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Cash Waqf Based on CBDC in Countering the Financing of Radicalism and Terrorism in Indonesia

Muhammad M Said, Prof. Dr. MA, CPHCM, CIRR
Professor of the Faculty of Economics and Business, Syarif Hidayatullah Islamic University (UIN) Jakarta, Expert Group of the National Counterterrorism Agency, and IKAL Strategic Center.
E-mail: saidppsa23@gmail.com

Abstract.
This study aims to explore the role of the Central Bank Digital Currency (CBDC) within the framework of Islamic economics in preventing the financing of terrorism in Indonesia. The research highlights the misuse of religious concepts such as jihad by radical groups to justify acts of terrorism and how digital financial oversight can mitigate such activities. Through a qualitative approach, this research analyses data from governmental reports, and financial regulations on terrorism and terrorist financing, with a focus on how CBDC can increase financial transparency and reduce the risk of illicit transactions. The findings indicate that CBDC can significantly enhance the ability of central authorities to monitor suspicious financial activities, including the cross-border flow of funds used for terrorist purposes. By providing real-time transaction data, CBDC offers a robust tool for preventing the financing of terrorism. Additionally, the study emphasizes the importance of incorporating a correct and comprehensive understanding of jihad through educational programs as part of broader deradicalization efforts. This includes engaging religious leaders to counteract radical narratives that misuse Islamic principles. The research concludes that the implementation of CBDC can support the goals of *maqasid al-shariah* by promoting justice, protecting wealth, and safeguarding the welfare of society. As a policy recommendation, government should adopt CBDC to strengthen financial system, ensure transparency, and prevent the financing of terrorism, while also addressing the root causes of radicalization through education and financial inclusion programs.
Keywords: *CBDC, social Islamic finance, Terrorism Financing, Maqasid al-Shariah*

1. Introduction

Radicalism and terrorism have long been serious threats to political, economic, and social stability in many countries, especially in nations with significant Muslim populations such as Indonesia. This threat has been exacerbated by technological advancements and globalization in recent decades. The internet and social media have become the primary tools for extremist groups to spread their ideologies, recruit new members, and facilitate the financing of terrorist activities. Despite various efforts made by governments and security agencies to counter terrorism, the threat continues to persist and evolve in increasingly sophisticated ways. In Indonesia, terrorist groups such as Jemaah Islamiyah (JI) continue to operate even after being banned since 2007, and despite the defeat of ISIS in the Middle East, their ideology persists in Indonesia, spreading through various digital platforms.

Radical groups not only use physical violence but also effectively exploit digital technology to recruit members and raise funds. Social media serves as a primary tool to attract new sympathizers, while fundraising is conducted through traditional methods such as donation boxes and more sophisticated means like the use of digital financial technologies, including cryptocurrencies. This contradicts the hope that technology could support peace and development. Instead, technology is often used to reinforce the threat of terrorism.

In the era of globalization, radicalism and terrorism are no longer confined by geographical boundaries. The use of encrypted communication tools such as Telegram and WhatsApp allows terrorist groups to operate across borders undetected. The challenge is even greater in developing countries like Indonesia, where limited human and technological resources make it difficult for law enforcement agencies to monitor terrorist activities in cyberspace.

One of the main gaps in combating terrorism is the lack of effective oversight of the flow of funds used to finance terrorism. While agencies like Densus 88 have succeeded in capturing many terrorist suspects, many terrorist networks remain active in fundraising through non-transparent channels such as donation boxes, orphanage donations, and humanitarian aid, which are used to finance terrorist operations both domestically and abroad. Radicalism and terrorism are a common enemy of humanity, attacking the most fundamental human values. No major religion in the world advocates violence; on the contrary, they teach compassion, peace, and mutual respect. Radical actions that claim to represent religion only serve to harm society, create fear, and threaten the comfort and peace of others.

To address this challenge, a new, more effective approach is needed in monitoring suspicious financial flows. One such innovation is the Central Bank Digital Currency (CBDC). CBDC allows for real-time financial transaction monitoring, enabling authorities to track suspicious money flows and prevent terrorism financing at an early stage. Moreover, CBDC offers opportunities for developing countries like Indonesia to strengthen monetary sovereignty and reduce dependence on a global financial system dominated by Western countries. One of the important aspects that can be manipulated by terrorist groups is the economic and financial sector, especially through the rapidly growing digital economy and financial technologies. In the economic sector, a gap often exists between expectations and reality, marked by the presence of unemployment and poverty groups who feel they are being treated unjustly by the state and a minority group that dominates the economic and financial sectors. This imbalance creates fertile ground for radical groups to easily recruit members.

Given the potential threat posed by radicalism and terrorism, the government seeks to reduce the popularity of radical ideologies by improving the economy, providing better opportunities, and developing the digital economy and financial systems through a series of regulations aimed at limiting the operational space for radical and terrorist groups. Regulations such as Presidential Regulation No. 7 of 2021 on the National Action Plan for the Prevention of Violent Extremism Leading to Terrorism (PAN-RE) 2020-2024 represent a policy manifestation of the UN Plan of Action to Prevent Violent Extremism from December 2015, which outlines a series of measures to prevent and combat terrorism and serves as a coordination reference between ministries and agencies (BNPT 2024).

Laws such as Law No. 19 of 2016 on Electronic Information and Transactions (UU ITE) serve as a vital legal foundation for creating a safe digital ecosystem. Bank Indonesia's regulations aim to create a secure and reliable digital financial system, payment systems, and financial technology services that are efficient and not misused for terrorism financing. In addition, the Financial Services Authority (OJK) has established a transparent and secure financial ecosystem, particularly in the context of preventing terrorism financing. The Financial Transaction Reports and Analysis Center (PPATK) requires financial service providers to report suspicious transactions to ensure that the financial system is not used for destructive purposes. Government Regulation No. 71 of 2019 on the Operation of Electronic Systems and Transactions sets operational standards for electronic system operators, with data security systems and technical standards designed to create a safe digital space and support healthy transactions. These regulations show that strong tools exist to combat radicalism and terrorism.

