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An Assessment of Islamic Banking in Asia, Europe, USA, and Australia

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Abstract

The paper reviews the progress of Islamic banking in two major regions, including Asia and the Western world. The paper offers an inclusive discussion of Islamic banking initiatives in several countries of the globe, specifically the countries from the Middle Eastern region, Europe, Australia, Asia, and North America. The discussion for Asian countries includes Saudi Arabia, Iran, UAE, Qatar, Bahrain, Kuwait, Turkey, Egypt, Malaysia, Oman, Indonesia, Pakistan, and Bangladesh. The paper also appraises the development of the Islamic banking setup in the Western world. The Islamic banking status in the west covers the following countries: United Kingdom, Italy, Australia, Luxembourg, France, Germany, Canada and the USA. The review of Islamic banking in the two major world regions reflects a progressive Islamic banking setup. The paper entails a qualitative approach to evaluate the Islamic banking progress in various countries by extracting data from different sources, including central banks and other important financial and regulatory institutions. The study affirms that the Islamic banking paradigm emerged and flourished from the Asian states, specifically Middle Eastern and Asian countries, including Egypt, Bahrain, Qatar, UAE, Malaysia, Pakistan and Iran. The findings also suggest that the Islamic banking model has progressed gradually in European and other countries like Australia, the USA and Canada, which warrants a promising potential for the global Islamic banking sector.

Keywords: Islamic Banking, Islamic Finance, Growth, Development, Shariah-Compliant Banking, Global Islamic Banking

1. Introduction

The world economy, after the recession of 2007, has inspired us to realize that the theories and philosophy of capitalism have been unsuccessful in offering solutions to the global economic woes (Zaman, 2013). National and international economic distress is principally the consequence of debt-laden and interest-based financial structures of global banking and economic system (Chapra, 1985; Ariff, 1988; Aqib, 2012). The splendid growth of Islamic banking and finance and its progress in various regions of the world (Khan & Bhatti, 2008) reflects its ability to deliver financial propositions that are not only Shariah-compliant (in conformity to the Islamic law) but also pragmatic to cater to contemporary economic and financial



needs. The resilience and progress of Islamic banking are reflected by the key facts and performance parameters of Islamic banks compared to their conventional interest-based counterparts (Islamic Financial Services Board, 2019).

Islamic banking (IB) is a comprehensive Islamic economic framework subsystem. Although the Shariah-compliant banking system per se is a relatively young discipline, the theoretical background and basis of Islamic or Shariah-complaint banking and financial system are strongly pinned upon the Islamic economic framework, which is as old as the religion of Islam itself. As a code of life, the Islamic faith guides all aspects of life, including the economic and social dimensions. The early Islamic financial initiative can be traced back to the second half of the 19th century, when the roots of the Islamic financial system started to grow in various forms (Aqib Ali, 2014). Primitive Islamic banking activities emerged in various parts of the world, including the Arabian and sub-continental regions (Wilson, 1983). The earliest venture underpinned Islamic banking principles evolved from Egypt in the 1960s, establishing a financial arrangement named *Mit Ghamr*. Another Islamic finance initiative in Malaysia, *Tabung Haji* was also formalized in the 1960s (Ahmad, 1987). Although it was still in its infancy at that time, Islamic banking gradually began to evolve slowly and steadily. It was in 1970 that the Islamic banking initiative took off with the development of several Islamic financial institutions (Aziz, 2005), including the first international Islamic financial entity in the form of the Islamic Development Bank (Wilson, 2000). Currently, Islamic banking has attained a global reckoning, with astounding success in both the Muslim states and non-Muslim countries, including the regions in Europe, UK, and Africa. Based to the (Islamic Financial Services Board, 2019), aggregated Islamic banking across the globe accounts for approximately 72% of all Islamic financial offerings, with huge assets of around US\$ 1.6 Trillion. There are a total of 1389 Islamic financial institutions worldwide (Thomas Reuters, 2018), operating in more than 110 countries (Ayub, 2017). Of these, 505 financial institutions are Islamic banks, including the Islamic windows of conventional banks.

2. Methodology

The methodology employed by the researcher is qualitative in nature. The data was gathered using various secondary sources, including reports, publications, working papers and online sources.

The data, including the facts and figures, were collected from the central banking institutions and various countries' governmental and financial regulatory authorities. The paper reviews the developments and growth of Islamic banking in various countries from the four major world regions, including Asia, Europe, Australia, and North America. The paper evaluates the information in terms of descriptive and theoretical perspectives by stating the statistics and various data and information, including numbers and percentages of growth, market share, etc., precisely and exactly as provided in the available data sources. Concerning the article's structure, Islamic banking was reviewed in three world regions, i.e. Asia, Europe and North America. Based on many countries in Asia and due to the greatest involvement of the Islamic banking paradigm in the Asian regions, especially the Middle East and Gulf States, more detailed discussion and space is being assigned to Asian countries followed by other countries in Europe and other regions. The paper attempts to provide a descriptive analysis of Islamic banking development in the pertinent countries from the subject global territories.

3. Islamic Banking in Asia

Islamic banking origins are rooted in the Asian region, especially in the Middle East. The country-wise situation of the Islamic banking sector in the Asian states is described as under:

3.1 Islamic Banking in Malaysia

Malaysia has attained the position of a leader in global Islamic banking intuitive. The country has achieved remarkable progress based on a holistic strategy regarding Islamic banking and financial model by attaining accomplishment at various fronts; ranging from the deployment of a potent regulatory regime to acquiring support from stakeholders; from government facilitation to ensuring smooth formulation and execution of policies, from the enactment of effective Shariah governance framework to ensuring a scrupulous level of Shariah supervision for IBF (Islamic Banking and Finance) institutions, Malaysia's progress has been exemplary. Since the origin of an institution named *Tabung Haji* in the 1960s, Islamic finance



growth in Malaysia has been systematic and stable (Al Nasser & Muhammed, 2013). Malaysian Islamic banking industry has achieved the status of global Islamic banking and finance hub based on the impressive growth of the sector and great contribution to the global IBF domain (Alwi et al., 2019). Four full-fledged Islamic banks are in the country, namely Bank Islam Malaysia Berhad, MBSB Bank Berhad, Bank Rakyat, and Bank Muamalat Malaysia Berhad (Asni, 2019). Currently, 16 Islamic banks and Islamic banking windows (Bank Negara Malaysia, 2020). Kayadibi (Kayadibi, 2010) stated that a master plan for the financial sector was released by Malaysia's central bank (BNM) to promote the country as a regional center of IBF. Malaysia has a total of USD 204 Billion of Islamic banking assets, with IB having a 31.2% share of total banking assets being the third largest IB market in the world (Malaysian International Islamic Financial Center, 2018).

3.2 Islamic Banking in Pakistan

The Islamic banking origins in Pakistan may be dated back to the late 1970s when the global rise of Islamic banking initiatives took place in the second half of the 1970s. In 1977, the IB paradigm was initially considered by the then President of Pakistan, Zia ul Haq as a system that may be pragmatically implementable to eliminate *riba* (interest) in financial transactions (Khan & Bhatti, 2008). The first Islamic bank in the country was Meezan Bank, and two other Islamic banks, including Bank Islami and Dubai Islamic Bank, were established later; six fully-fledged Islamic banks were operational in the country as of 2006. Another latest development that can boost the Islamic banking initiative in the country is the verdict given by the Federal Shariah Court (FSC) in 2022 to ensure the Islamic financial system is implemented, and interest is eliminated from the economy by 2027 (Bhatti, 2022). Presently, five full-fledged Islamic banks are functioning in the country, including Al-Baraka Bank, Meezan Bank, MCB Islamic Bank, Bank Islami, and Dubai Islamic Bank. The number of conventional banks Islamic banking divisions/windows operating in the country is 17, and there are currently 2979 Islamic banking branches (IBBs) and sub-branches, including 2850 full-fledged IBBs and out of these 2850 full-fledged Islamic branches; dedicated Islamic banks' branches are 1469 and conventional banks' IBBs are 1381 (State Bank of Pakistan, 2019). The market share of Islamic banking assets and deposits in Pakistan's overall banking industry is 15.2% and 16.9%, respectively (State Bank of Pakistan, 2020), having 3250 outlets of Islamic banking branches with aggregated assets of around USD 20 billion.

3.3 Islamic Banking in Bangladesh

Islamic banking has been in operation since the first half of the 1980s (Sarker, 1999) in Bangladesh, and since its inception, it has developed positively and progressively in the country. The beginning of IB in Bangladesh can be traced back to the year 1983 when the first Islamic bank – Islami Bank Bangladesh Limited, was established (Sarker, 2005) and is also the largest Islamic bank in the country (Islam et al., 2019). In 1997, Bangladesh Bank mobilized all Islamic banks functioning in the country to conduct an “Islamic Banks Consultative Forum (IBCF)”, to bring forward the pertinent significant matters related to the Islamic banking sector's progression to address these issues aptly to warrant a bright future for the IB industry in Bangladesh. Although there are no separate Islamic banking regulations or law and Islamic banks are monitored and supervised by independent Shariah boards/councils (Rashid, Hassan & Ahmad, 2009); but to assure progressive growth, legal framework is one of the vital areas that require the attention of the concerned stakeholders (Nabi et al., 2015). According to Bangladesh Bank (the central bank of Bangladesh), Islamic banking in the country has been consistently showing a steady growth (Bangladesh Bank, 2018) and currently Islamic banking assets represent 24% of total banking assets in the country. There are currently 8 fully-fledged Islamic banks while sixteen conventional banks are operating their Islamic banking windows and branches totaling 1252 Islamic banking branches with total staff of 34,128 (Bangladesh Bank, 2019).

3.4 Islamic Banking in Indonesia

Indonesia is the largest Muslim country in the world and has a huge Muslim population, Islamic banking holds good potential in the country, but this potential is still largely untapped, as reflected by the low market share of Islamic banking of merely 5% of the total banking industry (Maulia, 2019). The current state of Islamic banking is not encouraging, yet the government resolves to gradually develop the IB sector. After the first Islamic bank was established in the country – Bank Muamalat Indonesia, in 1991 by the intuition taken by Indonesian Ulema Council (MUI), Muslim intellectuals and entrepreneurs (Bank Muamalat, 2020). Indonesia's central bank (Bank Indonesia) issued a comprehensive strategy to develop



and bolster the IB sector in 2008. As per the latest information as of December 2019, released by the Indonesian Financial Services Authority (Otoritas Jasa Keuangan, 2019), there are 14 full-fledged Islamic banks in the country. In addition to the full-fledged Islamic banks, 22 Islamic business units of conventional banks are also operating to offer Shariah-compliant banking services. In collaboration with other stakeholders and governmental support, Bank Indonesia is optimistic about the promising future of Indonesia's Islamic banking industry (Bank Indonesia, 2020). Some issues need to be addressed like the lack the political will and slack social attitudes towards the diffusion and acceptance of Islamic banking in the country (Sari, Zakaria & Zahri, 2016) and at state-level, the IB industry has lacked adequate regulation support (Abduh & Omar, 2012), if these matters among others are dealt with, the industry would certainly grow and thrive. According to Maulia (Maulia, 2019), the Indonesian authorities plan to increase the market share of Islamic banking by 20% by 2024.

3.5 Islamic Banking in Saudi Arabia

IB sector in the country functions parallel to the conventional banking sector. The banking industry in Saudi Arabia is regulated and governed by SAMA – Saudi Arabian Monetary Authority. Saudi Arabia has the second-largest banking sector among the Gulf Cooperation Council (GCC) states regarding the value of its assets, while the Kingdom's Islamic banking industry is also among the leading ones in the region (Khan et al., 2018). The Saudi banking sector consists of 14 foreign and 12 local banks. Three of the 12 local banks hold a joint 45% share of the total banking market. The Saudi banking sector has to its credit, the second largest share of 20.6% (Saudi Arabian Monetary Authority, 2019) of the total global Islamic banking assets in the world, while at the national level, the total assets of Islamic banking are more than half of the total banking share, i.e., 51.3% of total banking sector assets in the country (Hassan et al., 2018). Of these dozen local banks, four banks are fully dedicated Islamic banks, including Al-Bilad Bank, Al-Rajhi Bank, Bank Al-Jazira and Al-Inma Bank, while the remaining eight banks are providing both product offerings, i.e. both Shariah-compliant as well as conventional banking services. SAMA, with the cooperation and collaboration of the Capital Market Authority and Ministry of Finance is working meticulously to provide an effective framework for regulation and control of the IB sector to stabilize and promote it. And the view of (Nichita, Kagitci & Vulpoi, 2013) about the Saudi IB industry is that it will continue to flourish under the facilitative supervision of SAMA and is currently the second largest Islamic banking industry in terms of assets of around USD 376 Billion (Thomson Reuters, 2018), Saudi Arabian IB sector growth prospects are very much brighter.

3.6 Islamic Banking in Iran

Iran introduced the implementation of Islamic banking in the country at state level in 1979. The “law for usury-free banking” was enacted in 1983 and was enforced in the coming year in March 1984 by the central bank of Iran (Anwar, 1992). The peculiar feature of Iranian banking sector in its early stages after Islamic restructuring was that all banks were nationalized (Ashraf & Giashi, 2011) and were bound to operate on *riba*-free basis and hence the banking sector was based on a centralized model entailing a greater degree of regulation and control by the Central Bank of Iran – Bank Markazi Jomhuri Islami Iran. The primary private bank that started to operate in the country named Bank Karafarin was later followed by several other banks that were granted licenses by the country's central bank – Bank Markazi. The banks in Iran are largely classified into two categories i.e., government owned and private banks (Parveen, Zodeh & Ahmad, 2015). Currently, the banking sector of the country comprises thirty banking institutions including eight government-owned banks and eighteen private banks (Central Bank of the Islamic Republic of Iran, 2019). The major banks in Iran are Bank Mellat, Eqtesad Novin, Export Development Bank, Maskan Bank, and Bank Pasagard. As reported by IFSB's IFSI Report 2019, Iran has a staggering 32% share of global assets in Islamic banking sector and in addition to this merit; Iran is the premier country to implement Islamic banking at the state level by transforming the entire banking setup to Shariah-compliant banking and financial system.

