or equity of a specific project or investment activity. These certificates become effective upon the completion of the subscription process, receipt of the certificate value, and the utilization of funds for the intended purpose. This process is validated only after the sukuk's value has been fully received, subscriptions have been closed, and the funds have been deployed for their designated purpose (khalil , 2011, p. 1).

– Evolution of Sukuk Issuances Globally

Islamic sukuk has undergone a significant evolution in the stock market, gaining recognition as an innovative financial alternative that adheres to the principles of Islamic Sharia. It has garnered widespread popularity among investors and government entities. Despite this, there has been a noticeable decline in sukuk issuances in recent years. This trend is depicted in the figure below, which illustrates the global sukuk issuance from 2019 to 2023 in millions of US dollars.

Fig.1. Global Sukuk Issuance during the period 2019-2023 in millions of US dollars



Source: (Mubasher, 2023)

As indicated, global sukuk issuance experienced a decline from 2019 to 2023, with a 20% year-on-year decrease recorded at the end of June 2022, totaling \$74.5 billion compared to over \$93 billion in the same period of 2021. This decline occurred amidst a global economic downturn and the adoption of monetary tightening policies by major central banks, which adversely affected sukuk issuance. Furthermore, the total issuance of sukuk fell by 17.5% year-on-year to just \$2.8 billion in the second quarter of 2022, demonstrating resilience to fluctuations and external pressures, including the impact of rising oil prices, the Russian-Ukrainian conflict, and the inflation-control measures through interest rate hikes by several countries. These factors collectively heightened borrowing costs and curtailed new sukuk issuances. By the end of the second quarter of 2022, sukuk issuance stabilized at 77.8%. However, in the first half of 2023, the global issuance of Islamic sukuk further decreased by 17.5% to \$83.2 billion compared to \$100.7 billion in the corresponding period of the previous year, reflecting ongoing challenges in the financial landscape.

This overview underscores the dynamic nature of sukuk markets and the influence of external economic factors on the issuance and adoption of Islamic financial instruments. The decline in sukuk issuance highlights the need for innovative solutions, such as blockchain technology, to address these challenges and revitalize the market.

– **Main Challenges in Structuring Instruments**

The process of structuring sukuk faces several challenges that hinder its broader adoption in the market, as identified by (Khan, et al., 2022, p. 4). These challenges include:

- **Slow Process:** The documentation process for sukuk issuance is notably slower and less efficient compared to conventional bonds, leading to increased costs.
- **Decision of Shariah Scholars:** The involvement and decisions of Shariah scholars are critical in the sukuk structuring process. This reliance often leads to higher costs due to the need to integrate Shariah rulings into the financial instruments.
- **Lack of Standardization:** The sukuk market lacks the standardized practices found in the conventional bond market, which affects efficiency, increases costs, and limits market expansion.
- **Globally Acceptable Shariah Standards:** There is a significant need for universally accepted Shariah standards to harmonize diverse Shariah opinions across various sukuk structures.
- **Diverse Challenges:** Other obstacles include differing tax treatments in various jurisdictions compared to conventional bonds, the requirement for strong credit ratings, and asset management issues throughout the transaction's life span.

– **Financial Innovation as a Strategy to Overcome Challenges**

To address these challenges, financial innovations, particularly those enabled by blockchain technology, have been identified and classified into four main categories (Khan, et al., 2022, p. 4):

- **Tokenization:** The use of blockchain for sukuk tokenization can enhance data security and immutability, simplify the process by minimizing intermediary involvement, and allow for the issuance of sukuk in smaller denominations. This broadens access to Islamic finance for small and medium-sized enterprises (SMEs).

- **Smart Contract Template:** A smart contract model for sukuk structuring can be established on the blockchain in consultation with Sharia scholars. Once the base model is developed, specific conditions required for issuing a particular instrument can be encoded into the smart contract. Validating a smart contract derived from a standard model is quicker and simpler than the traditional documentation process for sukuk issuance.
- **Automation:** Automating the sukuk issuance process through the deployment of smart contracts facilitates agreements between the obligor and the Special Purpose Vehicle (SPV), as well as between the SPV and investors. Managed by the SPV or a third-party service, this automated approach increases transparency and efficiency, ensuring real-time processing of payments to the SPV and distributions to investors.
- **Credit Rating and Market Expansion:** The integration of artificial intelligence with blockchain data on sukuk issuances can support the development of alternative credit scoring methods. Such innovation could expand the market by enabling a wider range of organizations to raise capital through sukuk.