CBDC is one of the widely discussed innovations in the financial sector today. Empirical studies such as Hamza and Khoutem (2019) stated that CBDC can support financial stability in dual banking systems, particularly in countries with both conventional and Islamic banks. CBDC is also in line with the goals of maqasid al-shariah in Islamic economics, which aim to protect wealth and promote societal well-being. This technology can be used to enhance transparency in the management of zakat and waqf funds, ensuring that such funds are genuinely used for legitimate social purposes and not misused to finance terrorism.

Additionally, CBDC can play a significant role in expanding financial inclusion. Economically and socially marginalized individuals can gain access to the formal financial system, reducing their vulnerability to the influence of radical groups. With better access to financial services, they can engage in legitimate economic activities, reducing the allure of radicalism, which often offers financial assistance to disadvantaged communities. Despite its great potential, the main challenges in implementing CBDC include regulatory and technical issues, especially in the context of Islamic finance. One of the biggest challenges is the prohibition of riba (interest) in Islamic finance, which must be addressed by designing a regulatory framework that aligns with shariah principles. Additionally, cybersecurity is a major concern, as CBDC, being a digital currency, is vulnerable to cyber-attacks. Serious efforts are therefore needed to build strong security infrastructure to protect the integrity of the system. By leveraging CBDC technology, Islamic financial instruments such as waqf can be managed more transparently and efficiently. CBDC holds significant potential in combating terrorism financing, expanding financial inclusion, and supporting the equitable redistribution of wealth in accordance with Islamic financial principles. Thus, this study highlights the role of the Central Bank Digital Currency (CBDC) within the framework of Islamic economics in preventing the financing of terrorism in Indonesia.

2.Theoretical Review

Radicalism, Terrorism, and Globalization

Radicalism and terrorism are global phenomena that affect national and international stability. Radicalism often stems from social, economic, and political dissatisfaction, which then evolves into extremism where violence is used to achieve ideological goals. According to Wilkinson (2011), radicalism is a process that allows individuals or groups to become extreme in their thoughts, beliefs, and behaviours. In Indonesia, a clear example is the Jemaah Islamiyah (JI) group, which adopted radical ideology to establish an Islamic state through violence. This highlights the connection between socio-economic marginalization and radicalization (Gurr 1970).

Globalization and technology play key roles in spreading extremist ideologies. Castells (2010) argues that globalization expands the reach of radical ideologies by accelerating the exchange of information and providing access to broader international networks. Digital technologies such as the internet and social media have enabled terrorist groups to recruit new members and spread propaganda more efficiently. Bunt (2018) states that social media has become the primary tool for groups like ISIS to spread their ideology. For example, platforms like Telegram and WhatsApp allow terrorist groups to communicate anonymously, making them difficult to trace, as explained by Hegghammer (2016).

Radicalism is an ideology or movement that seeks fundamental changes in the social, political, or religious structure through extreme means. It is often characterized by the rejection of prevailing societal values and the desire to replace them with a new system deemed more suitable to their ideology. Transnational in nature, radicalism crosses national borders, especially through digital technology and media, expanding its influence across various countries, including Indonesia (Arifin Amira 2020).

Social and economic disparities are often exploited by radical groups to recruit new members by offering false promises of a better life (Fuad 2020). In Indonesia, radicalism often stems from a long history of social and political changes that have deepened dissatisfaction with the government (Rahayu 2024). Radicalism under the guise of Islam is a distorted interpretation of religious teachings, particularly in the context of the relationship between Islam and democracy (Sumitro 2015).

Terrorism, on the other hand, is an act of violence or the threat of violence aimed at civilians to create fear, with the goal of achieving political, ideological, or religious objectives. Financing is a crucial part of terrorist operations. Radical groups use various methods, such as public donations and social institutions, to raise funds. In this context, stricter monitoring of financial flows is necessary to prevent terrorism (Wilujeng Risman 2020). Terrorist groups increasingly utilize digital technology and social media to spread their ideologies and recruit new members. Monitoring digital activities is key in combating terrorism (Mahfud Sukmawati 2018).

Radicalism often serves as the starting point for individuals or groups to engage in terrorist activities. When radical ideologies spread and attract followers, some individuals are likely to choose violence to achieve their ideological goals, eventually leading to acts of terrorism. Radicalism, stemming from social dissatisfaction or a misinterpretation of religious teachings, can trigger acts of terrorism, often through violence, to achieve political or ideological aims (Rahayu 2024). Radical groups that evolve into terrorist organizations exploit illegal financing and technology to carry out their actions, demonstrating the link between radicalism and terrorism (Mahfud Sukmawati 2018).

Preventing radicalism and terrorism requires a comprehensive approach, encompassing economic, social, and technological aspects. Several parties have proposed prevention measures. First, economic empowerment by creating jobs and providing broader access to education can serve as a solution to prevent radicalization (Fuad 2020). Second, monitoring suspicious financial flows through technological innovations such as Central Bank Digital Currency (CBDC) is key to preventing terrorism financing (Wilujeng Risman 2020). Third, cybersecurity oversight, through monitoring radical group activities on social media and digital platforms, must be strengthened with cooperation between governments, communities, and digital service providers (Mahfud Sukmawati 2018).

Central Bank Digital Currency (CBDC)

Central Bank Digital Currency (CBDC) is an innovation that offers various opportunities and challenges, both in conventional and Islamic financial systems. CBDC not only has the potential to increase financial inclusion and payment system efficiency, but it can also support monetary policy objectives, environmental sustainability, and global financial security. In the context of Islamic economics, the implementation of CBDC in accordance with shariah principles can strengthen Islamic banking systems and support social justice. However, realizing the full potential of CBDC requires addressing technical, regulatory, and public education challenges with well-coordinated strategies.