3.7 Islamic Banking in Bahrain

The country is considered the hub of the global IBF industry. The premier Islamic bank in the country, Bahrain Islamic Bank, was set up in 1979. The Bahrain Monetary Agency (BMA), the country's central bank and financial sector regulator, played an instrumental role in fostering the Islamic banking industry (Al-Sadah, 2005). Bahrain is host to numerous IFIs (Islamic finance institutions) and other related institutions, including regulatory, standard-setting, academic and research



institutions that include the Bahrain Institute of Banking and Finance (BIBF), International Islamic Financial Market (IIFM), Islamic International Rating Agency (IIRA), and Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI). Several dedicated Islamic retail and investment banks, including some off-shore banking institutions, drive Bahrain's Islamic banking industry. The powerful IB initiative in Bahrain is spearheaded by the Central Bank of Bahrain (CBB), formerly the Bahrain Monetary Agency (BMA). The remarkable Islamic banking growth has been one of the reasons Bahrain is one of the global leaders in the Islamic finance sector, with total assets of USD 27.8 billion as of November 2018 (Central Bank of Bahrain, 2019). According to the latest facts and figures released by CBB (Central Bank of Bahrain, 2019), the Islamic banking sector grew from 24.7 Billion US Dollars in 2014 to 30.7 Billion US Dollars as of June 2019, with an impressive annual growth rate of 17% and the future potential and prospects are even more promising, keeping in context the outstanding support provided by the regulatory and other governmental agencies.

3.8 Islamic Banking in Kuwait

Many IFIs reside in Kuwait, which also has to its credit an institution named The Kuwait Finance House (KFH), the oldest established Islamic financial institution setup in 1977. KFH, the premier Islamic bank of Kuwait, is a pioneer in the global Islamic banking landscape. Regarding assets, KFH is the biggest Islamic bank in the world. The KFH services are available in Kuwait and several other countries, including Saudi Arabia, Bahrain, Turkey, United Arab Emirates, Germany and Malaysia (Kuwait Finance House, 2018). According to IFSB (Islamic Financial Services Board, 2017), Kuwait's impressive 39% Islamic banking share in the country's total banking assets is among the best in the world. The vigour and strength of the Kuwaiti Islamic banking sector are reflected by the fact that it has a total of five Islamic banks, including the largest Islamic bank in the world, and the average size of Kuwaiti Islamic banks is the largest in terms of assets (Ali, 2011). The aggregated number of Islamic bank branch networks in Kuwait is presently 600, with an approximate staff of 12000 personnel, and consolidated IB assets are around 96 Billion USD. Kuwait is among the top six countries in Islamic finance progression, mainly because of its powerful and ever-growing Islamic banking industry.

3.9 Islamic Banking in the United Arab Emirates

The country is home to DIB – Dubai Islamic Bank, which was established in 1975, and was one of the torch-bearer Islamic financial intuitions. The bank is currently the largest Islamic bank in the UAE, operating with 90 branches country-wide (Dubai Islamic Bank, 2019). DIB spearheaded the evolution of the global Islamic banking initiative by being the world's first fully-fledged Islamic bank and the second-largest Islamic bank in the world (Dubai Islamic Bank, 2020). There are seven fully dedicated Islamic banks in the UAE, while conventional banks also offer Islamic banking services through their Islamic windows (Tabash & Dhankar, 2014). Akoum (Akoum, 2017) stated that there are 47 Islamic financial institutions, including Islamic banks, Islamic windows of conventional banks, and Islamic finance companies. According to reports by Thomson Reuters (Thomas Reuters, 2018) and IFSB, UAE is the fourth largest country in terms of its global IB assets. The country's central bank started designing and devising its Islamic Finance Development Framework in 2018 to boost the progression of the IB sector. The objective of the Central Bank of United Arab Emirates (CBUAE) is to develop the legal and regulatory framework for the industry to support the sector effectively and to make the UAE the leading Islamic financial services hub (Central Bank of UAE, 2018). In 2018, the Higher Shariah Authority was established to standardize and harmonize the practices of Islamic banking and financial institutions by aligning them to internationally applicable Shariah standards and globally recognized best practices by collaborating with pertinent stakeholders (Central Bank of UAE, 2018).

3.10 Islamic Banking in Qatar

Qatar is among those few countries where the share of Islamic banking is substantial compared to the share of the conventional banking sector; the Islamic bank's market share out of the total market share in Qatar is approximately a quarter, 26.6% to be exact. According to Ibrahim (Ibrahim, 2015), there are 18 banks in Qatar, with four Islamic, seven local and seven foreign banks. There are currently four dedicated Islamic banks operating in Qatar, Qatar Islamic Bank (QIB) being the first, oldest and largest one, which was set up in 1982. Qatar Islamic Bank holds an overall 11% share of the total market share among all banks and a 42% share of the Islamic banking market in Qatar (Qatar Islamic Bank, 2020). Qatar Central Bank (QCB) is playing a very active role in the development of the Islamic banking and finance sector by devising and



designing effective regulatory reforms (Tlemsani, 2015), such as the implementation of a central Shariah committee for Islamic banks to bring consistency in the Islamic finance industry (Qatar Financial Centre Regulatory Authority, 2017). According to QCB (Qatar Central Bank, 2016), Islamic banks in Qatar normally function under three regulatory institutions, including the Qatar Central Bank, Qatar Financial Center Regulatory Authority and Qatar Financial Markets Authority, and to ensure the sustained development of Islamic banking sector, the three regulatory institutions would be devising a common approach to various regulations and allied matters to standardize the supervisory and regulatory practices, to accomplish and ensure robust growth of Islamic banking sector in the future.

3.11 Islamic Banking in Egypt

The country is credited with the oldest Shariah-compliant Islamic financial entity established in 1963; it was essentially a savings association, a funds pool named Mit Ghamr. Islamic banking commenced in Egypt in the shape of two models, first with the establishment of public/private fully dedicated Islamic banks and secondly with the establishment of Islamic banking branches of interest-based banks. The first full-fledged Islamic bank in Egypt was Nasser Social Bank. Egypt currently has 40 banks, of which three are fully-fledged Islamic banks, including Bank Faisal, Bank Al Barakah and Abu Dhabi Islamic Bank (ADIB). In contrast, others provide Islamic banking services (Mubasher, 2018). Egypt has a very low Islamic banking market share as the challenges for the IB sector are many, including the lack of separate laws governing the IB sector, lack of political will and dearth of innovative products and services; but the industry will certainly grow when these core issues are addressed in an and appropriate manner (Fayed, 2013; Smith & Zawya, 2018).

3.12 Islamic Banking in Turkey

In Turkey, “participation banking” is used for Islamic banking (Ergeç & Kaytancı, 2017). Although the share of Islamic or participation banks in Turkey is meagre at around 5%, at 4.90% to be precise (Zawya, 2018) but there are strong prospects that the industry will surge in the coming years because a comprehensive law for regulating the sector shall be issued by Turkey’s banking and regulatory and supervision agency – the BDDK. The plans are in the pipeline to lift the share of IB to 25% in the coming years by launching a mega Islamic bank in collaboration with Indonesia and some other countries that have shown interest in collaborating on the project. The proposed bank shall act as a central bank and a lender for global Islamic banking and financial institution (Daily Sabah, 2017). Presently, there are two state-run and three private Islamic banks, operating in Turkey, namely the Albaraka, Kuveyt Turk, Ziraat Katilim, Turkiye Finans and Vakif Katilim; collectively having more than 15,650 employees and 1100 branches (Birinci, 2019).

4. Islamic Banking in Europe

In the Western world, Islamic banking emerged and has been embraced as a lucrative and alternative financial proposition transcending religions and regions. The underlying motive for introducing and offering Islamic banking services in the Muslim-minority European countries was to realise the financial potential by attracting Muslims living in these regions (Cattelan, 2013). The country-wise status of the Islamic banking sector in western countries is discussed hereunder:

4.1 Islamic Banking in United Kingdom

The Islamic banking history in the UK dates back to 1982 when Al-Barakah International Bank (AIB) was set up and initiated operation as a fully-fledged Islamic bank in the country. Still, later its license was revoked by the Bank of England and till 2004, Islamic banking ceased to exist in the country (Abdullahi, 2016). UK has proven to be a lucrative Islamic banking proposition with a large Muslim population and a client-driven IB model. In 2004, the Islamic Bank of Britain was established as the country’s premier retail Islamic bank. Afterwards, the IB industry progressed encouragingly and soon, the UK was positioned as one of the top Islamic finance hubs outside the Muslim world by anchoring many Islamic banking and financial institutions (Sobol, 2015). The IB setup in the country thrived because of various favorable aspects, including the attraction of IB products and services to Muslims and non-Muslims (Lane, 2020) as well as the supportive legal and regulatory arrangements by the concerned authorities to give Islamic financial institutions a level-playing field in comparison



to other interest-based financial institutions, notably the changes in Stamp Duty Land Tax (SDLT) provisions to facilitate Islamic finance transactions is one prominent instance in this regard (Kulshrestha & Ali, 2019). There are currently more than 20 banks offering Shariah-compliant financial services in the UK (Firdaus, 2019). According to TheCityUK (TheCityUK, 2019), among these banks, five are fully-fledged Islamic banks, including (i) Al Rayan Bank (formerly Islamic Bank of Britain), (ii) Abu Dhabi Islamic Bank, (iii) QIB UK, (iv) Bank of London and the Middle East, and (v) Gatehouse Bank. The country is the largest Islamic finance market in not only the European region but is also one of the top Islamic banking and finance centers in the world (McKenzie, 2010). The IB prospects in the United Kingdom are pretty promising, as ratified by the facts and figures. TheCityUK reported that the aggregated bank assets of the UK's top Islamic banks are approximately 4.7 billion dollars, highlighting the UK as the center of Islamic finance in western countries.

4.2 Islamic Banking in Luxembourg

Luxembourg has a proven status as an Islamic finance center in the European region (Laarab, 2019), starting its Islamic finance journey with the establishment of first Islamic finance institution in a non-Muslim country named The Islamic Banking System in 1978 (Mausen et al., 2019). Apart from this, Luxembourg has also attained many firsts in the Islamic finance domain by being the first European country to authorize Islamic insurance in 1983 (El-Galfy & Khiyar, 2012), and according to LFF - Luxembourg for Finance, Luxembourg's central bank - Banque centrale du Luxembourg (BCL) was the first European central bank to join the IFSB, and according to EY (Ernst & Young, 2017), the country became the first European state to join as one of the founding members of International Islamic Liquidity Management (IILM) in 2010. Tan (Tan, 2015) mentioned that plans were underway to establish a fully-fledged Islamic bank (Eursibank) in 2014, with a proposal from various stakeholders from the Gulf region, but the idea could not materialize. The plans for the bank revived as the Islamic finance group (Eurigroup) pioneered the idea of Eursibank, is intending to raise the capital to establish the first Islamic bank in Luxembourg, which would cater to the financial needs of not only Muslim but also non-Muslims who are interested in transacting within an ethical banking framework in the European region (Merani, 2018).

4.3 Islamic Banking in Germany

One of the largest world economies and having a large Muslim population and a huge business and trade volume with the Gulf and Middle Eastern countries (Aichbichler, 2009), slate Germany a positive prospect for Islamic banking setup. Volk and Pudelko (Volk & Pudelko, 2010) stated that only limited Islamic banking services are offered to customers in Germany by the institutions that are also operating in Middle Eastern countries and offering a broad range of Islamic finance services in those countries. According to European Central Bank (European Central Bank, 2013), it was in 2009 that the country's Federal Financial Supervisory Authority (BaFin) decided to permit Islamic banking services in Germany and 2015, the first Islamic bank in Germany named KT Bank AG started its operations, and apart from it, some other financial institutions are also offering Shariah-compliant services in the country including the Commerzbank AG. Bahrain's Al-Baraka group is delivering digital Islamic banking services. Most Germans are Christian, but many people believe in no religion, approximately 37% according to Volk and Pudelko's study (Volk & Pudelko, 2016) conducted regarding Islamic banking in Germany. They asserted that a lower degree of religiosity does not necessarily imply that interest in Islamic banking would also be on the lower scale, as discussed in (Haron, Ahmad & Planisek, 1994; Gerrard & Cunningham, 1997) that religion is not to be overemphasised for banking selection. To accelerate the IB sector in Germany, Soyulu (Soyulu, 2019) recommended wooing Muslims and non-Muslim prospects to ensure relatively productive efforts to acquire customers from this unexploited IB market in Europe.

4.4 Islamic Banking in Italy

According to Iannazzone (Iannazzone, 2019), opportunities might be created to explore the IB initiative in Italy by contemplating the IB system with the related phenomena of ethical banking and social investing. Like several other European countries, Italy has also issued some guidelines regarding the comparability of Islamic banking services with conventional banking mechanics to deliberate the IB initiative in the country. The subject guidelines were released by the Bank of Italy in 2010. Yet, the supervisory challenges and regulatory matters need to be settled to allow Shariah-compliant banking services to gain momentum in the Italian banking system (Brugnoni, 2008). Biancone (Biancone, 2014) discussed the negotiations



between UBA (Union of Arab banks) and ABI (Italian Banking Association), to possibly establish the first Islamic bank in Italy in 2008. Still, it could not materialise due to the issues created by the global financial crisis. Padovani (Padovani, 2016) stated that the IB setup if launched and supported, would render financial opportunities for not only the 1.5 Italian Muslims but would also add diversity to the country's banking sector, attracting non-Muslims to avail of ethical banking services. According to Padovani (Padovani, 2017), the demand for Islamic banking services exists in Italy, and significant Islamic banking players, including the Al-Barakah Banking Group (ABG) from Bahrain, are considering entering the Italian banking industry; Padovani further emphasised the huge potential of IB initiative but asserted that the general regulatory environment and legal framework matters must be addressed beforehand to govern the operational aspects for Islamic banking and financial institutions.