These innovative solutions leveraging blockchain technology offer promising avenues to overcome the existing challenges in sukuk structuring, potentially leading to greater efficiency, standardization, and market expansion in Islamic finance.

2.2 Smart Sukuk Based on Blockchain Technology

2.2.1 Basic Concepts Related to Blockchain Technology

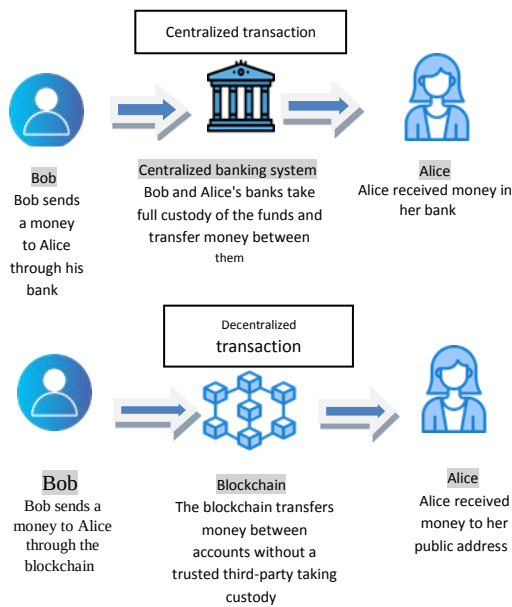
– The Concept of Blockchain Technology

Blockchain technology functions as a database designed to store records of value, transactions, and virtually anything that can be digitized. Unlike traditional transaction methods that often require intermediaries like banks and financial institutions to ensure trust, security, and facilitation, blockchain technology enables direct interaction between parties. This innovation, which underpins systems like Bitcoin, offers a broad spectrum of applications for transferring nearly any value. Blockchain's decentralized nature eliminates the need for intermediaries, thereby streamlining transactions (Gates, 2017).

– How Does a Blockchain Work?

The functionality of a blockchain can be illustrated by examining a financial transaction facilitated by this technology. Consider the following scenario depicted in the provided figure, which contrasts intermediary transactions with peer-to-peer transactions facilitated by blockchain.

Fig.2. intermediary transaction and peer-to-peer transaction



Source: (chain.link, 2023)

In the traditional system (the first case), when Bob wishes to send a financial payment to Alice, he must rely on a financial intermediary, such as a bank. This institution takes custody of his funds and manages the transfer to Alice, often deducting a fee for the service. Such transactions can be time-consuming, with cross-border transfers potentially taking weeks to complete. Conversely, in the blockchain scenario (the second case), the transaction between Bob and Alice occurs in real-time, without the need for an intermediary. This method significantly reduces, or even eliminates, commission fees and lowers the overall cost compared to using financial intermediaries. Furthermore, the transaction is recorded on a ledger, with each participant in the transaction and other network nodes maintaining a copy, enhancing transparency and trust without the necessity of a central authority.

This figure exemplifies how blockchain technology facilitates more efficient, secure, and cost-effective transactions by enabling direct peer-to-peer exchanges. Such capabilities are particularly relevant for the development of smart sukuk, where blockchain can enhance efficiency, transparency, and accessibility in Islamic financial transactions. By leveraging blockchain, smart sukuk issuances can overcome traditional challenges, offering a promising avenue for innovation in Islamic finance.

2.2.2 Smart Sukuk and Their Structure

– Definition of Smart Sukuk

sukuk, in essence, refers to a financial instrument that leverages blockchain technology through smart contracts to carry out functions transparently and dependably. The foundational sharia contracts used to establish sukuk, whether blockchain based or traditional, remain unchanged. The distinction arises from the incorporation of technology, specifically blockchain technology, in the formulation and execution of contracts. In this context, intelligent

agreements operate on a devised algorithm, encoding business rules directly into the underlying payment currency. These smart contracts enforce contract rules about payments and the transfer of ownership. (Mounira, 2022, p. 8)

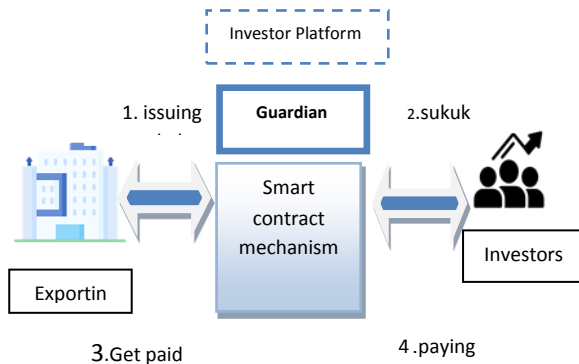
– Stages of Issuing Smart Sukuk

The process of issuing Smart sukuk involves several stages that leverage the unique capabilities of blockchain technology to enhance transparency, efficiency, and security. Turkey's experience in issuing smart sukuk provides a practical illustration of this process. The stages outlined below, as described by (Hamza, 2020, p. 4), detail the mechanism from announcement to the transfer of sukuk tokens to investors.