In the future, CBDC is likely to become an integral part of the global digital financial system, with wide-ranging impacts on monetary policy, financial stability, and international economic relations. Digital currency issued by central banks is seen as a solution to modern financial challenges in both conventional and Islamic economies. Several researchers have provided insights into this subject. Arief Triyuwono (2023) emphasizes the importance of analysing digital currency from an Islamic economic perspective, positioning it as a medium of exchange in line with Islamic principles, such as functioning as a standard for deferred payment, a store of value, and a unit of account. CBDC is believed to offer potential solutions aligned with maqasid al-shariah, particularly in safeguarding wealth (hifz al-mal) and promoting social justice.

However, there are challenges in ensuring anonymity and avoiding riba (interest) within the CBDC framework while adhering to shariah principles (Prayudya & Al-ayubi 2023). The implementation of CBDC requires serious attention to regulatory and technological challenges. Regulations related to the use of digital currencies that comply with shariah principles are still underdeveloped. The technology used, particularly the integration between CBDC and Islamic finance, must address issues such as cybersecurity, anonymity, and real-time transaction monitoring (Tekdoğan & Güney 2024).

CBDC is expected to provide various advantages, such as strengthening digital payment systems and increasing financial inclusion (Kesavaraj & Bhandari 2022), while offering a safer alternative compared to cryptocurrencies that are not regulated by official authorities. Replacing cash gradually and addressing challenges such as low financial literacy and weak technological infrastructure, as seen in countries like India and other developing nations, requires education (Lee & Wang 2020; Bindseil & Terol 2021). On the other hand, CBDC also offers the potential to reduce cash management costs and help formalize previously informal economies (Ozili 2022), while also helping to maintain financial stability in line with Islamic economic principles (Hamza & Jedidia 2020).

According to Takagi (2017), blockchain technology enables the recording of transactions that are tamper-resistant and decentralized, which can increase public trust in digital financial systems. For countries with Islamic economies, the use of blockchain can also support greater transparency, in line with the justice and openness principles taught in Islam. According to Alonso-Robisco & Carbo (2023), the issuance of CBDC can open new channels for more efficient monetary policy transmission, such as interest rate adjustments and more targeted liquidity provision, while expanding public access to risk-free digital money, reducing dependence on private financial intermediaries, and increasing overall financial inclusion and stability (Dash & Siddha 2022). CBDC accessed through mobile devices can offer a more inclusive solution for those who do not yet have access to traditional banking services. Additionally, CBDC can support government programs such as more efficient and transparent distribution of social assistance, acting as a backup for private payment systems that are prone to failure during crises, and supporting quicker and more effective financial aid distribution during global crises (Gupta & Jangir 2023).

The low level of digital and financial literacy, weak technological infrastructure, and high dependence on cash (Kesavaraj & Bhandari 2022) are significant challenges for CBDC. Close cooperation between governments, central banks, and the private sector is necessary to ensure that the required technological infrastructure and regulations support the widespread adoption of CBDC (Viviana Alfonso C. et al. 2024). This also emphasizes the importance of effective communication strategies to educate the public on the benefits and risks of CBDC (Bindseil & Terol 2021). To address the disintermediation issue, restrictions on CBDC use for daily transactions or setting lower interest rates than commercial bank deposits may be necessary, allowing CBDC to function as an efficient payment tool without disrupting banking system stability.

Ozili (2022) explains that CBDC has the potential to support a circular economy, where value transfer efficiency can reduce negative environmental impacts and help reduce the carbon footprint generated by the financial sector. CBDC can also facilitate transactions that support environmentally friendly projects and sustainability initiatives. The use of CBDC, supported by blockchain technology, offers significant advantages in terms of transparency and oversight of financial transactions. Mohamed Hazik (2020) notes that CBDC can assist authorities in monitoring financial transactions in real-time, allowing for earlier detection of illegal funding patterns, including terrorism financing. Additionally, CBDC can make it easier to track cross-border fund flows, reducing the risk of money laundering and other financial crimes. In the context of shariah, the implementation of CBDC that aligns with Islamic law can also ensure that financial transactions are conducted ethically and responsibly.

CBDC not only impacts the domestic economy but can also influence the global financial system. According to Hung (2023), the development of CBDC by countries such as China, through the Digital Currency Electronic Payment (DCEP), could be an important tool in efforts towards de-dollarization, or reducing dependence on the US dollar as the global currency. If CBDC is widely accepted across various countries, it could shift the dynamics of international trade and cross-border payment systems, providing countries with more options in managing their own currencies and reducing the dominance of the US dollar.

CBDC, as a digital product, represents a significant step in the evolution of digital currencies (Bordo 2022), marking an important milestone in monetary history, from commodity money to fiat money, and now digital currencies. CBDC represents a significant transformation in how we view and use money, with the potential to change global monetary and payment systems. CBDC is expected to play a key role in the future global digital economy, with countries that adopt it early gaining a competitive advantage in international markets. Kesavaraj Bhandari (2022) highlights that alongside the emergence of 5G technology, India has shown intentions to lead the Digital Revolution in the world through secure cyberspace, free from hacking and government surveillance. Specific challenges faced in implementing CBDC in this country include low financial literacy and weak technological infrastructure, particularly in balancing the benefits and risks and presenting best practices in CBDC design. Lee & Wang (2020) argue that with CBDC, China's central bank is enabled to manage processes with a focus on monitoring and control without bearing all the burdens or facing excessive centralization risks. CBDC will become a key tool in the future digital economy, and countries that are accustomed to this technology will have a competitive advantage (Skenderi 2022; Smirna Stamate-Ștefan 2023).