4.5 Islamic Banking in France

After the financial crisis of 2008, France aimed to attract foreign funds to stabilize the economy and Islamic finance was considered a vital proposition (Aqib Ali, 2022); this would also assist them to lure funds from investors in oil-rich Middle Eastern countries (Hajjar, 2019). France has the largest Muslim population in Europe, with a huge number of around six million (Hackett, 2017); France may become a key Islamic banking market in the region. According to TheBanks.eu (TheBanks.eu, 2019), there are approximately 340 banks in France, out of which sixteen have origins in Muslim countries, but only eight of these banks are offering Islamic banking products and offerings, while out of the Shariah-compliant services provided by the eight banks, few are for retail banking customers and most are for corporate banking customers only. French authorities have made some legal modifications to assist Islamic banking in the country (Schoon, 2009), but the IB setup seems stagnant to a larger extent (Bi & Atta, 2009). The IB sector may be boosted by addressing regulatory and supervisory issues (Khan & Porzio, 2010), especially in the context of huge potential with a large Muslim population in the country, offering lucrative financial opportunities and prospects to the early initiative-takers in the domain of Shariah-compliant banking products and services (Santelli, 2016).

5. Islamic Banking in Australia

The prime initiative of Islamic finance to serve the financial needs Muslim community in Australian can be traced back to 1989 with the establishment of MCCA (Muslim Community Cooperative Australia). After the success of MCCA which has financed more than \$1 billion for home financing and is managing approximately \$50 million of investments (MCCA, 2019); another institution was established named MCCU (Muslim Community Credit Union) in 1999, which primarily operated as a retail-banking services organization (Mirza, 2003). In 2001, another arrangement (Iskan Finance) to provide Islamic home financing was established (Rammal & Zurbruegg, 2016) and subsequently Amanah Islamic finance for Shariah compliant home mortgages was also set up. The license of MCCU was revoked by Australian Prudential Regulation Authority (APRA) in 2002 owing to their limited funds to sustain business activities (Ahmad & Hassan, 2009). Nevertheless, a promising prospect from Islamic financial perspective was the operational existence of various similar elements in the already established community-based Australian banks (especially those that were functioning in relatively small town) and these financial entities as pinned upon Islamic banking philosophy shaped to be a favorable IB proposition in Australia. The Islamic banking and financial offerings are gathering momentum and moving in the positive direction slowly and steadily in Australia. There are various banking and financial institutions including HSBC, Citibank, and NAB – National Australian Bank that are planning to provide Islamic finance products in the country to cater to the banking and financial needs of the Muslim population in the region. The latest IB venture is underway in shape of IBA (Islamic Bank Australia), that would become Australia's first full-fledged Islamic bank (Ahmad, 2019). This is expected that IBA would very soon commence operations (Islamic Bank Australia, 2020), Islamic Bank Australia acquired its license in 2022 and is now working on building its products, systems and processes (Islamic Bank Australia, 2023), to cater to all those Australians who wish to deal with a Shariah compliant banking entity, entailing ethical banking and financial products and practices.



6. Islamic Banking in USA & Canada

The Islamic finance initiative began its journey in the United States in the late 1980s, establishing a Californian financial entity named LARIBA – American Finance House in 1987 to provide Shariah-compliant auto and home financing. Furthermore, LARIBA also provided Mudaraba-based financing to various small and medium business enterprises. Moreover, HSBC was among the premier financial entities in the US to offer Islamic financing for consumer customers to fund their house and car financing needs. As of 2006, three banks offered Islamic financial services in the US, including Devon Bank, HSBC and University Bank (Tacy, 2006). University Islamic Financial was established as the first Islamic banking subsidiary by the University Bank of Michigan in 2005 to cater to customers' financial needs in line with Shariah guidelines. Catovic (Catovic, 2014) stated that the first regulatory breakthrough for the IB initiative in the US was made in 1997 when a proposal for a Shariah-complaint financing transaction by the United Bank of Kuwait (UBK) was approved by the OCC – Office of the Comptroller of the Currency. The concentration of Islamic banking and financial players in USA largely revolves around home financing arrangements. Other investment and financing products are still underdeveloped owing to several factors, including low market penetration and the absence of a regulatory framework (Zyp, 2009; Zinser, 2017). There are currently more than 30 Islamic financial institutions operating in the US (Aldarabseh, 2019), albeit none of these financial institutions is operating as a nationally chartered full-fledged Islamic bank, and most institutions are offering limited product assortment, mainly including home and auto financing services. The prominent names active in the IBF sector include LARIBA (Bank of Whittier), University Islamic Finance (UIF), Devon Bank, and Guidance Residential (Paldi, 2020). This is imperative for the US to address the supervisory and regulatory challenges impeding the IB progress, which not only results in a great opportunity cost but also a failure to realize financial potential worth millions of dollars (Zinser, 2019; Paldi, 2017).

Canada signals a progressive Islamic financial market with promising prospects of IBF growth. Various institutions include Al Yusr, Islamic Co-Operative Housing Corp, Al-Ittihad Investment, United Muslim Financial, Amana Auto Finance Canada, Habib Canadian Bank, Ijara Community Development Corp, Qurtuba Housing Coop, Manzil Bank, to name a few, which are offerings Shariah-compliant financial services. Furthermore, many conventional banking and financial entities plan to functionalize Islamic financial windows, including the Canadian Imperial Bank of Commerce and Canada Mortgage & Housing Corp. With a growing need to fund infrastructure projects in Canada, Islamic banking and finance seem attractive (Aqib Ali & Hussain, 2017; Nator, 2017). Another consideration that makes IBF a viable option, as highlighted in Thomson Reuter's report (Thomas Reuters, 2016), is that Islamic finance concurs with the country's emphasis towards socially conscious/responsible investments and financing philosophy.

7. Conclusion and Future Prospects

Islamic banking is an attractive proposition not only for Muslims but for everyone who is interested in a financial model with an ethical and moral underpinning along with a socially responsible perspective towards dealings and transactions. The evaluation of Islamic banking model in various countries of the world revealed that Islamic banking and finance paradigm has grown from strength to strength in Asian regions especially in the Middle Eastern countries from where it spread to other parts of the globe including Asian and European countries. The encouraging progress of Islamic banking in both Muslim as well as non-Muslim states demonstrates the promising potential of Islamic banking as an alternative financial system. Islamic banking certainly has great future prospects in the global financial landscape. Islamic banking, based upon the principles of equity and fairness in financial dealings would certainly help the countries to attain financially inclusiveness, economic stability and prosperity. However, concrete measures and coordinated efforts are required from the stakeholders like the financial, governmental, and regulatory institutions, to realize the full potential of Islamic banking in the world.



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A Conceptual Framework of the Blockchain Technology Adoption for Zakat Institution in Indonesia

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Abstract

The adoption of blockchain technologies necessitates the consideration of a wide range of factors far beyond the technology focus of most current research. Blockchain technology's ability to record transactions on distributed ledgers opens new possibilities for zakat institutions to improve transparency, prevent fraud, and build trust in the public sector. Even though academic research on blockchain technology is still in its infancy, most academics focus on the technology itself and overlook the zakat institutions adopting it. This paper drew on a comprehensive literature review to propose a conceptual framework for blockchain technology adoption. Zakat institutions can use the proposed framework as a reference point for adopting blockchain applications and for scholars to expand, refine and evaluate research into blockchain technology.

Keywords: blockchain technology; adoption; zakat, TAM

1. Introduction

Many believe that the recent appearance of blockchain technology represents the beginning of a major shift in the way organizations are structured and how they conduct business, as noted by Behnke & Janssen (2020). However, blockchain adoption for zakat institutions has yet to be studied in academic literature. Due to the difficulties early adopters have faced with



the new blockchain technology - which is still in its evolutionary stage - technical experts and researchers are now debating the merits of the technology.

A blockchain can be described as a series of blocks that record data in hash functions with a timestamp and a link to the previous block, as noted by Crosby et al. (2016). Using a "distributed ledger," the data is spread out across a network of computers. This prevents cybercriminals from exploiting centralized points of vulnerability. Tokens that can be transferred between parties without needing a trusted third party or intermediary or for the automatic execution of "smart contracts" when specific conditions are met are some of the uses of blockchain technology, as noted by Marsal-Llacuna (2018).

The use of blockchain is growing across industry sectors, including Zakat. Desto FinTech, a renowned company based in the US, introduced the i-Zakat service, the leading global company to manage zakat companies, as Ahmed & Zakaria (2021) noted. It also supports the management system attractively powered by blockchains that strictly adopt transparency, efficiency, and sustainability principles. In addition, I-Zakat prevents potential misuse, misallocation, loss, theft and other contributing factors to the lost fund and reduces the cost of operating a continuous work scheme that can last for generations. I-Zakat also reduces the cost of collecting funds, as Ahmed & Zakaria (2021) noted.

In Indonesia, zakat is administered by two institutions: the National Zakat Amil Agency, abbreviated as BAZNAS, and the National Amil Zakat Institution, abbreviated as LAZ. BAZNAS manages Zakat nationally and is formed by the government, whereas the community forms LAZ, which is tasked with collecting, disbursing, and utilizing Zakat. To aid in the collection of Zakat, BAZNAS established the Zakat Collection Unit, abbreviated as UPZ, as noted by Andayani, Hanum & Zaenal (2019). BAZNAS is not implementing blockchain technology in their management system as there are no regulations from the government to support cryptocurrency.

2. Gap analysis

As a country with the largest Muslim population in the world, Indonesia is still overwhelmed by the problem of poverty, which is now a big problem in Indonesia. Zakat is proven effective in reducing or eradicating poverty, with prominent examples from the era of the Second Caliph of Islam, Hazrat Umar bin Khattab (R.A), and of Umar bin Abdul Aziz, who was the First Caliph of Islam only for over one year (99-101H) as noted by Hidayati & Tohirin (2010). The amount of Zakat funds collected is still far from the potential amount. So that the amount of funds distributed automatically to eight Asnaf (Mustahiq) needs to be optimized. Many factors cause funds disbursed to BAZNAS not to the maximum. One of them is the distrust of the Muzakki towards Zakat institutions, as reported by BAZNAS (2017).

With its capability to trace transactions, Blockchain Technology can provide transparency to its users, which can be a possible solution to overcome distrust of Zakat Institution (BAZNAS). Besides that, implementing blockchain technology into zakat management can reduce the potential misconduct from zakat authority.

There are numerous scholarly articles about the conceptualization of blockchain-based zakat, for example, Zulfikri, Kassim & Hassan (2021) and Rejeb (2020). However, there are still limited studies regarding adopting blockchain technology for zakat institutions. Hence, this study proposes a framework research model to analyze the acceptance of blockchain technology for zakat institutions using the Technology Acceptance Model (TAM) by adding external constructs, namely trust, regulatory support and shariah compliance in the context of Islamic philanthropy, especially zakat.

3. Literature review

3.1 The Technology Acceptance Model (TAM)

Davis developed the technology acceptance model (TAM) based on the Theory of Reasoned Action (TRA) in 1989 (Davis, 1989). The authors believed that people's behavioral intention to use new technology (actual system use) is determined by their perceived usefulness and ease of use. Meanwhile, perceived ease of use influences perceived usefulness, and both perceived usefulness and perceived ease of use are influenced by various external variables.

TAM is a prominent and modest theoretical model of technology use. Explanatory capacity and ease of comprehension make it the most extensively utilized model in various disciplines. Venkatesh and Davis expanded TAM to TAM2 in 2000, adding social influence processes, cognitive instrumental processes, and a detailed account of the key forces underlying judgments of

perceived usefulness and behavioural intention (Venkatesh et al., 2003) later identified and discussed eight models of behavioural intention to use information technology and proposed the Unified Theory of Acceptance and Use of Technology (UTAUT). And in 2008, Venkatesh and Bala proposed TAM3, which was based on TAM2 but included the effects of trust and perceived risk on system use (Venkatesh et al., 2003).

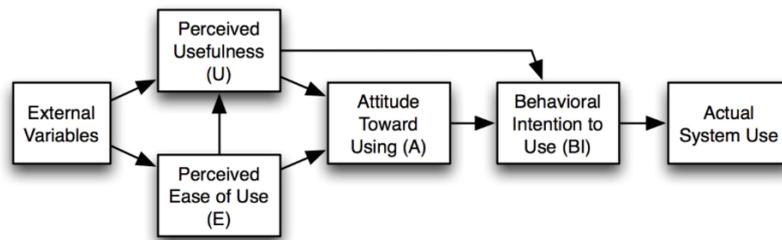


Figure 1. Technology acceptance model (TAM)
Source: Author's elaboration on (Venkatesh et al., 2003)

Comparing the TAM model with the other models (TAM, TAM2, UTAUT and TAM3), TAM is more versatile than the other models, which contain stricter definitions of external variables and are better suited to the study of specific information technologies, such as UTAUT and TAM3. Most of the time, TAM is used in the following three types of research: task-related systems, e-commerce systems, and hedonic systems, as noted by Hsiao & Yang (2011). TAM Model has also been used in zakat management study. For example, Roziq, Wijayanti & Irmadariyani (2020) measured the acceptance of the SIMBA application. This research uses a qualitative study using a case study approach. Meanwhile, Purwanto, Sulthon & Wafirah (2021) used the TAM model to measure the behaviour intention to use online Zakat. Santoso et al. (2020) studied muzakki intention to use blockchain in zakat management using the TAM model. This study uses TAM as the model for study acceptance of zakat institutions toward Blockchain technology.

TAM (Technology Acceptance Model) variables such as perceived ease of use and perceived usefulness can be used to gain a deeper understanding of the customer's desire to adopt new technology, as noted by Venkatesh et al. (2003). Several studies and researchers have found the TAM useful in measuring technology acceptance. Good decision-making tools for a system's deployment are essential. When it comes to embracing blockchain technology, there is no one-size-fits-all solution. TAM must be integrated with other important constructs when considering a current model compatible with blockchain.

