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Identification and Prioritization of Factors Affecting the Development of the Islamic Debt Securities Market (Sukuk) Using the Fuzzy Screening Technique

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Abstract

This study examines the key drivers of the Islamic debt securities market (Sukuk). This Sharia-compliant financial instrument is gaining recognition for its role in promoting economic development through ethical, non-usurious financing. As it is being used more in sectors such as infrastructure, energy, housing, and development, Sukuk has emerged as a significant financing tool for both Islamic and international markets. Following a two-step research strategy, the study first identified and categorized key factors influencing Sukuk market development by conducting a qualitative analysis of academic literature, scientific reports, and institutional documents. Twenty-one main components were distilled at this stage. Experts' views were gathered and analyzed at the second stage, based on linguistic variables, a fuzzy ranking technique, and Excel-based modelling, to prioritize factors uncovered while managing uncertainty in expert judgment. The results indicate that increasing the liquidity of Islamic finance instruments is the most significant method for improving Sukuk market growth, followed by the Management of Issuance Costs of Islamic Financial Securities (Sukuk) and Risk management (including exchange rate, interest rate, and credit risk) within the Sukuk structure. The study offers policy relevance to policymakers, regulators, and stakeholders who aim to improve the Islamic finance ecosystem by promoting the development and efficiency of the Sukuk market through targeted, evidence-based policies.

Keywords: Islamic Financial Instruments, Islamic Financial Market, Islamic Debt Issuance, Fuzzy ranking

JEL Classification: G23, G18, C44, Z12

Introduction

The use of Islamic financial instruments in Iran's financial system, as an Islamic country, can hold a special and significant position. Utilizing these instruments can resolve many challenges related to financing in various economic sectors of the country. One of the most important factors in the development of any country is the optimal allocation of financial and spiritual resources; an allocation achieved through the effective and efficient development of financial and monetary markets. In this regard, Islamic financial instruments, especially Sukuk, undoubtedly play a crucial role in guiding idle and low-yield capital towards high-yield investment activities due to their compliance with Sharia principles. These instruments can pave the way

for sustainable economic growth, increased employment, and improved capital productivity in the country (Warsame & Irrer, 2016). Given the usurious nature of bonds and the Sharia prohibition of their use in Islamic financial systems, the idea of replacing these instruments with Islamic financial securities, namely Sukuk, has been proposed (Towhidi et al., 2022). Securitization of assets has become a financing tool that has gained significant attention in recent decades. In this method, assets, as one of the balance sheet items, are converted into tradable securities (Shahriari, 2016), which is considered one of the most important Islamic financial instruments located in a key sub-sector of the economy and plays a fundamental role in driving the wheels of national and international economies. The Sukuk market, after Islamic banking, constitutes the second largest sector of the Islamic financial industry (Kusuma & Silva, 2014; Thomson Reuters, 2018) and covers approximately 90% of the Islamic capital market (l-Sayed, 2013). Sukuk has been widely welcomed in many countries around the world due to its positive effects in financial and investment areas across various economic sectors. This reception has led to the strengthening of Sukuk's position as a key instrument in the Islamic financial system. The International Monetary Fund has also emphasized that Islamic banking instruments are experiencing rapid growth; a growth that can be attributed to the expansion of Islamic financial products that align with the broad needs of investors, including governments, corporations, and financial institutions.

In this regard, many governments, including the UAE government, have issued these instruments due to Sukuk's effective role at the macroeconomic level, whether to cover budget deficits, stimulate financial markets, or finance development and infrastructure projects (Al-Makhmari, 2017). Sukuk also has a high capacity to act as an alternative instrument in financing companies and government entities (Ahmed et al., 2012) and has been welcomed by a wide range of investors, both Muslim and non-Muslim (Abd.Aziz et al., 2016) The development of the sukuk market has seen remarkable growth in recent years, especially after eight non-OIC countries expressed their interest in issuing sukuk in the global market. These countries include France, Germany, Luxembourg, the United Kingdom, Singapore, Hong Kong, and the United States (Ismaili & Ghouma, 2020). One of the primary factors driving this growth has been the increased issuance of sukuk to finance government budget deficits and manage liquidity in various sectors. Other factors contributing to the expansion of the sukuk market include the ability of this instrument to innovate rapidly and create new opportunities through the design of types such as Basel III-compliant sukuk, FinTech sukuk, and blockchain-based sukuk.

Additionally, the alignment of investment policies and practices with social development and environmental protection goals has led to the introduction and offering of instruments like green sukuk and socially responsible sukuk. Furthermore, sukuk, which is specifically designed for financing small and medium-sized enterprises, has also been widely welcomed in recent years and is recognized as one of the key factors in the development of the sukuk market (Boukhatem, 2022).

More than a decade has passed since the beginning of the sukuk issuance experience in Iran's debt market, and during this period, this market has experienced significant growth. Various types of Islamic financial instruments have been designed and issued, and the necessary legal and executive frameworks for their issuance have primarily been established. However, the share of financing through sukuk issuance in Iran is still significantly lower than in many developed countries and even some developing Islamic countries. This difference is primarily due to factors such as weak legal and institutional infrastructures, a lack of diversity in Islamic financial instruments, limitations in the supply of suitable underlying assets, and a low level of awareness among economic actors about the benefits of these instruments (Towhidi et al., 2022). Existing evidence suggests that the sukuk market in Iran has yet to establish a desirable position within the country's financial system, particularly in comparison to leading countries such as Malaysia, Indonesia, and some Persian Gulf countries. The small share of sukuk in Iran's financing indicates the existence of challenges and obstacles in the development of this market.

Nevertheless, in recent years, many efforts have been made to develop the Islamic financial instruments market in Iran, but to achieve further growth and attract domestic and even foreign resources, we need special attention from the government, the financial system, and all relevant bodies and institutions in this field. Although there are challenges on the path to developing and expanding these instruments, adopting strategic policies and forming consultative working groups comprising all involved institutions can be a practical step towards promoting the Islamic capital market. These challenges include the lack of diversity in Islamic financial instruments, the absence of suitable legal and institutional frameworks, the shortage of qualified underlying assets, and limited awareness among economic actors about the benefits and functions of sukuk. The development of the Islamic debt instruments market requires the creation of suitable infrastructures, culturalization, increasing attractiveness, reducing issuance costs, and enhancing public awareness of these instruments. Additionally, diversifying existing instruments can attract

investors with diverse tastes and approaches, ultimately leading to market expansion and enhancing its role in financing large projects. Accordingly, the present study, in its first step, employed content analysis to review library resources, scientific articles, and specialized reports, identifying the practical components in the development of the sukuk market. The extracted components were then classified into 21 categories. Then, by utilizing expert opinions and a fuzzy ranking technique, these components were ranked, and the most significant factors influencing the development of the sukuk market in Iran were identified.

Literature Review

Theoretical Foundations Financing, as the mighty arm of financial institutions, is considered one of the key factors in deepening and strengthening the financial system of any country. In this regard, various financial instruments have been developed to meet the diverse financing needs of different economic sectors. In recent years, the study and application of novel financial instruments have gained special importance and standing. Among these, one of the most successful and effective global experiences in Islamic finance is the use of Sukuk, which has received widespread international attention (Hajiha et al, 2022). The Sukuk market is the first structure that has truly contributed to global convergence between conventional and Islamic financial systems. Due to the relative similarity between conventional fixed-income securities and Sukuk, many investors have gravitated towards Sukuk. This has led to the utilization of idle financial resources and the catering to a diverse range of investment preferences. According to Tariq and Dar, Sukuk are considered essential instruments for deepening financial markets, increasing financial discipline, and enhancing financial stability. These securities are regarded as essential tools for mobilizing financial resources in both the public and private sectors (Boukhatem, 2022).