The overwhelming success of Central Bank Digital Currency, as Bindseil & Terol (2021) express concerns, may cause excessive banking disintermediation, which could worsen in banking crises. CBDC could excessively replace private payment solutions, which is considered undesirable. Their study highlights the challenges of determining the appropriate functional scope of CBDC, which is neither too broad to displace private sector solutions nor too narrow. Ozili (2022) is optimistic that with CBDC, the efficiency of value transfer can be enhanced, and the opportunities for banking disintermediation can be better managed within the financial system. Lukonga (2023) explores the monetary policy impacts of CBDC adoption in countries with conventional and Islamic banking systems. CBDC can influence monetary policy across jurisdictions, considering the unique characteristics of Islamic banking systems. Kiff & Zhou (2020) discuss the reasons why central banks are exploring CBDC issuance, while also considering design, policy, and security aspects.

Kawure (2022) found that CBDC could potentially replace physical currency, depending on perceptions, features, benefits, and the challenges associated with it. Bossu & Yoshinaga (2020) analyzed the legal foundations of CBDC in the context of central bank and monetary law, concluding that current central bank laws do not permit the issuance of CBDC to the public, thus requiring regulatory reforms to enable its issuance.

Hamza & Jedidia (2020) discuss the design of CBDC that aligns with shariah principles and its impact on financial stability in countries with dual banking systems. In the Islamic banking system, potential banking disintermediation caused by CBDC can be limited by shariah, which supports financial stability (Tang 2023; Tong & Chen 2021). CBDC is designed to provide the public with secure and stable access to risk-free digital currency, especially as the use of cash decreases and digital payments become more preferred (Alonso-Robisco & Carbo 2023). Moreover, CBDC is seen as a potential solution to the risks posed by unregulated cryptocurrencies. According to Mohamed Hazik (2020), CBDC has the potential to increase transparency in financial systems by allowing real-time transaction monitoring. This enables early detection of terrorism financing patterns, which are often difficult to track due to hidden funding methods such as digital donations or donation boxes.

From an Islamic economic perspective, Hamza and Khoutem (2019) emphasize that CBDC can support the principles of maqasid al-shariah, particularly in terms of protecting wealth (hifz al-mal) and promoting social justice. CBDC offers several valuable benefits. First, continuous access to central bank money: CBDC provides ongoing access to money issued by the central bank, even as cash usage declines. Some policymakers argue that the adoption of CBDC could reduce reliance on physical cash (Alonso-Robisco & Carbo 2023). Despite this, cash usage in regions such as Latin America (LAC) remained significant during the pandemic, even peaking in some jurisdictions during COVID-19.

Second, reducing cash management costs. CBDC has the potential to reduce operational costs associated with the issuance and management of physical cash. These costs, ranging between 0.2% and 1% of GDP in some countries, can be reduced through the partial replacement of cash with CBDC, significantly saving on distribution and transportation costs (Dash & Siddha 2022). Third, reducing economic informality. CBDC can help lower the level of informal economies that heavily depend on cash transactions. Widespread adoption of CBDC could encourage informal economic actors to use digital payment systems, thus helping them transition into the formal economy (Gupta & Jangir 2023). Fourth, increasing financial inclusion. CBDC plays a crucial role in promoting financial inclusion, especially for those who do not have access to formal financial services. In the LAC region, around 49% of the adult population lacks access to basic financial services. CBDC, accessed through mobile phones, can help overcome these barriers, as evidenced by the success of M-Pesa in Kenya (Dash & Siddha 2022). Fifth, strengthening the resilience and security of payment systems. CBDC can serve as a reliable backup for digital payment systems. In the event of failure in private payment systems, CBDC can act as a solution (Dash & Siddha 2022). Sixth, more effective fund distribution: CBDC can support the more efficient distribution of funds to remote areas, particularly in island nations in the LAC region. Additionally, CBDC can facilitate the rapid disbursement of fiscal transfers to households and businesses during crises (Alonso-Robisco & Carbo 2023; Gupta & Jangir 2023; Viviana Alfonso et al., 2024).

CBDC is a digital form of legal tender backed by national credit. e-CNY, for instance, is the digital version of fiat currency issued by the People's Bank of China (PBOC) and operated by authorized operators. e-CNY is a hybrid payment instrument based on quasi-value and account, which holds legal tender status and has several implications for the monetary system and the economy. E-money, while differing from CBDC in terms of issuance and circulation modes, is a replacement for cash. E-money, as defined by the Basel Committee on Banking Supervision (BCBS 1998), is a "stored value" mechanism or prepaid payment tool for executing payments through sales terminals or direct device-to-device transfers.

Waqf as an Islamic Monetary System

Several scholars have offered basic definitions of Islamic finance. According to Abdianti (2023), Islamic finance focuses not only on money and supply but also on principles such as justice, brotherhood, and fair wealth distribution. One of the objectives of the Islamic financial system is to enhance economic balance and wealth distribution within society. Islamic monetary policy, as supported by Hidayat (2023), encourages transactions in accordance with shariah principles while promoting financial transparency through technologies like blockchain, which can enhance financial inclusion and economic stability.

The goals of Islamic monetary policy: Some authors, like Nasution (2023), argue that the primary objective of Islamic monetary policy is to achieve and maintain currency stability by focusing on money management and price stability, without using riba, which is prohibited by shariah. One of the aims of Islamic monetary policy is to maintain a balance between sustainable economic growth and equitable wealth distribution (Juanda & Hidayat 2024). Islamic monetary instruments are essential for promoting inclusive economic growth and controlling inflation.

Islamic finance is distinct from conventional finance. Ilhamdi & Nugraha (2023) note that Islamic finance does not accept interest-based instruments; instead, it employs profit-sharing systems (mudharabah and musyarakah) to drive investment and fair wealth distribution. Monetary stability in Indonesia is maintained through Islamic monetary instruments such as Islamic Bank Certificates (SBIS) and the Islamic Interbank Money Market (PUAS) (Lucky 2024). Sukamto & Aisah (2021) assert that the Islamic monetary system differs from conventional systems by avoiding the use of interest rates as a policy tool. This system eschews riba, which is prohibited in Islam, and emphasizes profit-sharing and productive investment in the real sector. Conversely, Sobarna (2020) points out that the Islamic monetary system avoids the use of fiat money and fractional banking reserves, as practiced in conventional systems.