On the other hand, Blockchain technology is a relatively new and complex technology in both adoption and development. Adopting blockchain technology is influenced by various factors, both directly and indirectly. According to Albayati et al. (2020), five external constructs play a direct and indirect role in adopting blockchain technology: Trust, Regulatory support, Experience, Social Influence and Design. This study will choose Trust and Regulatory Support to develop the research framework as it is more correlated to adopting blockchain technology for zakat institutions in Indonesia. The new proposed model can be counted as a new contribution to the previous researcher and add a new perspective that engages new factors in the world of adoption technology for zakat institutions in Indonesia.

3.2 TAM and Islamic Finance

The technology acceptance model (TAM) has been widely used in studying Islamic finance. Shaikh et al. (2020) examine the determinants that influence bank users' acceptance of Islamic financial technology (FinTech) services by extending the technology acceptance model in the Malaysian context. This study adds consumer innovativeness and self-efficacy to the framework of TAM. Usman et al. (2022) proposes an extended model of TAM by including Shariah compliance, knowledge of Shariah compliance and confidence in Shariah compliance. This study aims to investigate the satisfaction of e-banking in Indonesian Islamic Banking.

Another study by Usman et al. (2022) proposes an extended TAM model in using financial technology (Fintech) in Islamic philanthropy by adding trust, image and religiosity to TAM conceptual framework. This study supports the theory of reasoned action and the TAM. The relationship between perceived ease of use and perceived usefulness with TAM is determined by trust and religiosity. Shaikh et al. (2020) examine the determinants that influence bank users' acceptance of Islamic financial



technology (FinTech) services by adding a new variable of consumer innovativeness into the TAM model in the Malaysian context. This study reveals that Islamic FinTech's service acceptance is determined by perceived ease of use, usefulness, and consumer innovativeness.

From previous studies, there are very few studies about the TAM model for blockchain technology for Zakat institutions. Therefore, this study proposes a framework research model to analyze the acceptance of blockchain technology for zakat institutions using the Technology Acceptance Model (TAM) by adding external constructs, namely trust, regulatory support and shariah compliance in the context of Islamic philanthropy, especially zakat.

4. Methodology

This study is qualitative in nature. It utilized an extensive review of the literature to identify and analyse the relevant studies to propose the conceptual model. The systematic review of the literature proposes new ideas, the discovery of new alternatives, and the development of new hypotheses and research proposals, as noted by Manning (2010).

To perform a systematic literature review, this study examines recent publications on blockchain technology, technology adoption, Fintech adoption, TAM, and Zakat. The article search targeted any scholarly publications. The search uses the university's library database, Google Scholar, and Emerald Insight database for relevant, mainly peer-reviewed articles, using appropriate filters and keywords. From 2015 to the present, the paper focuses on blockchain technology adoption, TAM, Fintech Adoption and zakat. The analytic result of this literature review produces a conceptual framework.

5. Results and discussion

5.1 TAM Core Construct

1. Attitude

Attitude refers to the user's positive or negative feelings toward the new technology as noted by Davis (1989). The theory of reasoned action (TRA) led researchers to find the actual behaviour, the user belief system described as an attitude toward using and exploring things such as a technology system. Behavioural intentions are formed by considering an individual's attitudes toward each of the options in a situation, and it appears that the attitude comparable choice procedure does not reflect the construction of an individual's estimates of whether they would conduct many behaviours as noted by Sheppard (1988). To maintain strong attitude-behaviour correlations, Ajzen (2012) identified a high correlation between predictors and fixed criteria. It has been shown that there is a strong association between attitude and behavioural intention, supported by other research results. It can be concluded that Attitude positively impacts behavioural toward blockchain technology.

2. Perceived of usefulness (PU)

Perceived usefulness is the degree to which a person believes that using a particular technology or system can enhance his/her job performance as noted by Davis (1989). There is a large volume of published studies describing the role of perceived usefulness on usage intention. For instance, Hanudin (2007) discovered that PU is a critical indicator of Malaysians' desire to use mobile credit cards. Blockchain is currently being used in a wide range of industries. If the users believe that blockchain is beneficial to them and can improve their productivity, they are more likely to embrace the technology. Hence, it can be concluded that Perceived usefulness positively impacts attitudes toward blockchain technology.

3. Perceived Ease of Use (PEoU)

Perceived ease of use is "the degree to which a person believes that using technology will be free from effort" as noted by Davis (1989). Perceived ease of use refers to the degree the literature shows that perceived ease of use has a positive effect on perceived usefulness. Kallanmarthodi & Vaithyanathan (2012) argued that PEOU measures an individual's subjective opinion of how easy it is to use a given system. The more user-friendly a system is, the more likely it is that a person will find it beneficial in the future. The easier it is to use blockchain, the more the users perceive it as useful, and therefore the more positive their attitudes towards using blockchain become. Therefore,



it can be concluded that Perceived ease of use has a positive impact on attitude toward blockchain technology and Perceived ease of use has a positive impact on perceived of usefulness toward blockchain technology.

5.2 TAM External Construct

1. Trust

Over the past decade, blockchain has been a major player in the worldwide market and threatens traditional businesses' long-term viability. It is known as a trustful technology, as Albayati, Kim & Rho (2020) noted. Trust refers to consumers' comfort, confidence, and security level when using technologies, according to McCloskey (2006). Trust, security, and privacy are all elements that influence people's willingness to use technology in some way, as stated by Matemba & Li (2018). Trust in a company's products and services can considerably impact the amount of time people spend on the Internet, according to Keen (1997).

In blockchain technology, the first axiomatic issue from the user's perspective is the legality, followed by contextual variables such as the social effect, technology design, and user experiences, as Wunsche (2016) noted. Additionally, trust and risk must be considered. Customers are particularly concerned about blockchain technology's potential for risk. To avoid this, the technology must have sufficient trust in the market to continue moving forward. Protection against negative acts that can be anticipated in advance might provide better protection and monitoring of customer activities to improve their trust. According to Mayer, Davis & Schoorman (1995), trust is also known as customer preparation toward the service provider.

This study's most important finding is that trust significantly influences customer behaviour. When customers have confidence in a provider, they are more likely to switch from one technology or service to another. There was a need for more confidence in blockchain technology until recently. There is a widespread belief that the dangers exceed the rewards, as noted by Wunsche (2016). Another common misconception is that blockchain is difficult to use and maintain. To encourage trust chains, blockchain-based consensus protocols such as proof of stake (PoS) could be used to build trust. The IBM Hyperledger platform is specifically developed for blockchain applications and features a collaborative management system that ensures data confidentiality and user confidence, as Demirkan and p (2020) noted. Hence it can be concluded that Trust has a positive impact on perceived ease of use toward blockchain technology, and Trust has a positive attitude towards the use of blockchain technology.

2. Regulatory Support

Regulatory framework and government support refer to regulatory frameworks established by the government to monitor and ensure that service providers and consumers of technology perform their commitments and prevent infractions, as noted by Albayati (2020). To deal with e-business, monitor service quality, and authorize and deploy new technologies in the country under the control of the government, regulations are essential, according to Peters & Panayi (2016). These regulations ensure that everything goes off without a hitch and that everyone gets treated fairly. The same holds for blockchain technology and cryptocurrencies regarding client behaviour. Regulators are required to prevent or reduce ambiguity from the regulations, as Wunsche (2016) noted. Regulations and instructions issued by the government can impact customers' trust in the technology and their willingness to use it safely. Cryptocurrency growth is beset by numerous issues, such as a need for more government regulation and regulations, as noted by Lu (2018). Policies, laws, and regulations are critical to identifying who is authentic and who is authorized in a blockchain implementation protocol, according to Viriyasitavat & Hoonsopon (2019). According to previous research, this study hypothesised that regulatory support and trust are directly related. Because clients are more trusting of new technology when regulated by the government, the risk is reduced. Therefore, it can be concluded that Regulatory Support positively impacts trust toward the attitude to use blockchain technology.

3. Shariah Compliance

Muslim life is guided by Shariah, which can be referred to as "the way or path" because it includes Islamic norms, concepts, and parameters as noted by Kasim (2012). As the Muslim population and awareness of Shariah compliance grow, it is imperative for businesses to adhere to Shariah principles to meet the needs of their customers according to suhaimi (2008). With Shariah compliance, Muslims can carry out their religious obligations with banks and financial institutions while still adhering to their faith according to Kassim (2012). Blockchain technology can be called shariah compliance if it conforms to Sharia Law: Share Profit and loss, does not include prohibited

business (alcohol, pork, drug, etc.) does not deal with interest on lending and borrowing as noted by Abdulgani & Suhaimi (2014). Kaakeh, Hassan & Almazor (2019) found Shariah compliance affects attitude directly and intention indirectly mediated by the attitude towards Islamic banking. Hence, it can be concluded that Shariah Compliance with Blockchain Technology has a positive influence on the attitudes of zakat institutions towards Blockchain technology and Shariah Compliance with Blockchain Technology has a positive influence on the behavioural intention of zakat institutions to use blockchain technology.

6. Conceptual research framework

Based on the literature review in the previous section, the research model is then shown in figure 2. The model postulates that the TAM model is used to measure the level of acceptance of Zakat institutions towards Blockchain technology. The framework model developed from the basic constructs of TAM theory and the external constructs is Regulatory Support, Trust and Sharia compliance.

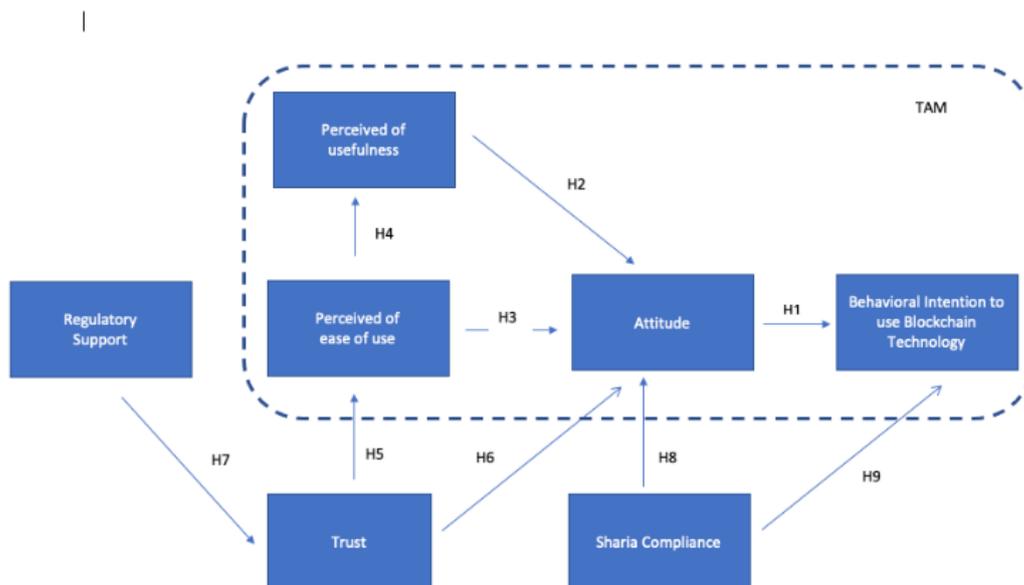


Figure 2. Proposed research framework

Source: Author's elaboration on (Venkatesh et al., 2003)

7. Conclusion, implications, and future research

The purpose of this paper is to propose a research model of blockchain technology acceptance for the Zakat institution. The research model is extended from the basic TAM theory by adding external constructs, namely regulatory support, trust and Sharia compliance which are from a review of the relevant past studies. This paper has several implications for theory and practice.

The theoretical implication of this paper is this study provides theoretical advice for advancing blockchain technology by conducting an early empirical investigation to analyse key technical elements. The Blockchain has been praised as a technology that can efficiently protect privacy. Various studies in the literature on blockchain adoption focus on supply chain users' adoption behaviour. However, few studies examine the effects of blockchain's technical features on user acceptance, especially



in zakat institutions. This study fills this gap in the literature by exploring the relationship between blockchain's technical features and the patterns of adoption behaviour by users, which are zakat institutions.

Another contribution is this study introduces trust, regulatory support and Sharia compliance that affect zakat institution acceptance. Unlike previous studies on blockchain adoption, which focus on users as an individual, this study uses zakat institutions as the users. The practical implication is other researchers and zakat institutions can utilize the information about the influencing factors to accept blockchain technology. This, in turn, would make the zakat institution management and government implement blockchain-based zakat.

However, this study is limited to three constructs in modified TAM concerning adopting blockchain technology and zakat, which can be expanded to different contexts. Because of this, future research could expand our model by incorporating more constructs. This paper is conceptual; therefore, empirical evidence needs to be provided.

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GMM dependency model for Shariah and underlying indices of India during Covid-19 period

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Abstract

The National Stock Exchange of India (NSE) has presented Nifty 50 Shariah and Nifty 500 Shariah indices to provide unconventional indices for Sharia-compliant companies. These indices follow Sharia laws and can be used in portfolios that are culturally dependable commodities for investors who do not wish to put their money into the undesired business. NSE witnessed big movements in the indices during the Covid-19 period. This study seeks to understand the association between Nifty 500 Sharia and Nifty 50 Sharia and their respective selected indexes, Nifty 500 and Nifty 50, during the Covid-19 pandemic. The period from 27/01/2020 to 31/05/2022 has been taken for this study. The techniques applied, like correlation, co-integration, GMM, etc. based on the objectives of this paper. We conclude that the return of Sharia indices is better compared to the other indices. Also, stocks compliant with Sharia Indices are less risky and a better alternative for the portfolio during pandemic times.