Sukuk is an Islamic financial instrument recognized as an alternative to debt-based products or bonds (Godlewski et al., 2013). While bonds are designed based on interest or coupons, the performance of sukuk depends on the underlying contract on which it is based (Basyarieh et al., 2020). Sukuk was first proposed in 2002, at a jurisprudential session of the Islamic Development Bank, as a tool for Islamic finance. "Sukuk" is the plural of the word "Sakk," meaning promissory note and document, and is essentially the Arabicized form of the Persian word "Chek." Arab countries developed this word and today use it to refer to various types of remittances, commitments,

and financial documents (Towhidi et al., 2022). Specifically, sukuk refers to certificates that represent financial obligations arising from trade or any other commercial and investment activity (Kamil, 2008). The Sharia Standard No. 17 of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOFI) defines sukuk as: Certificates of equal nominal value that, after the completion of the subscription process, represent the payment of the nominal amount stated there in by the buyer to the issuer, and whose holder becomes the owner of one or a set of physical assets, services, benefits derived from assets, or a beneficiary of a specific project or investment activity (Soroush, 1386).

Additionally, the Islamic Financial Services Board (IFSB) defined Sukuk in 2005 as follows: Certificates that represent the undivided co-ownership of the certificate holders in the underlying asset, to which all rights and obligations related to that underlying asset are linked (Towhidi & Yarmohammadi, 2015). In another definition, sukuk includes certificates of equal value in tangible assets, with each certificate representing ownership in the asset and the right to usufruct from the profits generated by specific projects and investment activities (Smaoui & Ghoma, 2020). The stock exchange, as the most important organized institution of the country's capital market, plays a crucial role in attracting both small and large investors, as well as short-term and long-term savers, from the public and directing them towards productive economic projects. It is clear that the greater the diversity of financial instruments used in this market, the greater the ability to respond to the diverse goals, preferences, and temperaments of savers and investment seekers. This not only provides a broader platform for individual participation but also leads to greater economic prosperity. (Mosavian, 2012). The capital market makes an undeniable contribution towards ensuring that the government and the private sector have the liquidity they need to enhance the country's economic development. In establishing a platform for mobilizing domestic and foreign investment, financing infrastructure projects, and managing public debt, it has become one of the foundational pillars of the economic system. However, the sustenance of the growth and dynamism of this market depends on meeting several pivotal prerequisites—such as establishing an open legal and regulatory framework, ensuring effective oversight and governance, establishing appropriate technological infrastructure, facilitating public knowledge and education, and ensuring continued governmental support to the capital market. (Towhidi, 2015). Understanding the evolution of the market relies on the creation of adequate platforms for developing an active market in the Islamic debt securities sector. For this

purpose, an understanding of the determinants driving the growth of the Islamic debt securities market, along with an examination of the interdependencies among these determinants, is of paramount importance. To further utilize the capacities of Sukuk in financing economic enterprises, it is necessary to address the challenges that these enterprises face in issuing Sukuk. These challenges include the direct intervention of the Central Bank in determining nominal rates, the lack of obligation to rate financial instruments and their issuers, and the complexity of Sukuk's nature. These issues lead to an increase in the all-in cost of financing, a decrease in transparency in the distribution of financial benefits from the issuance of securities, and ultimately, a prolonged issuance process.

In contrast, eliminating the direct intervention of the Central Bank in determining the nominal rates of Sukuk, obliging the rating of securities and their originators, and issuing non-coupon Sukuk can lead to a reduction in the financial and time costs of Sukuk issuance by increasing investor participation in the financing process, and pave the way for further development of this instrument in the country's economy. (Salvatian et al., 2019). Also, for the expansion of the Sukuk market, standardizing and diversifying the assets, the process of designing and approving securities, miniaturizing the structure of Sukuk, facilitating matters related to rating securities, standardizing and cheapening the asset pricing process, and the dynamism and increase in trading volume in the secondary market are effective factors. (Najafi, 2006). Since the beginning of issuing Islamic securities in the capital market, various types of these instruments, including participation Sukuk, Ijarah, Murabaha, parallel Salam, and manufacturing orders, have been designed and issued. However, comparing Iranian statistics on the issuance of Islamic debt securities with international statistics indicates that the country has a significant gap compared to the international level of issuance of these securities. Thus, there is a necessity to diagnose Iran's Islamic securities market properly, identify existing impediments and challenges, and recommend and implement viable and practical solutions for the sustainable development of the market. (Towhidi, 2017)

Nurhanifah (2024), in an article titled "Understanding Sukuk Market Development with a Qualitative Approach," which utilized exploratory and descriptive methods through a review of library resources, investigated the regulatory and structural obstacles to Sukuk market development. In this research, she explains that regulatory complexities and liquidity constraints create significant challenges for the development of this market.

Hafsa and Omaima (2024), in an article on "Blockchain and Smart Sukuk," addressed the question: Are blockchain and innovative sukuk new determinants for the development of the sukuk market? They concluded that innovative sukuk can overcome obstacles to sukuk market development, such as the elimination of the need for rating and compliance with Sharia.

Towhidi et al. (2023), in a study titled "Pathology of Government Securities in the Capital Market and Presentation of Policy Solutions," used thematic analysis of library documents and interviews with experts to identify and analyze challenges related to government securities across four dimensions: supply, demand, functional, and jurisprudential. The results of this research indicate that the main challenges stemmed from the immaturity of the country's debt market, inappropriate pricing of securities, lack of coordination, and the government's carelessness in timing issuance and not utilizing diverse and appropriate instruments.

Awad et al. (2022), in an article titled "Challenges and Obstacles to Sukuk Issuance in Palestine," identified obstacles to sukuk issuance using an analytical and descriptive approach through a questionnaire. They concluded that sukuk issuance faces economic, legal, and regulatory obstacles, which lead to a lack of interest in sukuk as a suitable financing tool for various economic projects. The absence of investors with high financial capacity, as well as the lack of approval of laws and regulations to facilitate sukuk issuance, are other factors contributing to the unattractiveness of sukuk.

Hajiha et al. (2022), in a study titled "Prioritization of Factors Influencing the Prosperity of Investment in Sukuk," used a descriptive-analytical method, along with a review of research literature and interviews with experts, to identify factors influencing the prosperity of investment in sukuk. After confirming 13 identified influential factors, they ranked these factors using the Analytical Network Process method. The results clarified that the sub-criterion of financial experts' complete mastery of the Islamic finance field has the highest importance among the sub-criteria influencing the expansion of sukuk investment. The sub-criterion of accurate and tangible implementation of Sharia and Islamic financial laws regarding sukuk, which is an executive criterion, ranked second. On the other hand, encouraging stock market investors to invest in sukuk with necessary provisions (from criteria related to investors), expanding the culture of sukuk investment given its importance (from cultural factors), increasing investors' awareness and knowledge about sukuk (from criteria related to investors), and government support and

providing necessary investment guarantees to investors (from legal and regulatory factors) have the least effect on the development and prosperity of investment in sukuk.

Delle Foglie et al. (2022), in their paper "Challenges and Opportunities of Socially Responsible Investment Sukuk for Financial System Sustainability," identified investment challenges and opportunities by reviewing literature on sukuk. Emphasizing the knowledge gap regarding various investment challenges and opportunities, she highlighted the lack of standardization in Sharia interpretations and the limited participation of retail investors in the secondary market as two significant challenges to the sukuk market.

Duku and Muhammad (2021), in a study titled "Challenges of Issuing Ijarah Sukuk in Nigeria," used a qualitative method to identify and enumerate the implementation of Sharia governance, an appropriate regulatory framework, and licensing processes as important factors.