Islamic finance treats money as a public good, which must circulate within the economy and not be hoarded. Unlike commodities that are traded or subject to interest, money serves as a fair medium of exchange (Rahmatia & Syawaluddin 2022). Muttaqien & Madjakusumah (2020) cite Al-Ghazali's idea that money should not be treated as a commodity, as its primary function is as a medium of exchange. Money is not meant to be traded or priced, but rather to facilitate fair transactions. Alim & Suryadi (2021) argue that the main principle of Islamic monetary policy is social justice, meaning that monetary policy is used to enhance societal welfare through fair wealth distribution and the elimination of economic inequality. On the other hand, several authors have given serious attention to cash waqf and the integration of cash waqf with sukuk.

Azizah Khanifa (2021) explains that the Cash Waqf Linked Sukuk (CWLS) Retail is an innovation that combines the concept of cash waqf with state sukuk. CWLS allows cash waqf funds to be invested in sukuk, where the returns are managed by the waqf institution (nazir) to support social programs and community economic empowerment. This innovation, according to Khanifa, plays a crucial role in supporting the objectives of maqasid al-shariah by maximizing the economic benefits for the ummah.

As an instrument that is more accessible to the public, cash waqf does not require physical assets such as land or buildings, as explained by Wahib (2021). The public can contribute to the form of money, either through direct cash methods or bank transfers. This expands the opportunity for the public from various backgrounds to participate in waqf. In this context, CWLS plays a strategic role as a means that makes it easier for Muslims to engage in philanthropic activities. Witjaksono (2018) points out that public participation in cash waqf is influenced by factors such as knowledge, attitudes, subjective norms, and religious commitment, which significantly affect one's intention to participate in cash waqf. Public awareness and a positive attitude (Deji Musa 2023) towards cash waqf affect business owners' intentions to use cash waqf as an instrument for their business growth. This indicates the importance of socialization and promotion of the benefits of cash waqf to encourage wider participation from the public and business sectors.

The benefits of cash waqf and CWLS are extensive, not only in supporting social development but also in strengthening the ummah's economy. Azizah Khanifa (2021) emphasizes that the returns from CWLS are used for programs that empower the ummah, such as sustainable social and economic programs. In Jayapura, Wahib (2021) notes that cash waqf funds at the Assalam Social Institution were used to purchase land designated for educational purposes, although the economic empowerment program still needs optimization. Morad (2014) found that cash waqf makes a significant contribution to the economic growth of society, especially for the middle and lower-income groups. This shows that cash waqf can help strengthen the welfare of those in need. Hardiati (2020) also highlights that cash waqf is highly aligned with the principles of maqasid al-shariah, allowing Muslims to contribute to economic development and poverty alleviation.

Therefore, the management strategy for cash waqf is critical to maximizing waqf's potential efficiently (Triyatno 2022). Sanusi Shafiai (2015) stresses the importance of proper cash waqf management in supporting religious, social, and economic activities for the wider community. Good governance ensures that waqf funds are used transparently and purposefully, supporting sustainable socio-economic development using digital technology platforms. Amaliyah Rahmawati (2022) notes that since 2012, various digital platforms have been developed to facilitate cash waqf through social media, websites, and applications. This has made waqf more accessible and more transparent. Nasution (2024) emphasizes that the development of e-cash waqf applications can enhance the efficiency and accountability of waqf management while attracting more public interest in participation. This digital transformation is essential for expanding the scope and effectiveness of cash waqf. With better access and transparency, digital platforms can encourage greater participation from both individual and corporate donors.

Digital Financial Regulation in Indonesia

The government's focus on economic and financial growth, as well as digital business, has increased significantly in recent years. Many regulatory reforms have been undertaken to support the growth of technology-based financial businesses, such as fintech, digital payments, cryptocurrency, and consumer protection in electronic financial transactions. This indicates the high level of government awareness in fulfilling its responsibility to protect all citizens from threats to the economic security of the people, who are the backbone of the national economy. Furthermore, regulatory reforms are crucial to overseeing digital business practices amid the increasing development of financial technology. These regulations are essential in responding to both opportunities and challenges while ensuring the security and integrity of the national financial system.

Several regulations have been introduced to strengthen the digital financial sector in Indonesia, including Law No. 19 of 2016 on Electronic Information and Transactions (UU ITE), which serves as the legal foundation for electronic transactions in Indonesia. This law regulates various activities related to information technology and provides legal protection for online transactions, including consumer data security. It is also important for regulatory reform in preventing cybercrimes, fraud, and data theft, as well as ransom demands in exchange for unlocking hacked national data. The UU ITE plays an important role in creating a safe ecosystem for technology-based financial services users.

Bank Indonesia Regulation (PBI) No. 22/23/PBI/2020 on Payment Systems establishes standards for payment systems in Indonesia by providing digital financial services such as electronic wallets (e-wallets) and electronic money (e-money), ensuring the security and efficiency of electronic financial transactions (Bank Indonesia 2020). In addition, PBI No. 19/12/PBI/2017 on Financial Technology (Fintech) aims to regulate and organize the scope of fintech, including licensing, operational aspects, and risk management related to digital financial technology in digital payments. This regulation governs the distribution, usage, and responsibilities of electronic money service providers like OVO, GoPay, and DANA. The purpose of this regulation is to ensure the safety of electronic money use in Indonesia (Bank Indonesia Regulation No. 19/12/PBI/2017, 2017).

Apart from PBI, the Financial Services Authority (OJK), responsible for overseeing the financial services sector, has issued several regulations, including OJK Regulation No. 13/POJK.02/2018 on Digital Financial Innovation, which governs digital financial innovation (IKD) through sandbox regulations, consumer protection, and oversight of financial technology such as peer-to-peer (P2P) lending, crowdfunding, and robo-advisors. Meanwhile, OJK Regulation No. 77/POJK.01/2016 on Information Technology-Based Lending Services (Fintech P2P Lending) regulates the operational mechanisms of P2P lending platforms and consumer protection for those using such services (OJK 2016).