- **Sukuk Issuance Announcement:** The Special Purpose Vehicle (SPV) company announces the issuance of smart sukuk for sale to investors via a dedicated platform. This stage involves publicizing the investment opportunity to potential participants.
- **Demand Transmission Process:** Investors express their interest in purchasing smart sukuk through different channels. Individual investors can submit their purchase requests via the bank's mobile application or internet banking platform, accessible through the bank's website or its branches. These requests from individual investors are processed using blockchain technology. Corporate investors, on the other hand, directly communicate their intentions to the authorized investment institution (typically a bank) through the platform.
- **Completion of the Distribution List:** Following the collection of orders, the SPV company and the bank complete the distribution lists. This stage involves finalizing who will receive the sukuk based on the demand and available supply.
- **Equivalent Value of Sukuk Tokens:** On the clearing day, the SPV adjusts the value of sukuk tokens to the Turkish Lira via the platform. The equivalent value in Lira is then provided in the token account by the bank and the Central Registration Institution (CRI). This process involves an automatic currency exchange facilitated by a smart contract.
- **Approval and Registration Procedure:** The smart contract receives automatic approval from the Central Registration Institution to finalize the clearing transaction. The transactions are then recorded on the blockchain nodes of both the Central Registration Institution and the bank, ensuring a transparent and immutable record.
- **Transfer of Sukuk Tokens to Clients' Wallets:** After the automated approval process, the corresponding sukuk tokens are transferred to the clients' wallets by the Central Registry Institution. This step completes the investment process, with investors officially holding the smart sukuk tokens.

These stages demonstrate the innovative approach to sukuk issuance facilitated by blockchain technology, highlighting its potential to streamline and secure Islamic financial transactions. Turkey's experience serves as a model for other countries and institutions looking to adopt similar technology for issuing sukuk or other financial instruments.

Fig.3. Smart sukuk Issuance Structure



Source : (Hamza, 2020, p. 4)

– How Smart Sukuk Works

Blockchain technology works to complete sukuk of any kind according to a specific protocol as follows: (<https://islamonline.net>, n.d.)

Smart sukuk operates through the well-known cryptocurrency Ethereum blockchain through are known as smart contracts. These contracts are based on a set of encrypted rules that are linked to a sophisticated electronic system. After receiving orders, this system automatically applies contract terms in respect of payment and transfers of ownership.

For enterprises and companies wishing to obtain cash, smart sukuk are launched, where investors raise funds to get smart sukuk for each investor for this amount paid, after the specified period expires, the enterprise or company shall pay the dues. These due shall be automatically distributed to investors through the blockchain system by the smart contract between the issuer and the investors. What distinguishes smart sukuk is that the distribution of dues does not require banks or financial brokerage institutions. Smart sukuk also gives a new opportunity to support cryptocurrency trading within well-known global exchanges and with explicit legal and regulatory standards.

3. Theoretical Aspect of Digital Financial Markets

3.1 Definition of Financial Markets

the definition market is a market that focuses on the purchase, sale, and possession of securities and financial instruments in their various forms. The financial markets have expended significantly over the past few decades and now offer many types of financial instruments, including forex currency market, securities market such as gold, silver, and oil, short term financial debt markets, cryptocurrency markets such as bitcoin and Ethereum, long term mortgage markets, insurance markets to protect against risks in exchange for certain installments. These markets can be long term, short term, or a combination of both. (<https://admiralmarkets.com>, 2023)

3.2 Elements of the Infrastructure of Financial Markets Based on Blockchain

Blockchain technology has introduced a transformative approach to the infrastructure of financial markets, enhancing security, efficiency, and transparency across various operations. The core elements that constitute this infrastructure include:

- **Smart Contracts:** These are self-executing contracts with the terms of the agreement directly written into code. Smart contracts run on blockchain platforms and automatically enforce and execute the terms of the contract when predefined conditions are met. They facilitate the exchange of value and can automate various financial transactions, reducing the need for intermediaries and enhancing efficiency (Gates, 2017, p. 40).
- **Cryptocurrencies:** Digital or virtual currencies that use cryptography for security. They operate on blockchain technology, which ensures the integrity of transaction data and the creation of new units. Cryptocurrencies serve as a medium of exchange, enabling direct peer-to-peer transactions without the need for traditional financial intermediaries (Reda & Issawi, 2021, p. 222).
- **Digital Financial Assets:** Advanced financing tools that represent the digital encoding of traditional securities. Companies can issue digital financial assets through crowdfunding platforms, leveraging the blockchain's capabilities to meet their financial needs efficiently. This digitization offers unique advantages, such as increased liquidity and accessibility for investors (Reda & Issawi, 2021, p. 223).
- **Trading Platforms:** Online platforms that allow investors to trade and monitor various financial instruments, including stocks and commodities. Blockchain technology addresses common issues related to risk, double spending, and transparency in trading platforms, proposing solutions that could enhance the integrity and efficiency of financial markets (Reda & Issawi, 2021, p. 226).
- **Settlement and Clearing:** Blockchain technology significantly improves the payment and settlement processes by reducing transaction times from days to minutes and lowering associated costs. This technology supports real-time settlements, eliminating the need for traditional clearinghouses and reducing counterparty risk (Reda & Issawi, 2021, p. 226).
- **Risk Management:** Blockchain's immutable ledger ensures that once a transaction is recorded, it cannot be altered without controlling the majority of the network's computing power. This characteristic mitigates counterparty risk and enhances the security of financial transactions, making fraud and unauthorized alterations nearly impossible (Gates, 2017, p. 22).

3.3 Digitization of Securities Market Operations

The move towards digitization in securities markets involves transforming traditional securities into digital formats for both primary and secondary market transactions. This shift employs distributed ledger technology (DLT) to merge account-based and token-based payment processes, offering a seamless, secure, and efficient transaction environment. Key aspects of this digitization include (Nouran, 2022, p. 20):

- **Digitization of Assets:** Converting financial, real estate, and other assets into digital assets for use in structured financial instruments like sukuk and project bonds. This process uses encryption and coding techniques on distributed ledger networks to create digital representations of these assets.
- **Digitization of Activities and Operations:** Encompassing the entire lifecycle of securities from issuance to maturity. This includes digital identity verification, customer due diligence, and anti-money laundering (AML) compliance. The digitization of these

activities facilitates more efficient and secure transactions in the securities markets, promoting transparency and accessibility.

The integration of blockchain technology into financial market infrastructures represents a significant leap forward, offering the potential to revolutionize how financial transactions are conducted, securities are issued and traded, and risks are managed. This technological evolution aligns with the broader trend towards digital finance, setting the stage for more inclusive, efficient, and secure financial markets.

4. Analysis of the Impact of Smart Sukuk on Financial Markets through the Experience of the Blossom Platform in Indonesia

4.1 About Blossom Finance Company

Is an American company in Delaware based in Jakarta Blossom Labs. Blossom finance was founded in 2014 to increase the availability of halal financial products using technology, she moved to Indonesia in 2015 to be close to one of the most prominent Islamic markets to help Indonesia's microfinance institutions raise funds from international investors to finance small businesses aimed at reducing poverty. Bright instruments from blossom help institutions raise funding at the lowest cost and by shariah law from international investors using blockchain technology. (Blockchain microfinance sukuk wins 2 Awards; yield 15.5% dzspite covid 19 stress, 2020)