Mavardi et al. (2021) employed the Analytical Network Process method in their work, "Constraints and Solutions for Issuing Municipal Sukuk in Indonesia." They conducted interviews with specialists to examine the constraints, solutions, and potential strategies for the sukuk market. Four key stakeholders are involved in the process of sukuk issuance, as concluded from the study's findings: regional governments (municipal), investors, the market, and infrastructure. Above all, "insufficiency of local governments' commitment in issuing municipal sukuk" was the most significant obstacle. Possible solutions to address this problem are passing some regulations in order to regulate and strengthen municipal sukuk issuance, as well as central government facilitation, which are measures that can spur regional governments to issue Islamic financial products.

Hasanzadeh et al. (2021), in an article titled "Pathology of Banking Sukuk and Presenting a Competitive Market Solution for Resource Mobilization in Iran's Banking System", examined the challenges raised regarding the role of the competitive sukuk market in mobilizing banking system resources. In this research, after reviewing previous studies and various sources, targeted interviews were conducted with experts in the field of finance. Using thematic analysis, the challenges associated with sukuk were extracted. The factors and components influencing the growth and development of the sukuk market were classified into five groups: legal, structural and technical, jurisprudential factors, investor-related factors, and cultural factors.

Towhidi et al. (2021), in a study titled "Identification and Prioritization of Influential Components in Selecting an Appropriate Sukuk Structure for Financing," identified and ranked factors influencing the determination of an optimal sukuk structure to meet the financial needs of public and private sectors. This research employed the structural equation modeling method. In this study, the components approved by experts were categorized into five main classes: "components related to the originator, asset and usufruct underlying the issuance, issuance pillars, structuring, and Sharia components." The results showed that among these five main components, those related to the asset and usufruct underlying the issuance had the most significant impact on originators' decisions regarding the selection of an appropriate sukuk structure. In contrast, components related to the issuance pillars had the least impact.

Nisful and Muslich (2020), in a study titled "Development of Government Sukuk in Indonesia," evaluated and identified the challenges facing the development of government sukuk using the Analytical Network Process method, and proposed alternative solutions and strategies to address these factors. The research results showed that government commitment, the existence of suitable infrastructure for transactions, and efficient and transparent regulations are among the key factors in the development of Indonesia's government sukuk market.

Aghataghi et al. (2020), in a study titled "Pathology of Financing through the Issuance of Waqf Securities in Iran," by reviewing the literature and interviewing experts, identified the damages of issuing Waqf securities in Iran and the solutions proposed by experts. Subsequently, based on the TOPSIS method, the damages agreed upon by experts were ranked. The research results indicate that the damages of (low awareness of officials and the general public about the concept and function of Waqf securities), (lack of active utilization of cooperation and participation of governmental, public, and popular charitable institutions for marketing the issuance of Waqf securities), and (insufficient advertising and marketing) are the first, second, and third most important damages of issuing Waqf securities in Iran compared to other cases.

Kunhibava et al. (2020) employed a qualitative methodology and literature review in their paper, "Blockchain-based Sukuk: A Legal, Regulatory, and Sharia Review," to study the Sharia and legal framework of sukuk in the blockchain scenario. They concluded that the digitization of sukuk issuance through blockchain eliminates inefficiencies in sukuk transactions, increases

transparency of sukuk assets and cash flow, and reduces the multiplicity of intermediaries in sukuk transactions.

Duqi and Al-Tamimi (2019) investigated "Factors Affecting Investors' Decision to Invest in Sukuk" in an article. The results of this research indicate that sukuk characteristics (structural and functional factors) are the most important factor in investors' decision-making, and religious factors, expected returns, and information availability are also other important influencing factors.

Dareshiri et al. (2019), in a study titled "Identification and Prioritization of Challenges for the Expansion of the Sukuk Market in Iran", investigated the requirements and challenges facing the Islamic financial instruments market using thematic analysis. The thematic network of challenges for the expansion of the sukuk market in Iran was identified in the form of 162 basic themes, 32 organizing themes, and six overarching themes. The weight of each dimension of the challenges was determined using Shannon entropy. They identified lack of oversight regarding settlement and delays in profit payments, complexity and lack of transparency in supervisory structures, inflation rate and exchange rate risk, inadequate company reporting and project information, weak expertise and inappropriate analysis of project profitability, superficial and unenforceable oversight in the issuance process, financing budget deficits through the debt market and unsecured debts, and lack of financial discipline in deposit attraction rates as factors hindering the quantitative and qualitative expansion of the capital market.

Mohammadi Nasab and Rashidi (2019), in their study "Factors of Attractiveness of Ijarah Securities from Investors' Perspective", identified and prioritized these factors. The research findings indicated that low risk, trust, tradability in the secondary market, low agency cost, principal guarantee, definite return and profit, Sharia investment horizon, and tax exemption are, in order, the most important factors of attractiveness of Ijarah securities.

Fahimi and Khansari (2019), in an article titled "Investigation of the Governing Law on International Sukuk Issuance in the World and Requirements for Legal Infrastructure in Iran's Sukuk Market", used library studies and a descriptive-analytical method to examine the legal framework and governing laws on sukuk issuance, especially in the international dimension, as one of the important aspects of these instruments in the field of Islamic economics and finance. Based on the research results, the most important existing approaches regarding the choice of governing law for

international sukuk issuance are: English law and exclusive English jurisdiction, English law and non-exclusive English jurisdiction, Sharia as the governing law, and the use of alternative dispute resolution processes. For the development of the international sukuk market in Iran, various considerations regarding the governing law and its legal framework must be taken into account, including the mechanism for determining the necessary legal framework in upstream laws, resolving conflicting laws, cooperation between regulatory bodies, and increased interaction with international institutions to strengthen legal standards and infrastructure, which are considered important matters.

Dareshiri (2018), in a study titled "Analysis of Strategies for Expanding the Sukuk Market in Iran with an Emphasis on the Demand Side", identified two overarching themes: obstacles (harms) and solutions, which are the organizing and foundational themes beneath it. Among the obstacles raised by experts, complexity, slowness, and issuance costs, illusory returns of credit institutions, lack of diversification of securities, freezing of fund liquidity in bank deposits, inappropriate advertising and marketing, disproportion between actual return and return paid to investors, and lack of understanding of risk and investment concepts were highlighted. Among the solutions, interaction with global organizations and financial flows, culturalization to prioritize investment in Islamic Shiite projects, and greater utilization of the Ministry of Foreign Affairs' capacity were themes emphasized more than others by market participants.

Salimifar et al. (2018), in an article titled "Explanation and Prioritization of Motivational Factors Affecting the Supply and Demand of Ijarah Sukuk", prioritized motivational factors in the supply and demand of Ijarah Sukuk through a literature review and survey method. The research findings, using the fuzzy hierarchical technique, showed that the motivational factors on the supply side, in order of priority, are: complete sale of securities, trust in investment companies, freedom of action in using funds, tax on securities, asset insurance cost, clarity of criteria for determining and valuing assets, securities pricing mechanism, innovation in securities design, and bureaucratic process. Also, the motivational factors on the demand side, in order of priority, are: sukuk yield compared to other securities, liquidity, culturalization for market development, securities maturity, legal risk, transparency and competition, trust in the issuer, type of underlying asset, and securities pricing method (fixed or floating). Therefore, by paying attention to these factors, the Ijarah sukuk market can be launched.

Piotrowski (2017), in "Challenges and Obstacles to Sukuk Development in the European Capital Market," read literature, cited statistical reports of the European market, and conducted a case study of sukuk issuance by the UK government in 2014 to examine the challenges to the development of the sukuk market. He concludes that the unusual character of sukuk necessitates these products to be considered in a distinct class of capital market products. Based on this, dealings in sukuk in European capital markets require re-examination and adaptation of legal structures. The more intricate character of sukuk compared to traditional capital market instruments leads to increased risks and issue expenses for issuers. Furthermore, the diversity and disparity in sukuk structures make it challenging to analyze financial risk, thereby reducing investors' appetite for these instruments.