Keywords: Shariah Indices; GMM; NSE; Modelling; Covid-19

1. Introduction

A Sharia index is referred to as an index of companies that needs to be compliant with the Sharia law. It focuses on socially responsible investment products of companies and is used as a measurement tool for valuing a section of the stock market. Shariah Board understands the Shariah principles and forms the foundation of Shariah Indices. The constituents of these indices are based on existing indexes screened by the Shariah Board. Investors worldwide are attracted by these products guided by the sharia principle, because they ensure that the investors' money is not used in stock options that are not aligned with Islamic beliefs. Being introduced in the mid-1970s, the Islamic finance industry has grown with numerous achievements in a brief amount of time. The assets in Islamic banking have shown an unexpected increase of 17.6% from 2009 to 2013 every year. Not



only this, growing companies like Ernst & Young predicted an increase of 19.7% by 2018. The sector is further predicted to grow annually by a percentage of 15 to 20, making it one of the quickest-growing sectors in the financial industry. Dow Jones, FTSE, S&P, and Morgan Stanley are some index providers that offer indices compliant with the sharia law to attract investments worldwide. In February 1999, Dow Jones became the first company to introduce the Islamic index. Bombay stock exchange (BSE) and the National Stock Exchange of India (NSE) are responsible for offering Sharia-based indices in India. Furthermore, the Nifty 50 Shariah and Nifty 500 Shariah were introduced by NSE on February 2008 and December 29, 2006, as their base date. With these indices, investors have the option to engage their money in activities that are compliant with Sharia law. In addition to NIFTY50 Shariah and NIFTY500 Shariah, NSE calculates NIFTY Shariah 25. The NIFTY 50 Index is the parent index to NIFTY50 Shariah Index, without any fixed number of companies. Moreover, the parent index, the nifty 50 index, constitutes Sharia-compliant indices. This index is used for various applications, including portfolio benchmarking, index funds, ETFs, and structured product launches. Additionally, Taurus, UTI, Kotak, Reliance, Bajaj Allianz, HSBC, TATAs, etc., are some financial institutions working towards introducing Shariah products in the Indian financial market.

This research paper aims to analyze the selected Sharia indices on different parameters for understanding the various investment options available under Sharia law while referring to the Indian financial market. The findings of this study will be helpful to fund/ portfolio managers in developing suitable portfolios.

2. Literature review

According to Kumar (2022), the Sharia Indices are highly volatile due to being a recent phenomenon and studied only four macroeconomic variables. The author tried to study the relationship between macroeconomic variables and Sharia stock indices. Johansen's co-integration test shows cointegration between interest rate and money supply for only FTSWIND Sharia indices.

Irfan et al. (2021) assessed the pandemic's influence on the Islamic stock markets BSE Shariah (India) and JII (Indonesia). Indian stock market showed a downward slope, while the stock market in Jakarta showed an upward slope after the declaration of the pandemic. This concludes that the efficient market hypothesis is true as the market reacts to information, and bad news has a clear effect.

Ahmad and Ibrahim (2020) compared KLSE Syariah Index with the KLSE Composite Index performance. Risk-adjusted returns were compared using the Adjusted Sharpe, Treynor, and Adjusted Jensen Alpha Index. For both unadjusted and risk-adjusted returns, the performance of these two indexes was similar. This indicates that one index is not superior to another. The author offers the possibility that market participants have not yet recognized the "value" of stocks certified by the Syariah Committee.

According to Jamaluddin (2013), the government of India is taking interest in the Shariah finance business in the country and is showing growth. Prof Rajan's report also contains a paragraph on Islamic Banking which the author has mentioned. Based on these, the author concludes that India is one of the world's potential markets for Islamic finance.

As reported by Arshad & Rizvi (2013), compared to traditional indexes, the Islamic index is subject to radical or short-term effects due to rapid changes in volatility. The author used a wavelet to analyse the selected indices by taking 15 years of data period. The study has a practical impact on the modern financial situation, where Islamic financial assets show steady growth despite the financial crisis.

Ashraf & Deo (2015) discovered the linearity of the Indian Sharia Indexes, CNX NIFTY, CNX500, and S&P BSE TATAS 50, from January 1, 2008, to June 30, 2013. The authors attempted to test non-linear dependence through the BDS test. The results implied that non-stationary and linear dependence don't cause linearity; rather, non-linearity is caused by volatility. The authors state the need for policy regulations for the Sharia market.

Al-Khazali et al. (2014) studied the performance of nine Dow Jones Islamic indexes with nine Dow Jones conventional indexes using stochastic modelling. The period taken is divided into three; from 1996 to 2000, 2001 to 2006 and 2007 to 2012. The period from 1996 to 2012 was also considered.

Syauqi Beik (2011) analysed the performance of JII with other Islamic and conventional stock indexes during the start of the catastrophe period. The data is from January 1, 2006, to December 31, 2008. In the long run, no cointegration and long-term relationship was found between the Indonesian markets and Malaysian markets and the USA however, in the short run, it significantly affects the JII. The author concludes that JII is the least volatile index of all the markets that should be used to attract more investment.



As reported by Charles et al. (2012), which studied the indices of global and local, Islamic indices fluctuate more than conventional indices. Daily data has been taken over 15 years from the Dow Jones Islamic and conventional indexes. ICCS (iterative, cumulative sum of the square) method has been used for analyzed data. The author concluded that variance had been affected in Islamic and conventional indices.

Hassan et al. (2005) investigate the potential effects of Islamic Shariah screening on the performance of Islamic investment portfolios compared to conventional portfolios. Transaction expenses or management fees do not impact their findings because they only look at index funds. They use DJIM databases of 8 years and a range of techniques comparable to those utilized in the current investigation. They come to similar conclusions as we did about the fact that Islamic funds sometimes outperform traditional index funds.

Hassan & Girard (2010) reported in their research that conventional funds outperformed Islamic ones in a bullish market, whereas conventional funds outperformed a bearish tone. In challenging economic times, including Islamic mutual funds in a portfolio helps to reduce downside risk. Islamic and conventional funds represent less than 50% of the market index represented by Kuala Lumpur's proxy for diversification.

Ahmad & Ibrahim (2020) compared the three-year performance of the KLSI and KLCI indexes. They looked at the performance as determined by the risk and return of both indices using a variety of approaches. The t-test for comparing means, the Treynor Index, the adjusted Jensen Alpha, and the adjusted Sharpe ratio (SR) were some of the methods employed. The sample was divided into three parts: the full sample, the growth period during the first year of the 2000 fiscal year, and the decrease period during the two years that followed. The KLSI had poor returns for both the overall and declining eras. However, it marginally outperformed the KLCI during the period of growth, according to a comparison of the raw returns and risks from 1999 to 2002.

Albaity & Ahmad (2008) looked at how KLSI and KLCI did in the short and long term. Our research shows no statistically significant difference between Islamic and traditional stock market indices regarding risk-adjusted returns over seven years. We also use the causality and Johansen cointegration tests to analyse their short- and long-term links. The long-term equilibrium shows that both indices move together in addition to a considerable short-run presence of bidirectional causality. This implies that the direction of KLSI's short- and long-term movement is well predicted by the movement of KLCI. Therefore, making a prediction based on the other is helpful.

Al-Khazali et al. (2014) investigated nine important Dow Jones indexes, including Asia Pacific, Canadian, Emerging Markets, US DJI, and others, to compare the performance of Islamic stock indices and that of their conventional counterparts. The study used a stochastic dominance analysis technique with data from 1996 to 2012. The study shows that, except for the European market, conventional indexes statistically outpace Islamic indices. However, globally, European and US Islamic indices outperformed their traditional equivalents throughout the financial crisis of 2007–2012. According to the study, Islamic indexes performed better than their traditional counterparts throughout the financial crisis.

In their study Abdullah et al. (2013) assessed the degree to which the Asian stock market fluctuates in response to intra-regional influences by analyzing the long- and short-term interconnections between the international and Asian emerging stock markets. It was determined that the United States controls other markets in both the short- and long-term on a global scale. Moreover, the established OECD and the growing Asian countries have significant long-term and short-term interactions. Regionally, the data indicate that Hong Kong plays a significant role in Southeast Asia. They are compatible with the "contagion effect" theory, which states that Asian markets are better described by their regional markets than by developed markets.

Over the course of four years, Ul Haq (2013) analyzed daily data from the Sensex and the BSE's Shariah 50 indexes to make a comparison between traditional and Shariah indices in the context of the Indian stock market. This paper uses some statistical methods, including a Granger causality test, a wavelet analysis, and cointegration. The findings indicate that there is long-term cointegration between the two indices, as well as a two-way flow of information.

In their study Biancone & Radwan (2016), assess the compliance of European businesses to Sharia Law. The authors conclude that their findings have shown a good opportunity for businesses to move towards the principle of Islamic finance. The authors also mention the qualitative and quantitative challenges towards this step, the qualitative being related to certifications and the quantitative being related to debt-structuring models.

Bollani & Chmet (2020) have conducted a bibliometric analysis of the publications related to Islamic Finance. This study helps to determine the direction the research in Islamic finance is moving. The authors see an increasing research interest in Islamic finance. The literature mainly focuses on "banking, rates, comparisons with traditional banks and portfolios, analysis of governance and control structures".



According to Siddiqui & Rizvi (2022), Copula's results suggest that Sukuk have strong dependency whether Shariah complaint indices have less dependency in the pre-crisis period. But MENA Sukuk and Nifty Shariah 50 showed an upsurge with a great margin during Covid-19. It also shows that GCC Sukuk and Nifty Shariah 50 are optimistically correlated in the context of their returns. GARCH results reveal the asymmetric co-movements for gains and losses. At last, the outcomes reveal higher and lower tail dependency among the Sukuk and Shariah markets. The results vary due to period variation of copulas, which shows dependence differentiation over time for all samples.

Siddiqui & Sheikh (2016) examined the effort to comprehend better the investments to be made in Shariah Indices, an analysis of the selected Shariah indices with the underlying indices on several factors has been done. They used the 3SLS and GMM tools for analysing the data over the period of 8 years. They used NSE and NSE Shariah indices. As a result, there is no cointegration between the underlying and shariah indices. The market for financial assets based on Shariah is expanding. This work represents a significant advancement in creating optimal portfolios that include assets from Shariah indexes.

In his study, Abbas (2012) attempted to find out the relationship between the shariah and conventional indices based on risk and return. He used the EGARCH to find the effect of risk in indices. Also, the CAPM and Sharpe ratio was used to find the return and difference between the Shariah and conventional indices. He took ten years of data to achieve the objectives of the study. The study concluded that there is no relationship between the conventional and shariah indices at risk, return, and performance-based; they are not affected by each other.

The literature review provides different and contradictory results in connection with various indices of different countries. As a result, it is impossible to portray a consistent relationship between Shariah and conventional indices. Earlier studies used techniques, including VAR, CAPM, ordinary least square, impulse response, DCC-GARCH, Granger causality, Treynor ratio, Jensen alpha, cointegration test, and others have been employed in earlier investigations. Still, we found that they have not used GMM.

Adding the advanced model Generalized Method of Moments is vital to the current study (GMM). Additionally, Simultaneous Equations (SE) are used, as the researcher did not use SE and advanced modeling approaches in earlier studies on the Shariah indices and NSE.

The present study is expected to answer the problem statement of what could be the change in dependency structure between Shariah and underlying indices in a pandemic period like covid -19.

Therefore, it is necessary to use sophisticated models to investigate whether the Shariah and underlying indices are related to the National Stock Exchange of India.

3. Research methodology

3.1 Data

This study is empirical and causal in nature. It is based on secondary data sources. Data has been taken from NSE, India's largest stock exchange. Since NSE has the highest turnover, it is justified to use it in the current study in the context of India. For the current study, the Shariah indices include the Nifty 500 Shariah and Nifty 50 Shariah, while the Nifty 500 and Nifty 50 are Underlying indices. The official website of NSE has been used to collect the indices' daily closing price data from 27/01/2020 to 31/05/2021.

3.2 Empirical framework

Statistical techniques used in this research include an empirical framework for measuring co-movement. Further, descriptive statistics have been used for analyzing the potential return and risk of the indices. Secondary data analysis, including Unit Root Test, Cointegration Test, GMM estimation, have also been employed for further analysis and hypothesis testing. The more standard methods like the Unit Root Test and Cointegration Test, OLS, when applied in the system equation environment. This is because it makes the use of an instrumental variable (IV) procedure for estimation in a consistent manner; the same is absent in OLS. Not only this but the standard errors are also reduced without requiring any known distribution of errors which is necessary while using OLS. GMM also works efficiently because it ensures that the endogeneity problem does not occur. The



endogeneity bias occurs when an independent variable is found to be correlated with an error term of the regression model. Ordinary Least Squares (OLS) might involve biased regression coefficients.

SN	Indices	Symbol	Log differenced
1	Nifty50	N	DN
2	Nifty50 Shariah	NS	DNS
3	Nifty 500	N5	DN5
4	Nifty 500 Shariah	NS5	DNS5

Table 1. Indices
Source: Authors' elaboration

3.3 Objectives of the study

The study aims to build efficient models for advising stakeholders and assessing the returns and volatility of NSE Sharia indices relative to their underlying indices. To achieve this broad purpose, the following specific study objectives are highlighted:

1. To compare the volatility of the Nifty 50 and Nifty 500. Nifty50 Shariah, Nifty500 Shariah.
2. To create a cointegrate model of the Nifty 50 and Nifty 500. Nifty50 Shariah, Nifty500 Shariah.
3. To understand the model between the effect of Shariah and Nifty 50, Nifty 500. Nifty50 Shariah, Nifty500 Shariah over each other.
4. To model the returns of Shariah and Nifty 50, Nifty 500. Nifty50 Shariah, Nifty500 Shariah.

3.4 Hypotheses

- H01 = Shariah has a lower standard deviation than the underlying indices.
H02 = Shariah, and the underlying indexes are not co-integrated over the long run.
H03 = Shariah indices and the conventional indices are not related in any way.
H04 = Nifty 500 does not significantly affect the return of Nifty 500 Shariah.
H05 = The return of the Nifty 500 is not significantly influenced by the Nifty 500 Shariah.

4. Results

4.1 Descriptive statistics

Descriptive statistics reflect the fundamental characteristics of a variable. Table 2 shows that the Nifty 500 index has a mean return of 0.079252, which is more profitable than other indices. Here, we may observe an intriguing fact: compared to its underlying stock market index concerning the mean return, the Nifty 500 Shariah is a superior investment option. Concerning risk, the Nifty 500 Shariah is also the slightest unpredictable stock market index. The 1.62% and the Nifty 50 1.54% are considered the highest-volatility indexes.