The government also issued Government Regulation No. 71 of 2019 on the Implementation of Electronic Systems and Transactions to establish operational standards for electronic system operators and all digital financial sectors. Government Regulation No. 71 of 2019 emphasizes the obligation of operators to ensure the security of user data and meet technical standards in the execution of electronic transactions.

In the area of trade, Government Regulation No. 80 of 2019 on Trade through Electronic Systems (E-Commerce) aims to regulate e-commerce and digital financial sectors, protecting consumers and ensuring transparency in all transactions on e-commerce platforms (OJK 2017; Government 2019). The protection of the public from money laundering activities has also garnered government attention, marked by the issuance of Financial Transaction Reports and Analysis Center (PPATK) regulations on the Prevention of Terrorism Financing and Money Laundering. PPATK Regulation No. 12 of 2017 emphasizes the requirement for digital financial service providers to report suspicious financial transactions. This regulation also aims to prevent terrorism financing and money laundering through digital financial systems while ensuring that technology-based financial services remain transparent and secure (OJK 2017).

3.Research Methodology

The methodology used in this study is a literature review, where written sources such as books, journals, articles, theses, and other documents serve as the primary data. A literature review is theoretical, conceptual, and descriptive, aiming to gain a deep understanding of the potential influence of Islamic finance, particularly cash waqf, in preventing the financing of extremism, radicalism, and terrorism within the context of CBDC in Indonesia.

The initial step in this research involves tracing relevant references using research tools such as Rabbit Research. This process begins by identifying appropriate keywords to track literature sources using artificial intelligence (AI). The search results are then compiled into separate folders to facilitate citation with the help of reference management software such as Mendeley. After gathering the literature, the researcher classifies it according to the research objectives and conducts content analysis by thoroughly reading the text to understand concepts, theories, or research findings. This method ensures that the data obtained is relevant and credible for drawing conclusions.

4.Results & Discussion

The threat of radicalism and terrorism remains a significant challenge for all countries globally. Terrorist activities that undermine humanity have become a shared enemy of civilization. In Indonesia, the potential for terrorism remains high, particularly with the presence of global terrorism networks such as ISIS and Al-Qaeda, which continue to pose threats through various forms of violence, including bombings, armed attacks, arson, and social isolation. Although the strength of both groups has diminished globally, they persist through recruitment, financing, and propaganda on the internet. The exploitation of children and women by ISIS has prompted the United Nations to urge countries to repatriate individuals associated with Foreign Terrorist Fighters (FTF) (BNPT 2023).

The Indonesian government has responded to terrorism by issuing Presidential Regulation No. 90 of 2023 and establishing a task force under the National Counterterrorism Agency (BNPT) to handle the repatriation of children from ISIS camps. Domestically, Jemaah Islamiyah (JI) continues to recruit, train, and strengthen its organization, particularly through activities targeting campuses and youth organizations under the guise of religious outreach. Meanwhile, Jamaah Ansharut Daulah (JAD) no longer has an active structure, but small groups of terrorist sympathizers remain active online, using social media to spread propaganda and raise funds. The ongoing conflict in Gaza has the potential to be exploited to garner sympathy for anti-Israel sentiments and jihad recruitment. However, the Indonesian government has clearly expressed its support for Palestine, as evidenced by President Jokowi's delivery of humanitarian aid through BAZNAS (BNPT 2023).

In 2023, Indonesia did not experience any significant acts of terrorism, signaling an improvement in security. However, the exposure of women, children, and teenagers to radicalism continues to rise, making them prime targets for radicalization. According to a BNPT survey in 2023, vulnerable groups most exposed to radicalism include women, teenagers, and children. The radicalism potential index is higher among women and the younger generation, particularly Generation Z (ages 11-26), especially those who are active on the internet. Throughout 2023, 2,670 pieces of digital content containing intolerance, radicalism, and terrorism-related extremism were identified, with 1,922 of them being flagged for removal, most of which were on Facebook and Instagram (BNPT 2023).

Digital Waqf: Financial Inclusion and Deterrence Against Terrorism

Waqf is an Islamic financial instrument that allows individuals to donate assets or wealth for public benefit, with the condition that the principal assets remain intact and only the benefits are distributed. The integration of waqf with digital technology, including through CBDC, can enhance financial inclusion and social distribution in several ways. First, Broader Financial Inclusion. Digital waqf allows individuals who previously had no access to formal financial systems to participate in Islamic financial activities. The use of digital platforms and CBDC removes geographical and infrastructure barriers, allowing people in remote areas to contribute to waqf programs. This helps address economic marginalization, which is often a root cause of radicalization. Second, Efficiency and Accountability in Waqf Management. Through a CBDC-based digital waqf system, waqf fund management becomes more transparent and accountable. All transactions are recorded and verified, ensuring that waqf funds are used in accordance with the donor’s intentions (wakif) and shariah conditions. Third, More Equitable Social Distribution. Digital waqf can enhance the effectiveness of distributing waqf proceeds to sectors in need, such as education, healthcare, and social infrastructure development. With digital technology, the distribution process can be faster and more targeted, reaching a wider and more diverse audience, including those outside the reach of traditional financial systems. Fourth, Encouraging Economic Participation of the Ummah. The ease of access through digital platforms allows more individuals to participate in waqf, whether in the form of cash or other digital assets. This fosters greater participation in supporting sustainable social, economic, and environmental projects, while also helping to create economic justice and reduce social inequality.

By combining the potential of CBDC with digital waqf, there is a great opportunity to create a more transparent financial system that is resistant to misuse, including for terrorism financing.