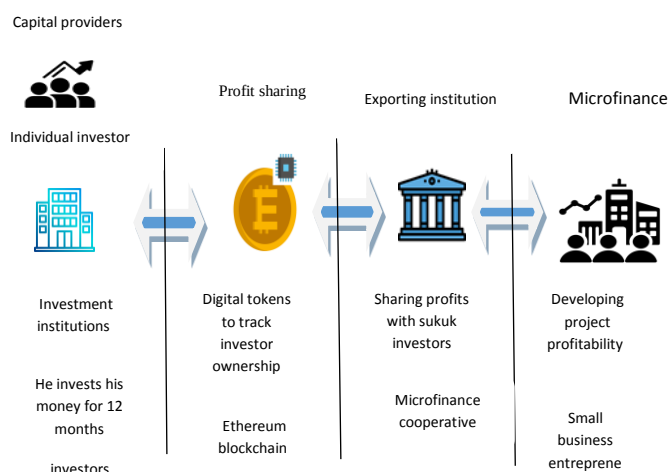
4.2 Blossom Smart Technology

The Blossom blockchain sukuk platform utilizes Ethereum Blockchain technology to support decentralized smart contracts denominated in the Indonesia rupiah. The platform digitizes sukuk processes, including property management, profit distribution, and capital return, the platform digitizes sukuk processes, including property management, profit distribution, and capital return, using the ERC20 standard for global tracking (is an official protocol of the Ethereum network in the form of a smart contract that allows digital exchange across peer to peer markets or secondary markets). This eliminates the need for traditional banks, reducing costs, increasing transparency, and enhancing transaction security by minimizing intermediaries involved in sukuk issuance. (Mahmoud Mohamed Abdel Hakim Zaer, 2023, p. 21)

4.3 Issuance of Smart Sukuk by BMT via the Blossom Platform

The Indonesia Microfinance corporation raised 710 million Indonesian Rupiahs (IDR) (50000\$) by issuing blockchain sukuk via Blossom finance's smart sukuk platform, which uses a modaraba (profit sharing) structure, and the funding is directed to the small company and microentrepreneurs. (Blockchain microfinance sukuk wins 2 Awards; yield 15.5% dzspite covid 19 stress, 2020), the following figure shows that:

Fig.4. Modeling Blossom sukuk



Source: (matthew j, 2018, p. 19)

The business model of Blossom sukuk is demonstrated through a figure that outlines the ecosystem involving individual investors and institutions. These entities purchase sukuk to finance small and medium-sized enterprises (SMEs). In this model, the sukuk issuing institution shares profits with the investors. Blossom's smart sukuk operates by aggregating funds from investors in exchange for smart sukuk tokens, which signify partial ownership in the larger sukuk pool. Upon receiving payment from the borrower institution, smart contracts autonomously allocate funds to the holders of smart sukuk tokens proportionate to their investment, eliminating the need for intermediaries.

Key features of Blossom's smart sukuk include:

- Issuance in local currency, allowing sukuk holders to receive periodic (monthly or annual) profit distributions from the issuer.
- The option for investors to retain their sukuk until maturity or to sell their stake to a third party.
- A profit-sharing model integrated with digital tokens leveraging the Ethereum blockchain technology.

Moreover, investors have the flexibility to purchase sukuk using any of the 40 accepted currencies listed by Blossom, including digital currencies. This is facilitated by a technological feature known as Oracle pricing, a decentralized system that calculates the conversion rate between the rupee and ether. Importantly, the returns on sukuk are not influenced by the market price of cryptocurrencies but rather depend on the performance of the underlying asset and the success of microfinance institutions in their portfolio (Ifnfin Tech, 2018).

4. 4 The Structure of Blossom Sukuk

Blossom Finance has innovatively designed two sukuk mechanisms on the blockchain to cater to different investment needs and objectives (whitehead, 2018)

- **First Structure: Sukuk al-Mudarabah (Profit Sharing Sukuk)** This structure focuses on collecting funds to be invested in PBMT social ventures, a venture capital entity that finances microfinance cooperatives. These cooperatives then provide financing to micro-businesses, including farmers and home-based convenience stores. The profits generated

from these financed activities are returned to the fund and distributed among the investors. This model aims for a minimum subscription of \$20,000 and caps at 5 million \$, offering investors a 60 percent share of the issuer's profits. Blossom projects a 6 percent net annualized return for a six-month sukuk under this model.

- **Second Structure: Sukuk al-Istithmar al-Ijara (Asset-Based Lease Sukuk)** The second structure proposed by Blossom is an asset-based lease sukuk, also known as sukuk al-ijara. This model is designed to fund tangible projects, such as the construction of hospitals. After the project's completion, the hospital operator would lease the facilities back to the sukuk's investors, generating profit. While active funds for this structure are not yet available, Blossom has developed the necessary technology and is in the process of evaluating potential issuers for this innovative financial instrument.

These structures demonstrate Blossom's commitment to leveraging blockchain technology for creating flexible and Sharia-compliant financial products. The sukuk al-mudarabah structure allows for direct investment in social ventures, providing both financial returns and social impact. Meanwhile, the sukuk al-ijara model offers a tangible asset-backed investment opportunity, aligning with traditional Islamic financing principles while integrating modern blockchain technology.