	<u>DN</u>	<u>DN5</u>	<u>DNS</u>	<u>DNS5</u>
Mean	0.054668	0.585943	0.079252	0.070640
S.D	1.541837	5.347535	1.302763	1.623542
Skewness	-1.086919	-2.527403	-1.481654	-0.408204
Jarque-Bera	3412.130	4583.059	5379.772	11183.31
Probability	0.00000	0.00000	0.0000	0.0000

Table 2. Descriptive statistics
Source: Authors' elaboration

It is seen in the descriptive statistic that the mean return is higher in the case of Nifty 50 and Nifty 50 shariah but contradictory results in the nifty 500 and Nifty 500 shariah which is higher in the underlying index. This shows that with larger base shariah index may give a lower return. Sharia indices have a lower level of volatility than their equivalent underlying indices. These returns have a lower standard deviation than those on the other investments. Compared to the Nifty 50 and Nifty 50 Shariah indices, the Nifty 500 and Nifty 500 Shariah indices exhibited a larger chance of a significant return decline. Additionally, the null hypothesis of normality is not confirmed by the Jarque-Bera test.

4.2 Correlation

There is a relationship between the returns on the Nifty 50, the Nifty 50 Shariah, the Nifty 500, and the Nifty 500 Shariah. Correlation analysis is the quickest and most straightforward method for assessing an indicator's predictive power. All indices are significantly associated with one another, as evidenced by the correlation values ranging from 0.1096 to 1.000 (Table 3).

	<u>D_N</u>	<u>D_N5</u>	<u>D_NS</u>	<u>D_NS5</u>
D_N	1.000	0.3583	0.3506	0.3099
D_NS	0.3506	0.1569	1.000	0.7916
D_N5	0.3583	1.000	0.1569	0.1096
D_NS5	0.3099	0.1096	0.7926	1.000

Table 3. Correlation analysis
Source: Authors' elaboration

4.3 Unit root test

Since stationarity is required for modelling and non-stationarity is a need for co-integration, the stationarity of the variable is examined using the unit root test. We opted to use the Augmented Dickey Fuller (ADF) test to analyze the unit root in the data from the study. If there is a unit root in the Nifty 50, Nifty 50 Shariah, Nifty 500, and Nifty 500 Shariah indices, or if the data are not stationary, then the null hypothesis (H_0) is confirmed to be correct.

Given that the probability values are more than 5% for all variables, the null hypothesis is accepted at level. In the case of the Nifty 50, the Nifty 500, and the Nifty 500 Shariah, each variable either possesses unit roots or is non-stationary at the level of the index. After accounting for the initial discrepancy, the variables have become more stable.

4.4 Johansen Co-integration test:

The Johansen Co-integration test is utilized so that the long-term co-movement of the indices that are being looked at can be measured. In this test, there are two statistics - trace and maximum Eigen value - to identify the number of equations that demonstrate the existence or non-existence of co-integration.

The hypothesis is accepted and that there is no cointegrated equation. This is in accordance with the null hypothesis that there is no equation ($r=0$), indicating that there is no cointegration among the variables. The outcome of this investigation also



demonstrates that the trace statistics (25.02992) are below the critical value (24.27596) and that the probability is 0.0401, which is over the significance level of 5%.

No. of CE(s)	Hypothesized		Trace	0.05
	Eigenvalue	Statistic	Critical Value	Prob**
None	0.045484	51.93622	40.17493	0.0022
At most 1	0.031281	25.02992	24.27596	0.0401
At most 2	0.011222	6.660781	12.32090	0.3602
At most 3	0.000238	0.137844	4.129906	0.7593

Table 4. Unrestricted Cointegration Rank Test (Trace), Johansen Co-integration test, Series: N NS N5 NS5
Source: Authors' elaboration

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
**denotes rejection of the hypothesis at the 0.05 level*
***Mackinnon-Haug-Michelis (1999) p-values*

Hypothesized	Max- Eigen			0.05
	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.045484	26.90630	24.15921	0.0207
At most 1	0.031281	18.36914	17.79730	0.0410
At most 2	0.011222	6.522937	11.22480	0.2940
At most 3	0.000238	0.137844	4.129906	0.7593

Table 5. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)
Source: Authors' elaboration

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level.
** Denotes rejection of the hypothesis at the 0.05 level*
***MacKinnon-Haug-Michelis (1999) p-values*

When we tested the hypothesis for $r=2$, $r=3$, and other numbers of equations. This was the same conclusion that we came to when we tested the hypothesis for other numbers of equations. The conclusion that the indices are not co-integrated is reached because of this, which leads to the acceptance of the null hypothesis.

The findings of the second statistic, a test known as the Max Eigen value test, are consistent with the conclusion that $r = 0$ is true. As a result of the fact that the critical value, 24.15921, is lower than the maximum statistical value, 26.90630, and the probability, 0.0207, is lower than 5 percent, it can be concluded that the null hypothesis is correct. According to the similar results that we obtained, which support the null hypothesis, the Max Eigen values are less than the critical values. This indicates that the null hypothesis is correct.

As a result, the test reveals that there is no co-integration or long-term link between the indices, which translates to the conclusion that they do not ultimately move in tandem with one another.

4.5 Granger Causality test

Since there is no causation between the series, the Null Hypothesis (H_0) is chosen to examine Granger causality. The results of below Table show that there is no correlation between the returns of the Nifty 50, Nifty 50 Shariah, Nifty 500, and Nifty 500 Shariah. This is because each series has a Granger causal probability value greater than 5%.



Null Hypothesis:	Obs	F-Statistic	Prob.
D_N5 does not Granger Cause D_N	581	0.96011	0.3835
D_N does not Granger Cause D_N5	581	2.21204	0.1104
D_NS does not Granger Cause D_N	581	56.3929	4E-23
D_N does not Granger Cause D_NS	581	1.05639	0.3484
D_NS5 does not Granger Cause D_N	581	133.530	2.E-48
D_N does not Granger Cause D_NS5	581	2.37319	0.0941
D_NS does not Granger Cause D_N5	581	54.3795	2.E-22
D_N5 does not Granger Cause D_NS	581	0.91786	0.4000
D_NS5 does not Granger Cause D_N5	581	166.641	8.E-58
D_N5 does not Granger Cause D_NS5	581	4.03665	0.0182
D_NS5 does not Granger Cause D_NS	581	18.9745	1.E-08
D_NS does not Granger Cause D_NS5	581	1.78675	0.1684

Table 6. Granger Causality test
Source: Authors' elaboration

4.6 GMM Estimation:

We apply the Generalized Method of Moments (GMM) estimation to this model. We offer estimations based on methods to confirm the reliability of our findings.

Equations used are as under:

$$\begin{aligned} d_{ns} &= \alpha_1 + \beta_1 * d_n + \beta_2 * d_{n5} + \beta_3 * d_{ns5} \\ d_{ns5} &= \omega_1 + \beta_4 * d_n + \beta_5 * d_{ns} + \beta_6 * d_{n5} \\ d_n &= \vartheta_1 + \beta_7 * d_{ns} + \beta_8 * d_{n5} + \beta_9 * d_{ns5} \\ d_{n5} &= \rho_1 + \beta_{10} * d_n + \beta_{11} * d_{ns} + \beta_{12} * d_{ns5} \end{aligned}$$

When it comes to choosing the Nifty 50, the GMM model suggests that none of the three independent indices—the Nifty 50 Shariah, the Nifty 500 Shariah, and the Nifty 500 Shariah—are significant. It is not possible to use the terms Nifty 50, Nifty 500, or Nifty 500 Shariah to refer to the same thing as Nifty 50 Shariah. When systems equations are used to estimate the returns of Nifty 500 Shariah as well as to calculate Nifty 500, the Nifty 500 Shariah index is simply a relevant index that may be used.

Dependent	Endogenous	Coefficient	Std. Error	t-Statistic	Prob.	
α_1	d_n	C	208.2922	47.28753	4.404803	0.000
β_1	d_{n5}		1.439370	0.018205	79.06637	0.000
β_2	d_{ns}		2.632514	0.073837	35.65328	0.000
β_3	d_{ns5}		-2.885665	0.069294	-41.64378	0.000
ω_1	d_{n5}	C	-130.0703	34.85340	3.731925	0.002
β_4	d_n		0.687071	0.009240	74.35628	0.000



β_5	d_{ns}		-1.796664	0.060997	-29.45489	0.000
β_6	d_{ns5}		2.004195	0.039838	50.30854	0.000
ϑ_1	d_{ns}	C	-30.07721	24.33754	-1.235836	0.2170
β_7	d_n		0.363476	0.010465	34.73143	0.000
β_8	d_{n5}		-0.520310	0.018152	-28.66398	0.000
β_9	d_{ns5}		1.075798	0.023147	46.47776	0.000
ρ_1	d_{ns5}	C	30.05649	21.27050	1.413060	0.1582
β_{10}	d_n		-0.334977	0.008347	40.13316	0.000
β_{11}	d_{n5}		0.487673	0.009794	49.79307	0.000
β_{12}	d_{ns}		0.903603	0.020811	43.41874	0.000

Table 7. Estimation Method: Generalised Methods of Moments
Source: Authors' elaboration

5. Conclusion and implication

The study focused on developing an efficient model which could forecast the returns of Shariah indices with its selected indices. During Covid-19, Shariah indexes show lesser volatility as compared to the underlying indices, which means they are a better investment as compared to conventional indices. Although the Nifty 500 is the most profitable index, the Nifty 500 Shariah is the better investment option as it offers the least risk among the underlying indices as offer the least volatility. The high positive correlation value shows the interdependence of all the selected indices. However, there is no cointegration and causal relationship between the underlying indices, as shown by various tests conducted on the data. Indices based on Shariah are gaining popularity all over the world due to less risk and less volatility as compared to conventional indices.

. Cause-and-effect analysis of the indices did not show any significant relationships among the returns of indices. It is also crucial to note that GMM model revealed that only two variables, Nifty 500 Shariah and Nifty 500, were found to be significantly impacting one another as system equations.

<u>Hypothesis</u>	<u>Accepted/rejected</u>	<u>On the basis of results</u>
H01	Accepted	lower standard deviation in shariah
H02	Rejected	no cointegration
H03	Accepted	no cointegration
H04	Rejected	Nifty500 shariah is significantly influence while Nifty500
H05	Rejected	Nifty500 is significantly influence while Nifty500 shariah

Table 8. Hypothesis summary
Source: Authors' elaboration

Sharia-based financial assets are gaining exceptional growth in the financial market. The study adds value to such market investments guiding optimal portfolio management consisting of sharia indices products. Results of the study are a guide to fund managers for strategically diversifying their portfolios while being compliant with the sharia law. Since the study The goal of diversification is also achieved because there is no short- or long-term causation. Furthermore, sharia indices can serve the purpose of offering optimum portfolio since they are relatively lesser risky.



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Halal tourism: a web content analysis in Italy

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Abstract

Due to the increase in the Muslim population and per capita income worldwide, halal tourism and Islamic finance sectors have caught a rapid development trend in recent years. This study presents information about halal concept hotels in Italy, a European country where halal tourism offer is an emerging sector. In this study, interview and web content analysis, which are qualitative research techniques, were used. The study's main purpose is to give preliminary information about the halal products and services offered in Italy, one of the most preferred countries by Muslim tourists, to reveal the current situation of halal concept hotels and the evaluations for the future of halal tourism in Italy. According to the research results, over 800 hotels across Italy have at least one halal product or service. Although Lazio is the region with the highest number of halal hotels, the most common halal hotel group is 4-star hotels. Italy has 194 halal-concept pools and beach facilities for women and families. Among the facilities halal-themed hotels offer tourists are prayer areas, halal food, alcohol-free rooms and family privacy.

Keywords: Halal tourism; Islamic Tourism; Italy; Halal-concept hotels; Muslim tourists

1. Introduction

In recent years, there has been a significant increase in halal and Islamic products in the tourism and financial sectors due to the increase in the Muslim population and per capita income worldwide (Muheramtohadhi & Fataron, 2022). Europe is one of the regions where the Muslim population has increased the most. The increase in the Muslim population in Europe has important social, cultural, and economic consequences. Halal food has increased demand for products and services, including travel and finance (Gunduz, 2023).

There are many comprehensive studies on Muslim countries in halal tourism (El-Gohary, 2016; Gunduz & Topaloglu, 2021; Jaelani, 2017; Sulong, Abdullah, & Chowdhury, 2022). However, studies on halal tourism in non-Muslim countries are limited (Aji, Muslichah, & Seftyono, 2021). In this study, it is aimed at answering the question of how halal tourism can develop in a



non-Muslim country. In this context, preliminary information about halal products and services offered in halal concept hotels in Italy, one of Muslim tourists' most preferred destinations, will be presented.

The study will use qualitative research techniques, including interviews and web content analysis, to answer the research question. Thus, in-depth information will be obtained from a leading travel agency's sales and marketing department in online halal hotel reservations to collect data on halal food services, non-alcoholic areas, hotel ratings and types, geographical distribution and leisure activities for ladies and families. These obtained data will be categorized and interpreted in the findings section. Finally, in the conclusion part, evaluations will be made on the future of halal tourism in Italy.

This study provides theoretical and practical information about the products and services offered by halal-themed hotels in Italy. Theoretically, the conformity of the products and services offered by such hotels with Islamic laws and customs gives an idea about Islamic law and traditions. In addition, considering that such hotels are not only for Muslim customers but are also visited by people from other cultures, it draws attention to intercultural communication and harmony issues. In practice, determining the current situation of halal hotels and their services in Italy will give an idea to investors who will enter this sector. The fact that such hotels provide services designed according to the needs of Muslim tourists and comply with Islamic rules can increase the number of tourists by making their holidays more enjoyable. In addition, emphasizing the importance of halal certification in the tourism sector can help create new job opportunities in this field. In this context, this study provides an important opportunity to raise awareness about halal tourism in Italy and meet the needs of Muslim tourists in the tourism sector.