Integrating these two concepts strengthens the financial system in several ways: First, Enhanced Transparency. CBDC, as a digital currency, enables central banks and financial institutions to monitor financial flows in real time. Financial authorities can track and supervise every transaction conducted using CBDC, significantly reducing the risk of misappropriation of funds for illegal purposes, including terrorist activities. Second, Increased Accountability and Traceability. Integrating CBDC with digital waqf enhances accountability and tracking of waqf funds, allowing for more transparent and accurate reporting on waqf fund utilization, which significantly reduces the risk of misuse by terrorist groups. Third, Stronger Anti-Money Laundering (AML) and Counter-Terrorist Financing (CFT) Policies. With CBDC, stronger AML and CFT policies can be implemented. Suspicious transactions can be detected and reported more quickly, while financial authorities can limit or block transactions that are suspected of being related to terrorist activities.

Digital waqf ensures that waqf becomes a secure financing instrument. Waqf funds can be more efficiently distributed for social purposes such as infrastructure development, education, and healthcare services. Fitriani Taufiq (2023) asserts that digital waqf can fulfill the objectives of shariah (maqasid al-shariah), providing peace of mind and security while improving the welfare of society. Raudhoh Hidayat (2023) explains that digital cash waqf on platforms like Tokopedia is considered valid under *maslahah mursalah* and aligns with the goals of maqasid al-shariah. Digital payment systems through electronic channels meet the conditions and requirements of waqf in accordance with Islamic law. Adriansyah Ulhusna (2024) adds that digital waqf plays a role in achieving the Sustainable Development Goals (SDGs). Through digital platforms, public participation in cash waqf using blockchain technology and smart contracts can be increased (Taufiq F. 2023; Hidayat R. 2023; Adam K. 2023; Ulhusna A. 2024).

Strategic Challenges and Policy Framework for Shariah-Based Financial Transaction Supervision

The integration of CBDC and digital waqf, which can contribute to preventing terrorism financing, requires a strong and shariah-based policy framework. This strategy must be designed by the government and financial regulatory authorities to support the development and use of CBDC and digital waqf within the Islamic financial system. Such regulations must include specific provisions on Anti-Money Laundering (AML) and Counter-Terrorist Financing (CFT) that are compatible with shariah principles. These measures will strengthen the role of Islamic financial institutions in detecting and reporting suspicious transactions related to terrorism financing. To achieve shariah compliance, a vital component is ensuring that the technology used is in harmony with Islamic law. This is critical for realizing shariah objectives (maqasid al-shariah), particularly in protecting life (hifz al-nafs) by utilizing CBDC integrated with waqf. This approach will ensure that all financial transactions are conducted justly and in accordance with Islamic law.

The threat of global terrorism is consistent with the increasing geopolitical tensions, particularly related to the trade war between the United States and China and their respective allies. Such tensions demand a comprehensive strategy that includes international cooperation with organizations like the Financial Action Task Force (FATF) to strengthen mechanisms for monitoring terrorism financing. One important element of shariah-based financial transaction supervision is public education and awareness. The responsibility to educate the public and business actors about the importance of transparent transactions that comply with shariah principles falls on Islamic financial institutions and related authorities. Financial literacy campaigns should also include the dangers of money laundering and terrorism financing and how CBDC and digital waqf can create a more secure and fair financial system.

Enhancing the role of Islamic financial institutions in transaction supervision is also crucial. Islamic financial institutions must have the authority to monitor, detect, and report suspicious transactions potentially linked to terrorism financing. Strict enforcement of shariah policies regarding Know Your Customer (KYC) requirements and reporting suspicious transactions will increase transparency and security within the financial system.

The design and implementation of CBDC that adheres to shariah principles, such as avoiding riba (interest), gharar (uncertainty), and maysir (gambling), presents major challenges that require serious attention. To guarantee the recognition and respect of rights and freedoms in an equitable manner, policies must consider public order and security. Justice, security, and societal order serve as the spirit behind the enactment of Law No. 19 of 2016 concerning Electronic Information and Transactions (UU ITE). However, certain weaknesses persist in terms of the monitoring of financial transactions, as the UU ITE primarily focuses on data protection and electronic transactions in general, without delving into specific details regarding CBDC and waqf transactions.

Therefore, future regulations will need to be formulated more specifically to address these gaps and to ensure that all digital financial instruments are regulated properly within the Islamic finance system. Cybersecurity concerns related to CBDC must also be addressed since the introduction of CBDC makes financial systems more vulnerable to cyber-attacks. As a digital currency, CBDC is susceptible to various forms of cyber-attacks, from hacking to data breaches, which can undermine the integrity of the system.

However, by leveraging technological advancements such as blockchain and artificial intelligence, a robust infrastructure can be built to ensure that CBDC is secure and free from manipulation. The ability to track every transaction and monitor waqf fund flows in real-time can make it easier to detect anomalies and prevent funds from being misused for terrorism financing or other illegal activities.

5.Conclusion & Policy Recommendation

The integration of Central Bank Digital Currency (CBDC) with Islamic financial instruments, particularly cash waqf, presents a promising strategy to combat the financing of terrorism in Indonesia. This study highlights the importance of CBDC as a financial innovation that not only enhances transparency and security but also supports financial inclusion, especially in marginalized communities that are often vulnerable to radicalization. CBDC provides real-time transaction monitoring, which allows authorities to detect suspicious financial activities, reducing the potential for terrorism financing. By aligning CBDC with shariah principles, it becomes a tool that adheres to the values of Islamic finance, ensuring that financial activities are conducted ethically and responsibly.

Furthermore, digital waqf plays a critical role in strengthening Islamic social finance by promoting broader participation in philanthropic activities. With the ease of access provided by digital platforms, more individuals and organizations can contribute to waqf, supporting various social and economic development programs. The integration of CBDC with digital waqf enhances the accountability and transparency of waqf fund management, ensuring that funds are utilized in accordance with Islamic law and donor intentions.