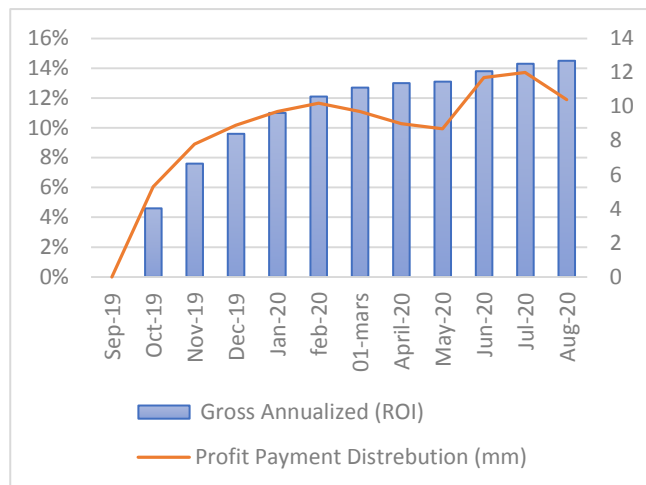
4.5 The Impact of Blossom Sukuk as a Digital Innovation on the Islamic Capital Market of Indonesia

Blossom Sukuk is one of the most prominent Islamic financial instruments that contribute significantly to activating the financial market in Indonesia. These sukuk reflect the trends of the Islamic economy and meet the needs of investors and companies for financing by the Sharia and ethical provisions. This can be illustrated in the following points:

- **Financing projects across various sectors:** Smart Sukuk is regarded as an alternative funding option for micro, small, and medium-sized projects. This consideration arises from recognizing that current funding sources are costly and challenging to access. Informal financing channels, often stemming from business partners such as intermediaries or informal financial institutions like market banks, offer a route to financing but are accompanied by high expenses and relatively elevated risks. Official funding sources from banks are also costly and challenging to tap into. This underscores the fact that the capital sources for these projects need a robust structure. Therefore, the introduction of Blockchain Sukuk and the prospect of future developments aim to broaden access to financing for these projects, ultimately enhancing overall inclusivity. (Haryanto & Abbas, 2020, p. 20 21).
- **High issuance and trading of Smart sukuk and achieving significant returns:** The sukuk was issued by the Indonesian microfinance Corporation KSPPS MBT Bina UAH in Indonesia on the platform. The platform focused on investments that have a social impact, where sukuk worth 715 million Indonesian rupiah (50.476 US dollars) were issued for one year based on the Mudaraba principle of profit and loss sharing, and the funding raised from the first tranche of sukuk was directed to finance 234 small projects with an average funded amount per beneficiary of 5 million rupiah (370 US dollars) the most significant individual funded amount in the portfolio was 20 million rupees (2300 US dollars) while the smallest funded amount was 5 thousand rupees (37 US dollars). (Blockchain Microfinance Sukuk

Wins 2 Awards, Yields 15,5% Dispite Covid- 19 stress, 2020). Figure 10 shows the overall performance of the first tranche almost a year after the issuance of the first sukuk with a cumulative annual return of 14.5% to investors, where cumulative profits of 103 million rupees (7.012 US dollars) were distributed.

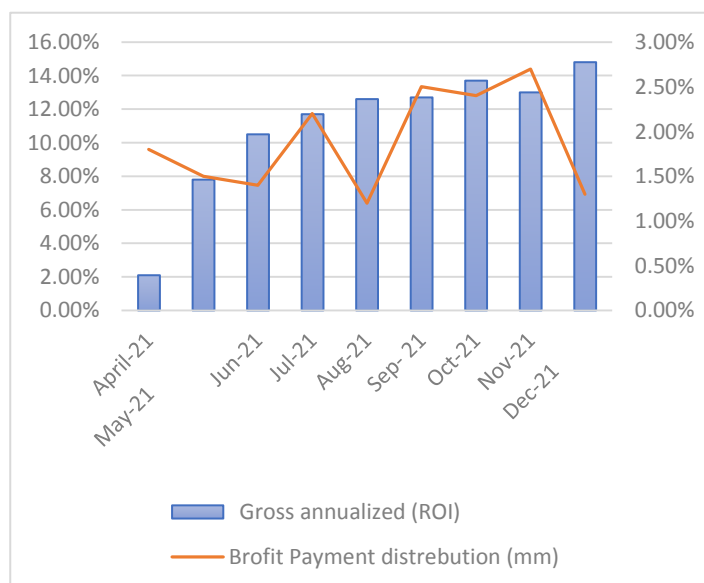
Fig.5. performance of the first tranche of Blossom Sukuk



Source: (FISKAL, 2020, p. 8)