Khozein (2017), in an article titled "Ranking the Effective Factors in the Expansion of Investment in Sukuk Using Fuzzy Hierarchical Analysis", examined the factors influencing the expansion of investment in Sukuk in the Tehran Stock Exchange. Various factors were identified through a review of the research literature and subjected to expert opinions, which were then prioritized using the fuzzy hierarchical analysis technique. The research results indicated that cultural factors were the most important, followed by investor-related factors, jurisprudential factors, structural and technical factors, and legal factors, respectively.

Emadi and Khamis Abadi (2017), in a study titled "Pathology of Challenges in Islamic Finance with Emphasis on Sukuk", identified infrastructures necessary for using Sukuk as a financing method. These include: standardizing assets used in Sukuk and their evaluation process, facilitating matters related to Sukuk issuance and rating, establishing rating agencies, creating a suitable secondary market for buying and selling Sukuk, and facilitating the liquidity of Islamic securities.

Rashidirad (2017) identified factors influencing the attractiveness of Ijarah Sukuk across five criteria: personal investment factors, investment benefit factors, investment process factors, and investment cost factors. He concluded that investors prioritize personal investment criteria when choosing Ijarah Sukuk. The next attractive factor is investment benefits. Investment process factors and investment cost factors ranked third and fourth, respectively.

Karimi and Salmani (2017), in a report titled "Obstacles and Considerations Related to the Issuance of Government Islamic Securities", examined the existing obstacles in the path of issuing this type of security. In

this research, components such as "lack of segregation between profitable and non-profitable projects, absence of an efficient secondary market, lack of precise identification of government assets for backing, absence of a reliable mechanism and contingency source for settling securities, inconsistency between government security rates and private sector investment options, shallow capital market, and weakness in knowledge and specialized personnel related to the security issuance process" were identified as the main obstacles.

Ashrafzadehgan (2016), in an article titled "Financial and Jurisprudential-Legal Pathology of Ijarah Sukuk Issuance in Iran", by reviewing the literature and using the Delphi method, identified the pathologies of Ijarah Sukuk issuance as well as the solutions proposed by experts to address these pathologies. The research results indicate that the absence of rating agencies and the time-consuming nature of financing through this method, compared to other methods, are the most important pathologies of Ijarah Sukuk issuance in Iran.

Towhidi (2015), in a study on "Requirements for the Development of the Islamic Securities Market," explained that considering the conditions and needs of investors, the design of securities should focus on the coordination of supervisory bodies in issuing securities, increasing the attractiveness of Sukuk structure in terms of risk and return, reducing issuance time, amending the guarantor, having an international outlook, and reforming the Sharia supervision process.

Yarmohammadi et al. (2015), in a study titled "Identification and Prioritization of Desirable Financing Criteria in the Islamic Capital Market from the Perspective of Resistance Economy," by studying the literature and interviewing experts, identified criteria from the perspective of the financier, the financed, complementary institutions, and macroeconomics, and ranked them using the TOPSIS method. The research results showed that risk and return criteria are more important to investors than other criteria, and also that the liquidity of financing instruments for complementary institutions and the alignment of financing instruments with economic justice are of the highest importance.

Keshavarzian and Mosavian (2014), in a study titled "Pathology of Issuing Ijarah Sukuk in Iran," examined the obstacles to issuing Ijarah Sukuk using a descriptive-analytical method. In this study, they identified several structural damages, including the lack of a specific solution for selling state bank assets

to intermediary companies, the absence of institutions related to the issuance of Ijarah Sukuk in the Central Bank's guidelines and procedures, the non-inclusion of the law on the development of new financial instruments and institutions for the Central Bank, the lack of tax and duty exemptions for the Central Bank, and the absence of a single custodian for guiding and coordinating the issuance of Ijarah Sukuk.

Kusuma et al., (2014), in a study titled "An Approach to Sukuk Market Development", identified factors hindering the global development of sukuk and provided suggestions for sukuk market development, including (1) efficient money markets, (2) efficient primary markets and securities issuance systems, (3) a strong and diverse investor base, (4) infrastructure to facilitate trading, pricing transparency, and efficient settlement of transactions, (5) derivatives markets and risk hedging tools for risk management, and (6) a legal and regulatory framework.

Yahya et al. (2012), in an article titled "Development of Ijarah Sukuk in Malaysia", using a descriptive method and by reviewing the research background, examined the reasons for the attractiveness of these securities and concluded that investors have welcomed these securities due to tax exemptions and compliance with Sharia rules.

Adam (2009), in an article titled "Sukuk, an Elixir for Convergence and Development of the Capital Market in OIC Member Countries", identified factors contributing to the expansion of the sukuk market. These factors include the yield of sukuk bonds, adherence to Sharia requirements, the credit rating of the issuing country, the level of demand from Zakat, pension, and Islamic insurance funds, as well as the facilitation of issuance within legal frameworks. Amin and Bashir (2008), in an article titled "Innovation and Factors Affecting Sukuk Issuance", identified factors and stated that the most important factors affecting sukuk issuance are the level of acceptance of Islamic financial laws, advertising, the existence of substitute financial instruments for sukuk, and the level of acceptance of these types of instruments in countries.

Dolati and Jafari (2009), in a study titled "Investigation of Tax Challenges and Financing through Ijarah Sukuk," examined tax challenges. The results of this study indicate that to address the tax issues associated with the issuance of Ijarah securities, the short-term solution is to exempt the profit or rent paid on these securities from taxation. In the long term, with the approval of appropriate laws, the profit or rent paid on Ijarah securities and the profit on

securities should be subject to tax.

Mosavian and Karimi (2007), in a study titled "Investigating the Process of Financing Through the Issuance of Ijarah Sukuk," examined tax challenges. By discussing theoretical tax issues, the fundamentals of Ijarah Sukuk, and their tax challenges, they emphasized the necessity of tax exemption for the issuance of Ijarah Sukuk.

Suku et al. (2008), in a paper titled "Challenges Related to Accounting Standards for Islamic Bond Accounting Issues" in Malaysia, took into account the challenges. They concluded that the market requires good accounting and reporting standards for Islamic financial instruments, which are both practical and Sharia-compliant.

Wilson (2008), in a paper titled "Innovation in Sukuk Structure", took into account the drivers of sukuk issuance. The results of the current research show that the greater the Islamic finance regulations in a country, the simpler it will be to issue sukuk. He also considered a higher investment culture and government financing of budget deficits as favourable elements for sukuk issuance.

Sokar et al. (2008), in a titled "Sukuk Structure, Rating, and Default Risk", in examining the sukuk structure of issuance, stated that sukuk is a financing of investment through debt, which can be issued in the stock market and can be used as funding for finance. However, for issuance, Sharia-based accounting standards need to be created and applied.

Juan Solé (2008) elaborated in an article, "Outlook and Challenges for the Development of Sukuk and Corporate Bond Markets," on two primary considerations: the need for deepening and developing financial markets and the issues that are obstructing these markets. He presents the idea that for the development of financial opportunities for the private sector, deepening the financial markets further and improving the country's financial system are crucial.