This study focuses on a literature review of the concept of halal tourism and the challenges of halal tourism in non-Muslim countries. Halal tourism can be defined as an understanding of travel per Islamic traditions. This type of tourism includes travel destinations where halal food is offered, places of worship following Islamic traditions are available, and Islamic values are respected. Halal tourism has become popular worldwide, especially in recent years, due to the increasing number of Islamic tourists. However, halal tourism in non-Muslim countries faces different challenges. These challenges include local service providers' need for knowledge and skills, inadequate local services, and the availability of suitable halal food. This study aims to raise awareness of halal tourism in non-Muslim countries among researchers and tourism industry stakeholders in the field of halal tourism.

The paper proceeds as follows. The next section provides a theoretical overview of halal tourism definitions and characteristics. Additionally, challenges in non-Muslims will be then defined. Section 3 will define the methodological workflow followed by the research team. Section 4 will provide the results of our study. Finally, section 5 discusses and concludes the analysis.

2. Literature review

2.1 Background and definitions

Halal tourism refers to activities that supply Muslim travellers' needs by providing services and facilities that comply with Islamic law, such as halal food, prayer facilities, and accommodations (Carboni & Idrissi Janati, 2016; Secinaro & Calandra, 2021). This type of tourism is becoming increasingly popular among Muslim travellers who seek to balance their faith-based requirements with their desire to explore new destinations and cultures. According to the (Mastercard-Crescent Rating, 2022) index, the Muslim travel market is projected to reach 230 million travellers by 2026, with a total expenditure of USD 300 billion. This indicates a significant potential for growth in the halal tourism industry, estimated 10% of the global travel market. This will foster the contribution to developing the tourism industry in Muslim-majority and non-Muslim countries (Mohsin, Ramli, & Alkhulayfi, 2016). The facility of halal tourism services provides Muslim travellers' needs and promotes cultural exchange and understanding between different communities (Carboni & Idrissi Janati, 2016). This is particularly relevant in the current global context, where there is a need for more inclusive and sustainable tourism practices (Biancone, Secinaro, Brescia, & Calandra, 2020; Rosato, Caputo, Valente, & Pizzi, 2021). Halal tourism can also positively impact the economy by creating new job opportunities and supporting small and medium-sized enterprises (Budiman, Mustahal, & Basit, 2022).

One of the main features of halal tourism is the provision of halal food, which refers to food prepared by Islamic dietary laws and certified alongside the supply chain (Henderson, 2016a). It includes meat from animals slaughtered in a specific way and avoiding pork and alcohol. Halal tourism also requires accommodation free from prohibited elements, such as alcohol, and provides prayer facilities for Muslim travellers (Othman, Ahmad, & Zailani, 2009; Tan, Ali, Makhbul, & Ismail, 2017). Additionally, activities should be aligned with Islamic principles and values. For instance, tourism activities and locations should avoid gambling and nightclubs (Wardi, Abror, & Trinanda, 2018). Instead, halal tourism activities focus on cultural and heritage experiences and religious tourism, such as visiting historical mosques, Islamic centres, and other religious sites abroad (Ekka, 2023).



2.2 Halal tourism characteristics

As mentioned, this is a dedicated tourism segment important for Muslim travellers and the tourism industry. For travellers, halal tourism provides a way to travel while adhering to Islamic principles and values. However, for the tourism industry, this means creating dedicated services for Muslims. This can be particularly difficult in non-Islamic countries where halal services are less widespread, and in some cases, there are also cultural constraints (Wibawa, Pranindyasari, Bhawika, & Mardhotillah, 2023).

In general, halal tourists pay a lot of attention to food, which may or may not make them agree to leave for a new destination. For example, as indicated by (Henderson, 2016b), halal certification is a strong element in the food supply when travelling abroad for Muslims. Therefore, the presence or absence of halal food (with certification) is an element that brings a strong competitive advantage to the destinations chosen at the departure stage. In addition, tourists at the booking stage might consider the services offered by accommodation facilities. These include elements such as the presence of the Koran in the rooms, the absence of alcoholic beverages in the minibar, on-demand room systems not programmed to receive adult-only channels, the presence of cosmetics and toiletries without food or alcoholic substances or even the presence of prayer rugs and a compass indicating Mecca in the rooms (Biancone, Secinaro, Radwan, & Kamal, 2019; Muharam & Asutay, 2019). In addition, according to (Battour & Ismail, 2016), the indoor or outdoor presence of prayer rooms may also be a feature Muslim tourists seek. Furthermore, according to (Battour & Ismail, 2016). The existence of pools, spas or beaches reserved and divided between men and women can be a decision driver for Muslim tourists, especially those with high spending power.

In recent years, scientific studies have also shown case studies of using technology to enable halal tourist enjoyment (Battour & Ismail, 2016). This is the case of the (Royal Thai Embassy, 2015), which indicated how the Tourism Authority of Thailand (TAT) officially announced the launch of its first App designed specifically for Muslim visitors to facilitate access to Muslim products, services, and facilities throughout Thailand. Finally, airports and package tours are the last two strategic elements for attracting halal tourists. The case of airports (Battour & Ismail, 2016) show how a Muslim-friendly airport is often considered a starting point to promote and market the destination as halal. This includes halal food inside the facility and dedicated prayer rooms. Finally, tourist packages sold in halal countries and to non-halal destinations are potentially important for promoting an entire regional territory. Table 1 below summarises the characteristics presented here.

Halal tourism characteristics	References
Food (halal certification)	(Secinaro & Calandra, 2021)
Accommodation	(Biancone et al., 2019; Muharam & Asutay, 2019)
Pool, spas and beaches	(Battour & Ismail, 2016)
Applications for smartphones and tablet	(Battour & Ismail, 2016; Royal Thai Embassy, 2015)
Airports	(Battour & Ismail, 2016)
Prayer rooms	(Mohsin et al., 2016)

Table 1. Halal tourism characteristics

Source: Authors' elaboration

2.3 Halal tourism challenges in non-muslims countries

Halal tourism faces several challenges, particularly for Muslim travellers when travelling to non-Muslim countries. These challenges, as previously mentioned, include finding halal food and prayer facilities, ensuring that accommodations and transportation are by Islamic values, and navigating cultural and language barriers. These challenges can be daunting for Muslim travellers, especially those unfamiliar with the local customs and traditions of the places they visit. This can lead to isolation and disconnection, making it difficult for them to enjoy their travel experience fully (Rasul, 2019).

Despite these challenges, there are also opportunities for halal tourism to promote cultural exchange and understanding. By providing for the needs of Muslim travellers, halal-friendly destinations and accommodations can create a welcoming and inclusive environment that promotes cross-cultural interactions (Vargas-Sánchez & Moral-Moral, 2019). This can help break down cultural barriers and stereotypes and foster a greater appreciation and understanding of different cultures and religions. Halal tourism can also provide an opportunity for non-Muslim travellers to learn more about Islamic values and practices and to develop a greater respect for the beliefs and traditions of Muslim communities. (Sulong et al., 2022)

Furthermore, halal tourism has the potential to generate economic benefits for both the tourism industry and local communities (Jia & Chaozhi, 2019). By addressing the needs of Muslim travellers, the tourism industry can tap into a growing and profitable market segment. In addition, halal tourism can promote economic development in local communities by creating



jobs and generating income for local businesses. This situation is described by (Nurdiansyah, 2018) through a case study in Thailand demonstrates how the tourism sector plays a strategic role in supporting the development of an economic sector by increasing foreign exchange and related incomes.

3. Methodology

In addressing our research aims and question, we use a qualitative approach. It typically involves collecting data through interviews, observation, and document analysis and analysing the data using content analysis and thematic analysis (Bhattacharya, 2017). Additionally, as suggested by (Britten, 1995), a qualitative study is a powerful tool for exploring complex, nuanced phenomena that cannot be easily captured using quantitative methods alone. One of the key power elements of qualitative research is its ability to generate rich, detailed data that captures the experiences, perspectives, and meanings that participants attach to their social world (Braun, Clarke, Boulton, Davey, & McEvoy, 2020). These data can be gathered through various methods, including interviews, focus groups, observations, and document analysis (Biancone, Secinaro, Marseglia, & Calandra, 2021). Furthermore, a qualitative study ensures flexibility and adaptability (Dal Mas et al., 2020). Unlike quantitative research, which typically uses standardized measures and procedures, qualitative research allows for a more fluid and iterative approach. Researchers can modify their research questions and methods in response to emerging themes and insights and use data to generate new hypotheses or explore unexpected findings. This allows for a more nuanced understanding of complex phenomena and can lead to new and innovative insights (Secinaro, Calandra, Cappa, & Bignamini, 2020). Additionally, qualitative research is well-suited to interdisciplinary and collaborative approaches, as it can draw on a range of theoretical and methodological perspectives to address complex research questions.

Within the scope of the study, a leading travel agency in the field of online halal hotel reservations is discussed using the case study method. The data used in the study were obtained by using the interview technique with the sales and marketing department of the travel agency and obtaining the necessary permissions (Gertsen & Söderberg, 2011). Interviews are a widely used data collection technique in qualitative research. This technique allows the researcher to gain in-depth information about his subject (Allan & Skinner, 2020). These are performed in an unexplored case study of halal tourism adoption in a non-Muslim country such as Italy.

In addressing our research aims, six questions were asked of the manager of the leading travel agency for 95 minutes of interview:

1. What hotels on your website offer halal food services?
2. How many of the hotels on your website have non-alcoholic areas?
3. How is the distribution of the hotels on your website according to the number of stars?
4. What is your website's distribution of accommodation businesses according to their types?
5. How is the distribution of the hotels on your website according to the geographical regions of Italy?
6. What are the leisure activities for ladies and families at the hotels on your website?

After the interview phase, the elements gathered are transcribed by a multidisciplinary team consisting of assistant professors and researchers with proven experience in qualitative research.

Finally, as indicated (Silverman, 2020), the interview allowed viewing additional materials supporting the research protocol, such as paper and computer databases, historical performance reports and internal procedure documents. Therefore, in addition to the interview, the research team was provided with a holistic information set based on the evidence collected and paper documents that were subsequently analysed, allowing for the integration of the concepts under analysis. Among these, also (HalalBooking, 2022) and (Halal Trip, 2023) as the two widely adopted platforms for booking halal tourism experiences worldwide.

4. Results

With the importance of halal tourism, the demand for halal-friendly accommodation options has also increased. With its diverse cultural heritage and picturesque natural beauties, Italy has started meeting halal tourism's needs. Responses from the tourism industry in Italy to the growing demand for halal food services, non-alcoholic areas and halal-concept hotels are presented in this section. In addition, various aspects of halal tourism in Italy are examined, including the different types and regional distributions of halal concept accommodation establishments and leisure activities for women and families. In this part of the study, some data from the online travel agency (HalalBooking, 2022), which is discussed within the scope of the case study, are presented in tables and graphics.



Table 2 provides information about the halal food services of hotels displayed in the online travel agency. As can be seen, the number of hotels with halal food nearby is 729, and the number of hotels that can provide halal food upon request is 243. In addition, some foods offered by 50 hotels are considered halal. The number of hotels where all of their meals are halal is 15. In some hotels, halal food and halal food can be found in the food and beverage establishments in the vicinity.

Halal food	Number
All halal food	15
Some Halal Food	50
Halal food on request	243
Halal food nearby	729

Table 2. Halal food services for hotels
Source: Authors' elaboration

Hotels with non-alcoholic areas are shown in Table 3. According to this, 728 hotels have non-alcoholic rooms. Alcohol is not served in facilities other than 202 hotel categories (such as villas, pensions, and chalets). 16 hotels are completely alcohol-free. Although some hotels do not serve alcohol, non-halal food such as pork may be available.

Alcohol-free Areas	Number
Alcohol-free property	202
Alcohol-free restaurant	16
Alcohol-free room	728

Table 3. Alcohol-free areas
Source: Authors' elaboration

Table 4 shows the halal concept hotels in Italy according to the number of stars. While determining these hotels, the hotels listed in the relevant online travel agency and offering one or more halal products or services to the tourists are included in this table. The group with the highest number of halal hotels consists of 359 hotels (44%) with 4-star hotels. 3-star hotels are in second place with 218 hotels (26%). In third place is non-star hotels with 134 (16%) establishments. These businesses are small-scale accommodation facilities such as hotels, motels, apartments, and hostels. Five-star halal hotels rank fourth on the list. Five-star hotels are followed by 1-star hotels (3%) with 23 hotels and 2-star hotels (2%) with 18 hotels.

Stars	Number
*****	76
****	359
***	218
**	18
*	23
Unrated	134
Total	828

Table 4. Halal concept hotels in Italy, according to the number of stars
Source: Authors' elaboration

Table 5 shows the distribution of halal concept accommodation businesses according to their types. Accordingly, hotels with stars constitute the largest group with 670 (84%) facilities. In this group, there are halal concept hotels with at least 1 star and a maximum of 5 stars. In second place, there are 42 guesthouses. The ratio of guesthouses among total accommodation establishments is 5%. There are 25 apart-hotels (3%) in third place. Ski Hotels is the group with the lowest halal concept business. Some of the ski hotels are only open during the winter season, which may have caused this number to be low. The



reason for the low rates of facilities other than hotels is thought to be the fact that many of these facilities are not registered online.

Property type	Number
Hotel	694
Guest house	42
Apart Hotel	25
Inn	21
Villa	11
Country House	11
Honeymoon House	7
Resort	6
Apartment	4
Townhouse	4
Ski Hotel	3
Total	828

Table 5. Distribution of halal concept accommodation businesses according to their type

Source: Authors' elaboration

Italy has 20 administrative regions, five of which are constitutionally autonomous (Eurostat, 1999). When the regional distribution of halal concept hotels in Italy is examined, it is seen in Table 6 that the region with the most halal hotels is Lazio (338). It is thought that most halal hotels are concentrated in this region because it is in the "Lazio" region of Rome, the capital of Italy. After Lazio, most halal hotels are in Tuscany (109). Florence has the region's highest concentration of 4- and 5-star halal hotels. The Veneto (103) region, located in the geographical region of northeast Italy, comes in 3rd place on the list. The capital city of this region is Venice, whose population exceeds 4.9 million (European Statistical Office, 2019). Veneto, respectively; Lombardy (98), Campania (59), Sicily (35), Apulia (22), Liguria (19), Sardinia (12) and Piedmont (10) regions follow. There are 23 halal concept hotels in 10 regions other than these regions.