Smart sukuk also achieved continuous high performance during the peak of the global pandemic (coronavirus pandemic) due to the focus on the real sector and the possibility of remote access, as the pandemic necessitated remote work and social distancing measures. Sukuk can be issued digitally based on blockchain technology, managed and traded electronically, allowing participants to access the market remotely without physical interactions; the results were robust even in crises. Despite the global crisis, Blossom platform achieved 14.3% of investment returns in 12 months, despite the closures during the height of the COVID crisis, especially with the recovery of the Indonesian rupiah to reach 2.39% compared to the rate when issuing sukuk (Blossom Finance, 2020). As shown in Figure 6:

Fig.6. Performance of the chip during the COVID crisis



Source: (Blossom Finance, 2020)

- Encouraging Innovation: The advent of Smart sukuk fosters innovation within the Islamic financial sector. It opens the door to developing new products, services, and platforms leveraging blockchain technology, contributing to the sukuk market's growth ((FISKAL, 2020, p. 9)
- Reporting and Analysis: Blockchain technology provides real-time data updates and reporting capabilities, allowing investors to make informed decisions swiftly (Khairy, Mahmoud, & Hakim, 2023, p. 31).
- Developing the Ecosystem and Deepening the Islamic Financial Sector: Smart Sukuk holds promise for advancing the Islamic financial industry, especially in Indonesia, where the Muslim population constitutes 87% of the total. The digital nature of Smart Sukuk, coupled with Indonesia's high internet penetration and the millennial demographic's inclination towards Sharia-compliant investments, presents a significant opportunity for growth (FISKAL, 2020, p. 9).
- Increasing the Inclusiveness of Financial Services: Smart Sukuk facilitates access to Sharia-compliant financing for SMEs and microprojects at relatively low issuance costs, promoting fair and accessible financing (Haryanto & Abbas, 2020, pp. 21-22).
- Access to Emerging Markets Globally: Investors gain access to sustainable development projects in emerging markets through the platform, enhancing global investor engagement (Khairy, Mahmoud, & Hakim, 2023, p. 23).
- Increasing Market Efficiency and Reducing the Role of Brokerage: By securely documenting transactions and ownership changes, blockchain technology fosters trust among stakeholders and minimizes the need for intermediaries, thus boosting market efficiency (Khan, et al., 2022, p. 13).
- Mitigation of Counterparty Risk: Blossom Finance's approach to credit scoring, focusing on liquidity-related indicators and cooperating with rating agencies, enhances the reliability and security of investments in Smart Sukuk (Haryanto & Abbas, 2020, pp. 12-13).
- Eliminating Price Fluctuations and Volatility: Adhering to Sharia principles, the platform minimizes price fluctuations and speculation, ensuring the value of blockchain instruments is closely tied to the underlying assets ((Mohieddin, 2020, pp. 33-34).
- Enhancing Liquidity: Smart Sukuk contributes to improved liquidity in financial markets, facilitating easier access to funds for a wide range of projects.

Blossom Sukuk, through its innovative application of blockchain technology, not only broadens the scope of Islamic finance but also strengthens the financial ecosystem, promoting sustainable growth and financial inclusion in Indonesia's Islamic capital market.

5. CONCLUSION

Smart sukuk emerges as a cornerstone for the future issuance of sukuk, poised to revolutionize the Islamic finance industry, foster financial inclusion, support small and medium-sized enterprises (SMEs), and activate the financial market through successful financing innovation. The findings of this study highlight several key impacts and advantages of Smart sukuk:

- Integration of Islamic Finance and Blockchain Technology: Smart sukuk is an innovative technology that combines the principles of Islamic finance and blockchain technology, provides high transparency and reliability to its investors, reduces costs by eliminating the

role of market makers, and enables attracting diversified investors and diversifying sources of financing. Thus, deepening the market and increasing its liquidity;

- **Stability and Sharia Compliance:** Smart sukuk mitigates large price fluctuations, adhering to Sharia provisions. It prohibits the premature sale of sukuk, thereby enhancing market liquidity by drawing more participants and streamlining trading operations. Smart contracts minimize the risk of non-compliance with payments and bolster security;
- **Innovative Issuance Model:** The Blossom Finance Platform is at the forefront of using blockchain technology for the issuance of Islamic sukuk. This innovation renders Islamic sukuk more accessible to small investors and issuers;
- **Supporting SME Financing:** By facilitating low-cost, Sharia-compliant financing, the Blossom platform significantly contributes to the economic upliftment of Indonesia. It aids small and medium-sized businesses, which, in turn, fosters economic growth and improves living standards;
- **Resilience During Global Challenges:** The intelligent sukuk's sustainability, even amid the COVID-19 crisis, underscores its robustness and adaptability in challenging times;
- **Access to Emerging Markets and Sustainable Development:** The Smart sukuk platform provides investors with opportunities to engage in leading projects within emerging markets, emphasizing sustainable development.