According to the background of research, the objective and approach of the present study are fundamentally different from those of the previous studies. The topic of this research differs significantly in its subject and approach compared to the research studies of Dareshiri et al. (2019) and Hajiha et al. (2022). Objectively, the present research identifies the success determinants of

Iran's Islamic debt securities (Sukuk) market development, whereas the main aim of Dareshiri et al. (2019) research was to identify and rank the damages and challenges in the path of Sukuk market growth in Iran. Moreover, the Hajiha et al. (2022) research focused solely on identifying and ranking the factors found to be effective in promoting investment in Sukuk, which differs substantially from the present research. Methodologically, the present research employed qualitative content analysis, whereas Dareshiri et al. (2019) utilized thematic analysis. Qualitative content analysis is well-suited for analyzing formal, lengthy, and structured texts, whereas thematic analysis is more suitable for analyzing interviews and human experiences. As in the present research and Dareshiri et al. (2019), expert opinion has been utilized, and the data are subjective and qualitative in nature; therefore, the use of the fuzzy ranking method was more suitable. This technique outperforms deterministic techniques due to its robust ability to handle uncertainty and ambiguity, as well as its capacity to process linguistic information. Conversely, according to Mansour Khaki, Mojarradi, Ghobadi Pour, and Maghsoud (2019), research findings suggest that in situations where the values of alternatives are very close to each other, the use of the TOPSIS methodology is not recommended in Multi-Criteria Decision-Making (MCDM) problems. Therefore, the findings of this study, by offering new solutions based on accurate qualitative data analysis, will be a practical contribution to the development of the Islamic debt securities (Sukuk) market, compared to the current literature.

Research Methodology

This research employed a survey method. The process of this study involved two stages as follows (Figure 1):

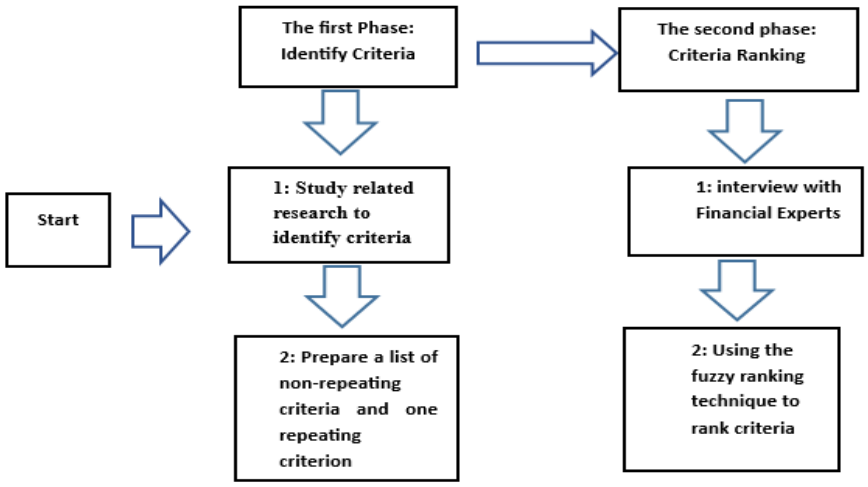

Figure 1. Research Phases

The first Phase: Criteria Identification

To establish the sukuk market development criteria, qualitative content analysis was used. For this purpose, various official documents, expert studies, and scientific articles on the topic were gathered and reviewed in a structured manner. The analysis included coding themes and placing them into broad categories. This method was employed to identify key factors for developing the Islamic debt securities (sukuk) market in Iran, facilitating the extraction of useful information from written sources. Content Analysis Qualitative content analysis is a valid social science and other disciplines research method, used for deciphering systematically written or spoken data (Shannon & Hsieh, 2005). The process allows researchers to get hold of the root ideas and meaningfulness in data by categorizing themes and coding patterns (Chelimsky, 1989).In this study, a deductive qualitative content analysis method was employed to develop the model and identify market development components. This method, which is flexible and enables the subjective and structured interpretation of linguistic messages, facilitates an understanding of the attitudes, priorities, and thought patterns of individuals (Tabrizi, 2014).

The second Phase: Criteria Ranking Fuzzy Ranking Process

The reason for using the fuzzy ranking technique in this research is its ability to address ambiguity, uncertainty, and subjective expert judgments. In multi-

criteria decision-making problems, especially if the judgments are qualitative in nature and based on human judgments, the traditional methods lack the necessary precision to determine priorities. The fuzzy ranking technique, by utilizing fuzzy logic, converts experts' linguistic judgments into fuzzy numbers, thereby enabling realistic and valid Prioritization of the criteria. It also facilitates achieving a relative consensus among experts through the aggregation and moderation of different opinions. Accordingly, this method is exceptionally well-suited to the example of differing opinions among specialists, and the fuzzy ranking process in this research has been carried out in three main steps.

The first Step: Identifying the Appropriate Spectrum for Fuzzification of Linguistic

Terms. In implementing the fuzzy ranking technique, selecting the appropriate fuzzy spectrum for fuzzifying the respondents' linguistic terms is crucial. One of the most practical fuzzy numbers is the triangular fuzzy number (T.F.N), which is also used in the present study. These numbers are represented as X= (a, b, c), as shown in Figure 2. Here, a represents the mode, b represents the distance from the mode to the lower bound, and c represents the distance from the mode to the upper bound (Momeni, 2010).

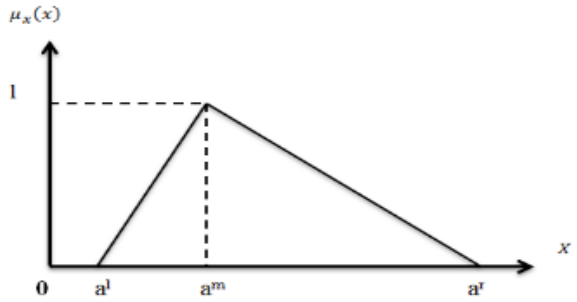

Figure 2. Triangular Fuzzy Numbers

Every specialist is to describe up to what point every option satisfies the various criteria. This criterion satisfaction assessment of the options is conducted using the scale elements in Table 2.

Table 1. Five-section fuzzy spectrum for scoring (Habibi et al., 2014)

Very little	little	Average	Much	Too much	Verbal Variables
۱	۲	۳	۴	۵	Score
(۰،۰،۰/۲۵)	(۰،۰/۲۵،۰/۵)	(۰/۲۵،۰/۵،۰/۷۵)	(۰/۵،۰/۷۵،۱)	(۰/۷۵،۱،۱)	Fuzzy Numbers

The second Step: Aggregation of Expert Opinions

Since various experts hold different opinions regarding the development factors, their ratings for these factors are also diverse. To obtain a comprehensive and reliable assessment, the fuzzy average of the experts' opinions has been calculated to represent their general view. Various methods, such as the arithmetic mean, geometric mean, and fuzzy mean, have been proposed. In this research, the fuzzy mean is used. Therefore, if the opinion of each expert is represented as a fuzzy number (L, m, u), then the fuzzy average is obtained through the following relation (Radfar et al., 2010).

$$\bar{x} = \frac{(\text{a1j b1j c1j})+\cdots+(\text{amj bmj cmj})}{m} = \frac{\sum(\text{a1j b1j c1j})}{m} \quad \forall_{\text{j}} = \text{n} \qquad (1)$$

Thus, by integrating expert opinions, a triangular fuzzy number is obtained for each factor, representing the average of their opinions.

The Third Step: Defuzzification

After combining the expert opinions, defuzzification operations must be performed on the obtained fuzzy values. During this research, relation (3-2) was utilized for the defuzzification process (Johnson et al., 1998, as quoted by Marvati et al., 2016).

$$X = \frac{\text{L}+2m+u}{4} \qquad (2)$$

Results

Data was analyzed in two stages. Elements of the evolution of the Sukuk market were found and grouped under main themes in the first stage. Later, one of the criteria was proposed in various studies under different names. However, the same concept was incorporated into the final list to prevent duplication and conceptual overlap. In the second phase, five steps of the criteria screening procedure were implemented: In the first step, expert interviews and opinions

were gathered. In the second step, fuzzy numbers were converted from linguistic variables (verbal statements). In the third step, fuzzy values were combined to get an aggregate evaluation, and in the fourth and fifth steps, using the defuzzification process, they were converted to crisp values, and finally, the ultimate constituents were ranked based on the results obtained.