Despite the great potential of CBDC and digital waqf, there are several challenges that need to be addressed. One of the main challenges is the development of a regulatory framework that ensures compliance with shariah principles while also addressing the technical and cybersecurity risks associated with digital currencies. Governments and financial authorities must work together to create policies that safeguard the integrity of the financial system and prevent its misuse by radical groups.

Another challenge lies in public education and literacy. Increasing awareness of the benefits and risks of CBDC and digital waqf is essential to encourage greater participation and ensure that the public understands how these instruments can contribute to the greater good of society. Financial literacy campaigns, along with collaborations between governments, Islamic financial institutions, and technology providers, are needed to ensure the successful implementation of CBDC and digital waqf.

Finally, the role of international cooperation cannot be overlooked. Global challenges like terrorism financing require coordinated efforts among countries and financial institutions worldwide. The implementation of CBDC and digital waqf in preventing terrorism financing should be supported by international standards and practices, particularly in collaboration with organizations such as the Financial Action Task Force (FATF).

The integration of CBDC and digital waqf offers a powerful solution to the complex issue of terrorism financing. By enhancing financial transparency, increasing accountability, and promoting financial inclusion, these innovations can help build a financial system that is secure, just, and aligned with the values of Islamic finance. Governments, financial authorities, and Islamic scholars must continue to explore and develop these technologies, ensuring that they serve as effective tools in the fight against terrorism while supporting broader socio-economic development.

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Short Biography

Prof. Dr. Muhammad Said, MA, CPHCM, CIRR, is a Professor at the Faculty of Economics and Business at UIN Syarif Hidayatullah Jakarta, holding the rank of Pembina Utama (IV-e). He actively participates in various academic activities, seminars, and conferences. In October 2023, he presented a paper titled "Green Sukuk for Green Projects in Indonesia" at Tennessee University of Chattanooga, USA. His international experience includes serving as a Visiting Researcher at the European Halal Union (2018), a Visiting Researcher at the Law & Business Center, University of East London (1997), an Academic Visitor at the University of South Australia (2017), a Visiting Research Fellow at the Faculty of Social Sciences, Katholieke Universiteit Leuven, Belgium (2016), a Visiting Research Fellow at the Center for the Study of Religion and Society, University of Victoria, British Columbia (2013), and a Visiting Researcher at the Asian Studies Program, Melbourne University, Australia (2011), among others.

He currently serves as the Vice-Rector I for Academic Affairs at Universitas Azzahra, Jakarta, and simultaneously as the Acting Dean of the Faculty of Islamic Studies at the same university (2023-present). His previous leadership roles include Director of Sekolah Tinggi Ilmu Ekonomi (2020-2022), Director of the Doctoral Program in Sharia Banking at the Faculty of Economics and Business, UIN Syarif Hidayatullah Jakarta (2017-2019), and Secretary of the Regional Research Council on Food Security in Central Kalimantan (2014-2017). Additionally, he was the Director of Research and Community Service at IAIN Palangka Raya, Central Kalimantan (2012-2016). He has been an Assessor for five director-level positions in the National Committee for Islamic Economy (2018) and served in the Department of Sharia Economy, Majelis Ulama Indonesia, Central Kalimantan (2012). He was the founding Chairman of the Central Kalimantan branch of Masyarakat Ekonomi Syariah (MES) in 2012 and a panelist in the Open Debate for the Governor and Vice Governor Candidates of Central Kalimantan (2012). He also served on the selection committee for candidates for the Central Kalimantan Election Commission. He has been publishing articles in the reputable journals Internationally and nationally, book and book chapters, such as: An Empirical Study on Korean Packaged Halal Food Manufactures: Muslim Millennial Consumers' Purchase Intention. September 2023. *International Journal of Economics Management Business and Social Science (Ijembis)* 3(3):390-402. DOI: 10.59889/ijembis. v3i3.153; Analysis of Sharia Aspects in The Digitalization of Halal Tourism Business PT Alam Indah. September 2023. *International Journal of Economics Management Business and Social Science (Ijembis)* 3(3):416-429. DOI: 10.59889/ijembis. v3i3.155; Business Ethics Violation on Hit Products in the Practical Ground of PT Megasari Makmur: Halal Perspective Analysis. *International Journal of Social Service and Research.* 3(5):1222-1230. DOI: 10.46799/ijssr. v3i5.378; An Analysis of Human Capital Development in Indonesian Islamic Banking System. *Tapis Jurnal Penelitian Ilmiah* 6(2):91. DOI: 10.32332/tapis.v6i2.5340; Identity of Javanese-Muslim and Chinese-Confucian Ethnic Entrepreneurial Ethics in the Kanoman Market. *International Journal of Social Science and Human Research* ISSN (print): 2644-0679, ISSN (online): 2644-0695 Volume 06 Issue 01 January 2023DOI: 10.47191/ijsshr/v6-i1-50, Impact factor-5.871Page No: 368-376; Effect of Zakat Potential Management on Achieving SDGs: Case of the Indonesian National Amil Zakat Agency. *International Journal of Islamic Economics and Finance Studies.* 2023/9/1, 160-188. DOI: 10.54427/ijisef.1186151; The Urgency of Halal Tourism Literacy in Responding to Rejection of Halal Tourism in Indonesia. *Afkaruna Indonesian Interdisciplinary Journal of Islamic Studies* 18(1). DOI: 10.18196/afkaruna. v18i1.12770; Zakat's potential to increase intellectual capacity: affirmative actions in Indonesia. *Islamic Banking & Finance Review*, 9(2), 2022. https://doi.org/10.32350/ibfr.92.02; Social-Commercial Interconnection: Lessons from Bank Muamalat Indonesia & Baitul Maal Muamalat Affiliation. *Journal of Islamic Monetary Economics and Finance*. Vol. 4 (21). 341-368. DOI: https://doi.org/10.18196/afkaruna.v18i1.12770.

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