These findings underscore the transformative potential of Smart sukuk in enhancing and revitalizing the financial market. Through innovative mechanisms like the Blossom Finance Platform, Smart sukuk stands as a pivotal development, promoting economic growth, financial inclusion, and sustainable development within the global financial landscape.

6. Bibliography List:

1 Bibliographie

1. Blockchain Microfinance Sukuk Wins 2 Awards, Yields 15,5% Despite Covid- 19 stress (2020, aout 4), Récupéré sur [https://blossomfinance.com,;](https://blossomfinance.com,)
2. Blossom Finance (2020), Blossom Finance halal Investments in micro – businesses. Récupéré sur blossomfinance: <https://blossomfinance.com;>
3. chain. Link. (2023), Retrieved from what is blockchain technology? <https://chain.link;>
4. FISKAL, B. K. (2020), Potensi Smart Sukuk: Identifikasi Peran dan Fungsinya dalam Inklusivitas dan Pendalaman Sektor Keuangan Syaria, Retrieved from <https://uploads-ssl.webflow.com;>
5. Gates, M. (2017), blockchain: ultimate guide to understanding blockchain, bitcoin, cryptocurrencies, smart contracts and the futur of money, USA: createspace independent publishing platform;
6. Hamza, O. (2020), smart sukuk structure from sharia Perspective and financing benefits: Proposed application of smart sukuk through blockchain technology in Islamic banks within turkey, (second spicial issue for EJIF workshop), p4;
7. Haryanto, E., & Abbas, j. (2020), KAJIAN SMART SUKUK: POTENSI PEMBIAYAAN UMKM DAN PENDALAMAN PASAR KEUANGAN SYARIHA, p 13,22;
8. The concept of financial markets and their main types (2023), Récupéré sur [https://admiralmarkets.com, \(14/6/2023\);](https://admiralmarkets.com,)
9. Ifnfin Tech. (2018), Blockchain Sukuk: the smart way of doing it, Retrieved from ifnfintech: <https://ifnfintech.com;>
10. Khalil. m. (2011), sukuk: devinition, structure and accounting issues. Munikh Personal RePEc Archive (MPRA Paper No. 33675), P1;

11. Khan, N., Kchouri, B., Yattoo, N. A., Kraussl, Z., Patel, A., & State, R. (2022), Tokenization of Sukuk: Ethereum Case Study, P4;
12. Mahmoud Mohamed Abdel Hakim Zaer, A. K. (2023), Smart Sukuk Issuance Platforms based on Blockchain Technology to Finance Small and Medium Enterprises in the Kingdom of Saudi Arabia: Opportunities and Challenges, Volume number 129, p 15, 31;
13. Mahmoud, I. M. (2019). Blockchain technology in the Islamic finance sector. Retrieved from Islam online: <https://islamonline.net/>;
14. matthew j, m. (2018), Blossom: Halal & Ethical Investments Using Sukuk, Good returns. Great impact, Retrieved from <https://docsend.com/view/j7jczhp>;
15. Mohieddin, A.-H. A. (2020), A forward-looking view of using the “initial cash issuance to issue” (ico) “smart Islamic sukuk” via the blockchain, Sharia and Law Journal, P 33,34 ;
16. Mounira, B. (2022), Blockchain Sukuk Industry A Revolution In The World Of Investment Sukuk-Wathaq Platform Experience As A Model, Journal of Financial, Accounting & Managerial Studies (Vol 9 Issue 1) P 5 ,7;
17. Mubasher. (2023), Decrease in sukuk issuances globally, Récupéré sur mubasher: <https://www.mubasher.info>;
18. Nouran, Y. (2022), Strategies for digitizing government securities in Arab countries. International Monetary Fund, p 20;
19. Reda, Z. A., & Issawi, N. S. (2021), A prospective study of the impact of using block chain technology - Blockchain - in developing the infrastructure of financial markets. Volume 12 Issue 01, p 22, 228;
20. whitehead, R. (2018), Islamic microfinance start-up sets up. sukuk on Blockchain, taegets SMEs, social impact projects. Retrieved from <https://salaamgateway.com>.