Phase one: Defining the criteria

The first Step: Researching applicable research to determine the criteria

In Table 3, components are grouped according to identical definitions and descriptions. On-recurring factors are also classified into separate categories. To classify the factors, the components involved in developing the Islamic debt market were collected from theoretical foundations and research literature. These components were then categorized into 21 groups based on the opinions of experts and specialists in the field.

Table 2. Categories of Islamic Debt Securities (Sukuk) Market Development

Reference	Components
Emadi and Khamis Abadi ,2017 Hasanzadeh et al. 2021, Salimifar et al. ,2018, Jobst et al. 2008, Karimi and Salmani 2017, Jobst et al.2008, Mavardi et al. 2021, Baita et al. 2023, Towhidi et al. 2023	Standardization of Assets for Issuance of Islamic Financial Instruments (Sukuk)
Hassanzadeh and Ahmadian 2012, Khozein and Dankob 2011, Khozein 2017, Sepidbar and Masuminia,2023 Najafi Moghadam ,2016, Dareshiri et al.2019, Emadi and Khamis Abadi ,2017 ,2012 Zolfaghari et al. ,2012, Aghataghi et al.,2020, Towhidi et al. 2023, Hasanzadeh et al. 2021, Awad et al. 2022, Solé2008, Zolfaghari et al. ,2012	Standardization of Islamic Financial Instruments (Sukuk) Issuance Stages
Emadi and Khamis Abadi 1396, Hasanzadeh and Ahmadian ,2012 Karimi and Salmani 2017, Hasanzadeh et al. 2021, Yarmohammadi et al.2015, Salimifar et al. ,2018, Delle Foglie and Keshminder et al.2022, Mavardi et al. 2021, Lokot Zein,2018, Alowaiyesh et al. 2020, Alsoy and Ela 2018, Juan Sol 2008, Zolfagari et al. ,2012 Hajidolabi, 2017, Towhidi et al. 2023, Dareshiri et al.2019 , Allan Castel Vitor 2020, Alowaiyesh et al. 2020, Talahma2015 Hajidolabi, 2017, Sepidbar and Masuminia,2023 , Najafi Moghadam 2016 , Hajiha et al., 2022 , Mawardi et al., 2021, Jobst et al. ,2008 , Hafsa and Omaima 2024 ,Masoumi and Ebrahimi, 2022, Towhidi et al. 2023, Sepidbar and Masoumi Nia ,2023	Increasing the liquidity of Islamic financial instruments (Sukuk)

Emadi. And Khamis Abadi, ۲۰۱۷ Hassanzadeh and Ahmadian,2012 Hassanzadeh et al. ,2020, Darehshiri, et al., 2020, jobset et al. ,2008, Smaoui et al. 2017, Talahma,2015, Najafi, Moghaddam,2016, Zolfaghari et al.,22012, Towhidi et al. 2023, Zolfaghari et al.,2012, Sepidbar and Masuminia,2023 Keshavarzian and Mosavian,2014, Mesdi and nayfer,2014, Hafsa and Oumayma ,۲۰۲٤, Warsame and Irer,2016, Delle Foglie,2024	Management of Interest Rate Risk in the Banking Sector
Emadi. And Khamis Abadi, ۲۰۱۷, Yarmohammadi et al.2015, Awad et al.،222022, Ahmadet al.،۲۰۱۳ Lokot Zein,2018، Talahma,2015, Ulusoy and Ela,2018, Rahman et al.,2020, Hassanzadeh et al.,۲۰۲۰, Salimi far et al.2018, Keshavarzianand Mosavian,222014, Salimifar et al.,۲۰۱۸, Kunhibava et al.,2021 Masoumi and Ebrahimi,2020.	Management of Issuance Costs of Islamic Financial Securities (Sukuk)
Hassanzadeh et al.2020, Awwad and et al.2023, Hassanzadeh and Ahmadian,2012, Hassanzadeh et al.,2020, Mawardi et al.,2021, Mirza and Soltana,2020, Talahma and Adekoya Augustine,2017.	Promoting the Banking Sector's Role in the Issuance of Islamic Bonds (Sukuk)
Amin and Bashir 2008, Akbarian and Dianati ,2006, Khozein and Dankob ,2011, Tohidi et al ,2021, Hasanzadeh et al. ,2021, SalimiFar et al. ,2018, Mawardi et al. 2021, Ahmad et al. 2013, Oscaria, 2010, Leukocyte ,2012, Alowaiyesh et al,.2020, Talahma2015, Rahman et al. ,2020, Darrehshiri et al., 2020, Yarmohammadi et al.,2015, Towhidi et al. ,2023, Keshavarzian and Mosavian, 2014, Hassanzadeh and Ahmadian ,2012 Sepidbar and Masuminia,2023 Basyariah et al. 2020, Lokot Zein,2018 , Towhidi et al. ,2023 , Awwad and et al.,2023 , Akbarian and Dianati ,2006 ,Khozein and Dankoub 2011, Mawardi et al. ,2021 , Piotrowski, ۲۰۱۷ , Zolfaghari et al.,2012	Increasing the Diversity of Islamic Financial Instruments (Sukuk)
Awwad and et al.,2023, Ahmad et al.,2013, Augustine,2024, Aghatagi and et al.,2020, Zolfaghari et al.,2012, Solé, ۲۰۰۸, Fahimi and Khansari ,2019, Babajani and sahebgharani ,2018, Fathi et al., 2022,	Enhancing the Supervisory and Regulatory Role of the Securities and Exchange Organization
Dolati et al.,2009, Hasanzadeh et al. ,2021, Yarmohammadi et al.,2015, Salimifar et al.,2018, Awad et al. 2022, Lokot Zein 2018, Talahma2015, Simpson and Weiner 1993, Juan Sol 2008, jobset etal.,2008, Yahya et al.,2012, Mosavian and Karimi,2007, Mohammadi Nasab and Ashidi, Rad.,2019, Dolati and Jafari,2009,	Increasing Exemptions and Incentives for Islamic Financial Instruments (Sukuk)
Jbril,2019, Masoumi and Ebrahimi,2022, Kunhibava et al.2021, Busari and Aminu2021, Khan et al. 2020, Moniza et al.,2018, Hafssa and Oumaima2024, Busari and Aminu2021, Busari and Aminu2021, Zeka and	Applying Innovative Financial Technologies for Process Efficiency, Cost Reduction, and Broader Accessibility

Sheikh,2019, Towhidi et al. ,2023	
Towhidi et al. ,2023, Hasanzadeh et al.,2020, Dareshiri et al.,2019,	Improving the Pricing Mechanism for Islamic Bonds (Sukuk)
Sepidbar and Masuminia,2023, Masoumi and Ebrahimi,2022, Busari and Aminu2021, Hajiha et al.2022, Mawardi et al. 2021, Karimi and Salmani, 2017, Najafi moghadam,2017, Towhidi et al.,2023, Ahmed et al.2013, Solé 2008, Alowaiyesh,2020, Khedri,2017, Sepidbar and Masuminia,2023, Jobst et al.,2008, Towhidi,2024, Dolati and Jafari,2009, Kusma and Silva,2012	Development of the Primary Market for Islamic Financial Instruments (Sukuk)
Sokur et al.,2008, Lokot Zein, 2012, Solé, ٢٠٠٨, Keshavarzian and Mosavian,2014, Sepidbar and Masuminia,2023,	Developing accounting standards in accordance with international standards
Hasanzadeh et al.,2020, Emadi and khamisabadi,2017, Hasanzadeh and Ahmadian,2012, Dareshiri et al.,2019, Jobst et al.,2008, Smaoui et al. ,2017, Talahma,2024, Masoumi and Ebrahimi,2022, Najafi moghadam,2017	Management of Islamic Financial Instrument (Sukuk) Profit Payments
Dareshiri et al.,2019, Keshavarzian and Mosavian,2014, Karimi and Salmani 2017, aghataghi et al.,2020, Mawardi et al. 2021, Towhidi et al. 2023, Sepidbar and Masuminia,2023, Augustine,2024, Najafi moghadam,2017, Jobst et al. 2008, Ahmed٢٠١٣	Improvement of the process of expert review and reporting of bond issuance
Yarmohammadi et al.2015, Hasanzadeh et al.2020, Dareshiri et al.2019, Augustine,2024 Emadi. And Khamis Abadi, ٢٠١٧, Hassanzadeh and Ahmadian,2012 ,Zolfaghari et al.,2012, Towhidi et al., 2022, Sepidbar and Masuminia,2023 ,Keshavarzian and Mosavian,22014, Towhidi et al., 2023; Mesdi and Nayfer,2014; Hafsa and Oumayma,٢٠٢٤; Warsame and Irer,2016, Delle Foglie,2024	The relationship between the actual return on assets and the return paid to investors: Development of Credit Rating for Islamic Financial Securities (Sukuk)
Dareshiri et al.2019, Najafi moghadam2017, Salimifar et al.2018, Jbril.2019 ,Masoumi and Ebrahimi,2022, Kunhibava et al.2021, Nagano2016, Nurhanifah, ٢٠٢٤, Jobst et al.2008	Proper management of proceeds from the issuance of Islamic financial securities (Sukuk)
Rahman et al.٢٠٢٠)). Klayen Vil, ٢٠١٦)). Zolfaghari et al.2012,	An appropriate framework for evaluating Islamic financial securities (Sukuk)
Solé 2008	Reviewing issuer conditions for the development of Islamic financial securities (Sukuk) issuance

Najafi moghadam2017, Yarmohammadi et al.2015, Jobst et al.2008, Tareq and Dar,2007, Smaoui et al. 2017, Emadi and khamisabadi2017, Towhidi2020, Rahman et al.٢٠٢٠, Hasanzadeh et al.2020, Jbril.2019 ,Masoumi and Ebrahimi,2022, Kunhibava et al.2021, Towhidi,2015, Dareshiri et al.2019, Jobst et al.2008, Emadi and khamisabadi2017, Towhidi et al. 2023, Tareq and Dar,2007, Karimi and Salmani 2017, Nisful & Muslich,٢٠٢٠, Ahmad et al.2013, Mirza and Sultana2020 , Salimifar et al.2018 , Karimi and Salmani 2017	Risk management (exchange rate, interest rate, credit risk, etc.) within the structure of Sukuk
Towhidi et al. 2023, Sepidbar and Masuminia,2023 , Keshavarzian and Mosavian,2014, Mesdi and Nayfer,2014, Hafsa and Oumayma,٢٠٢٤, Warsame and Irer,2016, Delle Foglie,2024, Yarmohammadi et al., 2015, Awad et al.،2022	Development of Credit Rating for Islamic Financial Securities (Sukuk)

Second Stage: To obtain a list of all criteria, step one was the identification of conceptually duplicative or redundant criteria and their removal. Thereafter, in the list of criteria that were reported in various studies under other names but with similar ideas, one was selected and added to the final list as a representative (Table No. 4).

Table 3. Identified Categories

Components	
Standardization of Assets for Issuance of Islamic Financial Instruments (Sukuk)	S1
Standardization of Islamic Financial Instruments (Sukuk) Issuance Stages	S2
Increasing the liquidity of Islamic financial instruments (Sukuk)	S3
Management of Interest Rate Risk in the Banking Sector	S4
Development of Credit Rating for Islamic Financial Securities (Sukuk)	S5
Management of Issuance Costs of Islamic Financial Securities (Sukuk)	S6
Promoting the Banking Sector's Role in the Issuance of Islamic Bonds (Sukuk)	S7
Increasing the Diversity of Islamic Financial Instruments (Sukuk)	S8
Enhancing the Supervisory and Regulatory Role of the Securities and Exchange Organization	S9
Increasing Exemptions and Incentives for Islamic Financial Instruments (Sukuk)	S10
Applying Innovative Financial Technologies for Process Efficiency, Cost Reduction, and Broader Accessibility	S11
Improving the Pricing Mechanism for Islamic Bonds (Sukuk)	S12
Development of the Primary Market for Islamic Financial Instruments (Sukuk)	S13
Developing accounting standards in accordance with international standards	S14
Management of Islamic Financial Instrument (Sukuk) Profit Payments	S15
Improvement of the process of expert review and reporting of bond issuance	S16
The relationship between the actual return on assets and the return paid to investors	S17
Proper management of proceeds from the issuance of Islamic financial securities (Sukuk)	S18

Reviewing issuer conditions for the development of Islamic financial securities (Sukuk) issuance	S20
Risk management (exchange rate, interest rate, credit risk, etc.) within the structure of Sukuk	S21

Source: Research Findings

The kappa method was used to assess reliability. The steps for calculating the conversion status of factors into categories by the researcher and the expert are as follows: the researcher identified 21 categories, and the expert identified 20 categories, with 19 categories being common. The kappa coefficient, calculated using SPSS software, is 0.86, which exceeds the minimum acceptable value of 0.6 (Gwet, 2012). Therefore, the tool codes utilized for code extraction were trustworthy enough.

The second Phase: Screening of Criteria

The first stage: interview with Financial Experts

The statistical population of this research includes 10 experts familiar with the research topic, comprising university professors and experts in Islamic finance. These individuals were purposefully selected using a judgmental sampling method, ensuring they possess expertise, experience, or a history of activity in the field of Islamic finance. To confirm content validity, the questionnaire was provided to the experts for evaluation of the criteria and sub-criteria.

Table 4. Demographic Information of Respondents

percent	Abundance	Specifications	
۱۰۰	۱۰	Man	Gender
۰	۰	Women	
۱۰	۱	20 to 30 years old	Age
٤۰	٤	۳۱ to 40 years old	
٤۰	٤	41 to 50 years old	
۰	۰	51 to 60 years old	
۱۰	۱	61 to 70 years old	
۳۰	۳	Master's Degree	Education
۷۰	۷	Doctorate	
۱۰	۱	Less than 5 years	Work Experience
۰	۰	5 to 10 years	
۸۰	۸	10 to 20 years	
۱۰	۱	More than 20 years	
۳۰	۳	Financial Economy	Field of Study
۲۰	۲	Economic Jurisprudence and Law	
۵۰	۵	Financial	

The second stage: Expert Evaluation

In this section, experts evaluated the importance of each component based on linguistic scales. After the experts completed the questionnaire, the linguistic variables (verbal expressions) were converted into fuzzy numbers for calculations. The fuzzy number average was calculated using Excel via relation (1), and the results are presented in Table 6. Thus, by integrating expert opinions, a triangular fuzzy number is obtained for each factor.

Table 5. Average Fuzzy Numbers

Average	Components
(0.5,0.75,0.875)	S1
(0.525,0.775,0.925)	S2
(0.625,0.875,0.95)	S3
(0.5,0.75,0.925)	S4
(0.525,0.775,0.95)	S5
(0.6,0.85,0.95)	S6
(0.375,0.525,0.575)	S7
(0.45,0.65,0.775)	S8
(0.55,0.775,0.875)	S9
(0.55,0.775,0.925)	S10
(0.3,0.4,0.4)	S11
(0.3,0.4,0.425)	S12
(0.45,0.675,0.85)	S13
(0.45,0.675,0.825)	S14
(0.425,0.65,0.825)	S15
(0.425,0.65,0.825)	S16
(0.525,0.75,0.875)	S17
(0.45,0.675,0.825)	S18
(0.6,0.825,0.9)	S19
(0.475,0.675,0.825)	S20
(0.45,0.675,0.825)	S21

Source: Research Findings

The Third Step: Defuzzification and Prioritizing Components

Using relation 2 and Excel software calculations, the defuzzied numbers were obtained as shown in the table below.

Table 6. Defuzzification Results

Defuzzification value	Components
۰,۷۱۸۷۵	S1
۰,۷۵	S2
۰,۸۳۱۲۵	S3
۰,۷۳۱۲۵	S4
۰,۷۵٦۲۵	S5
۰,۸۱۲۵	S6
۰,۵	S7
۰,٦۳۱۲۵	S8
۰,۷٤۳۷۵	S9
۰,۷۵٦۲۵	S10
۰,۳۷۵	S11
۰,۳۸۱۲۵	S12
۰,٦٦۲۵	S13
۰,٦۵٦۲۵	S14
۰,٦۳۷۵	S15
۰,٦۳۷۲	S16
۰,۷۲۵	S17
۰,٦۵٦۲۵	S18
۰,۷۸۷۵	S19
۰,٦٦۲۵	S20
۰,٦۵٦۲۵	S21

In response to the research question and based on the results, as can be inferred from Table No. 9, among the categories, increasing the liquidity of Islamic financial instruments (Sukuk) is the most influential, followed by managing the issuance costs of Islamic financial instruments (Sukuk), and risk management (exchange rate, interest rate, credit risk, etc.) within the structure of Islamic financial instruments. Enhancing the role of the banking system in the issuance process of Islamic financial instruments (Sukuk), reforming the pricing system of Islamic financial instruments (Sukuk), and utilizing new financial technologies to accelerate and improve processes, reduce costs, and increase accessibility are three factors that have less impact.

Table 7. Prioritizing Components

Rank	Defuzzification value	Components
١	٠,٨٣١٢٥	Increasing the liquidity of Islamic financial instruments (Sukuk)
٢	٠,٨١٢٥	Management of Issuance Costs of Islamic Financial Securities (Sukuk)
٣	٠,٧٨٧٥	Risk management (exchange rate, interest rate, credit risk, etc.) within the structure of Sukuk
٤	٠,٧٥٦٢٥	Increasing Exemptions and Incentives for Islamic Financial Instruments (Sukuk)
٥	٠,٧٥٦٢٥	Development of Credit Rating for Islamic Financial Securities (Sukuk)
٦	٠,٧٥	Standardization of Islamic Financial Instruments (Sukuk) Issuance Stages
٧	٠,٧٤٣٧٥	Enhancing the Supervisory and Regulatory Role of the Securities and Exchange Organization
٨	٠,٧٣١٢٥	Management of Interest Rate Risk in the Banking Sector
٩	٠,٧٢٥	The relationship between the actual return on assets and the return paid to investors
١٠	٠,٧١٨٧٥	Standardization of Assets for Issuance of Islamic Financial Instruments (Sukuk)
١١	٠,٦٦٢٥	Development of the Primary Market for Islamic Financial Instruments (Sukuk)
١٢	٠,٦٦٢٥	An appropriate framework for evaluating Islamic financial securities (Sukuk)
١٣	٠,٦٥٦٢٥	Developing accounting standards in accordance with international standards
١٤	٠,٦٥٦٢٥	Proper Management of Revenues from Issuance of Islamic Financial Instruments (Sukuk)
١٥	٠,٦٥٦٢٥	Reviewing issuer conditions for the development of Islamic financial securities (Sukuk) issuance
١٦	٠,٦٣٧٥	Management of Islamic Financial Instrument (Sukuk) Profit Payments
١٧	٠,٦٣٧٢	Improvement of the process of expert review and reporting of bond issuance
١٨	٠,٦٣١٢٥	Increasing the Diversity of Islamic Financial Instruments (Sukuk)
١٩	٠,٥	Promoting the Banking Sector’s Role in the Issuance of Islamic Bonds (Sukuk)
٢٠	٠,٣٨١٢٥	Improving the Pricing Mechanism for Islamic Bonds (Sukuk)
٢١	٠,٣٧٥	Applying Innovative Financial Technologies for Process Efficiency, Cost Reduction, and Broader Accessibility

Source: Research Findings

Conclusion

In this study, content analysis was used to identify and prioritize factors influencing the development of the Islamic debt securities (Sukuk) market, and the fuzzy ranking technique was employed to prioritize them. The research results showed that the factor "Increasing the liquidity of Islamic financial instruments (Sukuk)" has the highest priority with the highest final weight (0.83125). This finding is consistent with the results of previous studies, including those by Tohidi et al. (2023), Yarmohammadi et al. (2015), Delle Foglie (2024), Lokot Zein (2018), Nagano (2016), Kusuma et al. (2014), Nurhanifah (2024), and Solé 2008 (2008). Subsequently, the factor "Management of Issuance Costs of Islamic Financial Securities (Sukuk)" ranked second with a final weight of 0.8125, which is consistent with previous studies, such as those by Hasanzadeh et al. (2020), Tohidi (2015), Lokot Zein (2018), and Piotrowski (2017). Finally, the factor " Risk management (exchange rate, interest rate, credit risk, etc.) within the structure of Sukuk," including risks arising from exchange rates, interest rates, and credit risk, was identified as the third influential factor with a final weight of 0.7875. This finding is also consistent with the results of studies by Dareshiri et al. (2019) and Tohidi (2015). In contrast, factors such as "Applying Innovative Financial Technologies for Process Efficiency, Cost Reduction, and Broader Accessibility" (0.375), "Improving the Pricing Mechanism for Islamic Bonds (Sukuk)" (0.38125), and "Promoting the Banking Sector’s Role in the Issuance of Islamic Bonds (Sukuk)" (0.5) had the lowest priority and impact.

The findings of this research can serve as a practical guide for economic policymakers, financial institutions, securities issuers, and capital market participants. Focusing on key factors, including increasing liquidity, can be achieved by creating a suitable environment for secondary market development, diversifying the design of Islamic financial instruments (including flexibility in maturity, yield rate, payment method, risk level, etc.), increasing the liquidity of government securities, issuing zero-coupon (discount) securities, establishing an organized market for debt securities to discover prices through market mechanisms, reducing restrictions on the use of funds from securities issuance, creating appropriate mechanisms to attract individual and institutional investors, launching an electronic trading platform to facilitate transactions, improving the performance of market makers, and increasing information transparency and standardization. On the other hand, reducing issuance costs is also possible through measures such as eliminating, adjusting, or merging issuance pillars, reducing real estate transfer costs by

using purchase agreements and irrevocable powers of attorney, reducing commissions for intermediary institutions and insurance, and utilizing new technologies such as blockchain. Improving risk management is also achieved through measures such as balancing risk and return, using Islamic financial instruments to hedge currency, interest rate, and credit risks, analyzing historical asset data for credit rating, issuing international Sukuk to reduce investor risk, using rating agency services to diversify yield rates, and designing structures based on asset loss coverage, timely payment of securities profits, using new financial technologies for Sukuk risk management, using the Islamic securities guarantee fund to compensate for potential defaults by originators, and using credit enhancements in the structure of Islamic financial instruments, which can lead to increased investor confidence and sustainable growth of the Islamic debt securities market.

Given the identification and Prioritization of factors affecting the expansion of the Sukuk market, it is suggested that future research analyze the causal and structural relationships among these factors. In fact, merely identifying and ranking factors is not enough; examining how these factors interact and influence each other (such as the relationship between liquidity, issuance costs, and financial risks) can provide a deeper understanding of the mechanism of Sukuk market development. Also, given the emerging trends in the financial sector and the rapid growth of new technologies, it is suggested that future research explore the role of new financial technologies in the development of the Sukuk market.

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