Locations	Number
Lazio	338
Tuscany	109
Veneto	103
Lombardy	98
Campania	59
Sicily	35
Apulia	22
Liguria	19
Sardinia	12
Piedmont	10
Other Regions	23
Total	828

Table 6. Regional distribution of halal concept hotels in Italy

Source: Authors' elaboration

The map in Figure 1 below shows the regional distribution of halal hotels in Italy. Regions with a high concentration of halal hotels are shown in dark red, while regions with a sparse distribution are shown in light yellow. It is seen that the density of halal hotels is higher in the western regions of Italy.

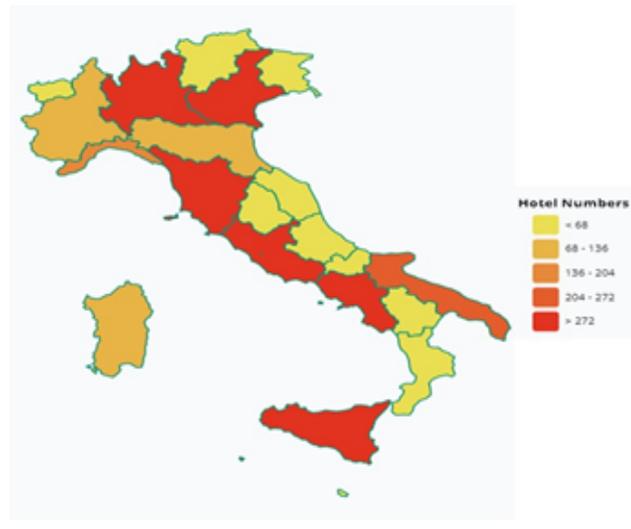


Figure 1. Regional distribution map of halal hotels in Italy
Source: Authors' elaboration

Figure 2 contains pieces of information about leisure activities for ladies and families in halal hotels. There are a total of 194 halal concept pool and beach facilities in Italy for ladies and families.

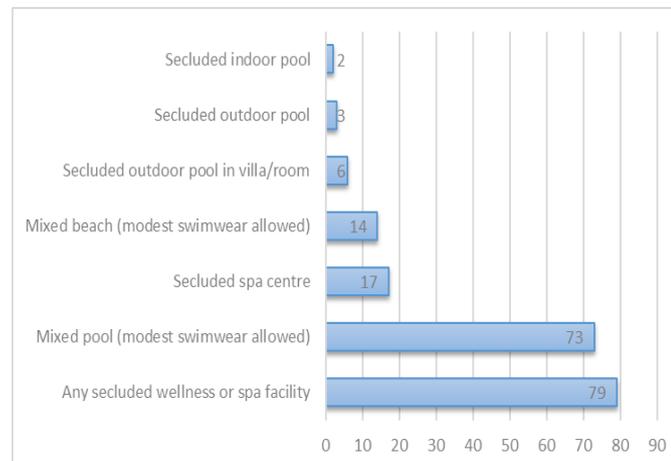


Figure 2. Leisure activities for ladies and families
Source: Authors' elaboration

The number of secluded wellness or spa facilities is 79. The number of facilities with a mixed pool (hijab swimwear is allowed) is 73. The number of facilities with a secluded spa centre is 17. The number of hotels with a mixed beach (where hijab swimwear is allowed) is 14. The number of facilities with a sheltered outdoor pool in the villa/room is 6. The number of accommodation facilities with a secluded outdoor pool is 3. The number of accommodation facilities with a sheltered indoor pool is 2. As seen in Graph 2, there is no hotel with a separate beach or pool exclusively for women or men. It is thought that this is due to the absence of a halal hotel certificate, which is common in the country.



5. Discussion and conclusion

The study gives preliminary information about the halal hotel products and services offered in Italy, one of the Muslim tourists' most preferred countries. Qualitative research techniques such as interviews and web content analysis were used to collect data on the products and services offered by halal hotels in Italy.

The data presented in the case study are related to halal tourism in Italy and provide information on halal food services, non-alcoholic areas, halal concept hotels and their regional distribution in Italy. The largest number of hotels (729) provide halal food nearby, followed by 243 that can provide halal food on demand. Some food offered by 50 hotels is halal, and only 15 hotels offer all halal food. As it can be understood from here, Muslim-friendly hotel services in Italy are still in their infancy.

In the study, data on non-alcoholic areas in hotels were also discussed. Accordingly, 728 hotels have non-alcoholic rooms, and 202 do not serve alcohol in their facilities. The number of completely alcohol-free hotels is 16. This number is quite low compared to the tourism potential of Italy.

The study also examined the distribution of hotels providing halal service according to the number of stars. Accordingly, most halal hotels (44%) consist of 4-star hotels, followed by 3-star hotels (26%) and non-star hotels (16%). Five-star hotels have the lowest number of halal hotels (5%). Five-star establishments have large and versatile restaurants, especially those that serve alcohol, which is why it takes more work to serve halal food. Therefore, it is thought that 5-star hotels may be the least halal hotel category due to their facilities that are not suitable for providing halal food services.

The distribution of halal concept accommodation businesses according to their types was also evaluated in this study. Hotels constitute the largest group, 84% of halal concept accommodation establishments. Although guesthouses, apart-hotels, inns, villas, country houses, honeymoon houses, holiday villages, apartments, townhouses, and ski hotels are other accommodation establishments with the halal concept, they are relatively few in number.

According to the data on the regional distribution of halal concept hotels in Italy, the highest number of halal hotels (338) are found in Lazio, followed by Tuscany (109) and Veneto (103). There are halal concept hotels in Lombardy, Campania, Sicily, Apulia, Liguria, Sardinia, Piedmont and ten other regions. However, it can be said that the most active region in halal tourism is Italy's western coast.

Halal tourism is a tourism sector that provides services by the Islamic faith and has gained importance in recent years due to the increase in the number of Muslim tourists living in non-Muslim countries (Battour, Hakimian, Ismail, & Boğan, 2018). This form of tourism meets the needs of tourists who believe in Islam by ensuring they spend their holidays by their religion. In non-Muslim countries, halal tourism contributes to the growth and development of the tourism sector (Jia & Chaozhi, 2019). Tourists who believe in Islam spend their holidays in countries with halal tourism services. Therefore, they constitute an important market for the tourism sector. In addition, halal tourism services contribute to increasing employment in the tourism sector and developing local economies.

One of the limitations of this research is that since the sample only covers halal hotels and services in Italy, generalizations cannot be made about halal tourism sectors in other countries. In addition, other research limitations are that the data sources are limited to web content analysis and interviews, examining only hotels may reflect only some of the sector; and not examining the experiences and opinions of tourists.

The results of this study show that the halal tourism sector in Italy is developing rapidly, and halal-concept hotels are becoming widespread. Future research provides opportunities for a deeper understanding of this industry. These include examining the products and services offered by other businesses (travel agencies, airline companies, etc.) in the halal tourism sector, analyzing the experiences and expectations of tourists about halal tourism services in more detail, and determining strategies for further development of the sector. In addition, monitoring trends and developments in the halal tourism sector will provide more up-to-date and detailed information about the sector's future.

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Implications for Islamic Finance Development in Finland: How Do Finnish Muslims Perceive Riba and Islamic Banking?

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Abstract

Islamic banking and finance (IBF) has gained significant attention in recent years, including in Finland where a growing Muslim community has created a demand for Islamic financial products. This research aims to explore the perceptions of Muslims in Finland towards riba and IBF and the implications for the development of IBF in Finland. The study employs survey research utilizing a questionnaire for a sample of Muslims living in Finland about the reasons for not taking usurious loans and their reluctance to pay interest, which affects significantly the Muslim community and leads to their financial exclusion, such as preventing them from owning a dwelling in Finland or investing their money in projects that follow their belief. The results were exclusive and reflect the reality experienced by the Muslim minority in Finland. The findings reveal that while Muslims in Finland are generally aware of the concept of riba and the importance of avoiding interest-based transactions, there is a lack of understanding of the broader principles of IBF. In addition to the interesting results observed, the non-existence of Islamic banking institutions in Finland makes this research unique because it highlights the challenges facing the development of IBF in Finland, including the lack of awareness and education about IBF, the lack of access to Islamic financial products, and regulatory and legal barriers. The study concludes that there is a need for increased awareness and education about Islamic finance in Finland, as well as greater efforts to promote the development of a regulatory framework that is favorable to the growth of IBF, this study provides valuable insights into the perceptions of Muslims in Finland towards riba and IBF and the implications for the development of IBF in Finland.

Keywords: Interest; Riba; Islamic banks; Islamic finance in Finland; Housing and Muslims in Finland; financial inclusion



1. Introduction

Islamic banking and finance have gained increasing attention globally (Biancone et al., 2020) as an alternative financial system based on Sharia principles (Davis, 2018; Nazim Ali, 2010) that prohibit *riba* and encourage risk sharing. Finland as a Nordic country with a growing Muslim minority population has also shown interest in IBF. However, little is known about the perceptions of Muslims of Finland towards *riba* and IBF in Finland.

Previous studies have explored the perceptions of Muslims towards *riba* and IBF in other countries such as the United Kingdom (Bälz, 2007), Malaysia, (Chen, Welsh, & Cheong, 2022; Ghaffour, 2017; Ibrahim et al., 2019; Loke Ke Wei & Mohd Thas Thaker, 2017; Mohamad, Mohamad, & Hashim, 2018; Yahaya et al., 2016), and other Islamic (Khavarinezhad, Biancone, & Jafari-Sadeghi, 2021) and Arab countries (Ben Mimoun, 2019; Cortina, Ismail, & Schmukler, 2018; Itani, Sidani, & Baalbaki, 2011; Nor, 2012; Ray, 1995; Shome, Jabeen, & Rajaguru, 2018; Topal, 2019). Some of these studies have also found that Muslims generally prefer Islamic banking over conventional banking due to their religious beliefs, although they also face challenges in accessing Islamic financial products and services.

Finland has high-quality living standards and an industrialized economy. Unlike the other Nordic states, immigration in Finland started to increase only in the 1990s and increased more in the 2000s (Kauppinen & Vilkama, 2016). In addition, Muslim immigrants moved continuously to Europe in the last decade (Zucchelli, 2022). This makes the Muslim community in Finland grow considerably.

However, the integration of immigrants into the new hosting state includes a lengthy process. Immigrants need in the beginning support from the social service authorities, in the case of Finland, immigrants get different benefits including housing facilities (Kela, n.d.). Although reasons for moving to another country are different, immigrants search for stable economic security. Purchasing a home is a factor of success in the host country, and Finland does not restrict homeownership rights; nevertheless, earlier studies have shown that there was a huge gap in homeownership between native citizens and immigrants (Kauppinen & Vilkama, 2016). Moreover, owning a dwelling in Finland requires generally taking a mortgage from the bank, also, the practice of charging interest on a loan is considered too usual that it is reputed to be determined by market forces and not to have any moral or ethical measurement (Mews & Abraham, 2007). Interest in conventional finance is a common feature, it refers to the amount of money that a lender charges a borrower for the use of borrowed money (Hasan, 2021) or assets, usually expressed as a percentage of the principal amount borrowed and is typically calculated on an annual basis, it is used as a way of compensating lenders for the risk, they take in lending money and as an incentive for individuals and businesses to save and invest their money.

Alternatively, the Islamic financial industry is increasing continuously in different geographical areas (Alharbi, 2015; Kamdzhlov, 2022; Maulidizen, 2018b; Varga & Bánkúti, 2021). However, Western countries including Finland are still taking measured steps toward the Islamic financial sector (Antoniazzi, 2022), Western businesses risk missing occasions to figure out novel and pioneering financial services and products (Bollani & Chmet, 2020) in a relatively new market (Huet & Cherqaoui, 2015; Maulidizen, 2019). The first Islamic banks established in Europe were in Luxembourg in 1978 (Alharbi, 2015), however, The United Kingdom has the most developed Islamic financial sector in Europe (di Mauro et al., 2013) with six Islamic banks providing various products in different areas of the financial sector (Jirvaj, 2022), especially with the growth of sukuk (Masood & Bellalah, 2013) market in 2017 (Siddiqui & Rizvi, 2022). The Islamic Bank of Britain was in 2004 the first fully Sharia-compliant bank in Europe (Bälz, 2007). Until now, no Islamic banks have been established in Finland although the Muslim community is growing significantly. Islamic banks are financial institutions that operate according to the principles of Islamic law (Sharia) (Salman, 2021). The fundamental principle of Islamic banking is that it prohibits the payment or receipt of interest considered usury (*riba*), as it is considered exploitative and unfair. *Riba* is an Arabic term that refers to any unjust increase in the value of a transaction involving an exchange of two different items of the same kind. *Riba* in IBF specifically refers to the charging or paying of interest on a loan. This paper aims to examine the financial activities of the Muslim community. We also investigate whether the absence of the Islamic financial system has an impact on the economic well-being of the Muslim community in Finland, as well as on the national economy.

Despite the increasing interest in Islamic banking and finance in Finland, there is a lack of research on the perceptions of Muslims in Finland towards *Riba* and IBF. This study aims to fill this gap by investigating how Finnish Muslims perceive *riba* and IBF and what implications this may have for the development of IBF in Finland.



In this paper, we will discuss whether the analysis of the religious background of the Muslim community and the financial policy of the Finnish State makes it possible to identify the elements of national policy that have a special significance for the economic outcomes of Muslim citizens living in Finland.

The study proposes the following hypotheses; firstly, Muslims in Finland are more likely to prefer IBF over conventional banking and finance due to their religious beliefs and values. Secondly, Muslims in Finland face challenges in accessing Islamic financial products and services, which may hinder the growth of Islamic finance in Finland.

The expected results of this study are twofold. First, the study aims to identify the perceptions of the Muslim minority in Finland towards *riba* and IBF. This will provide insight into the potential demand for IBF products in Finland. Second, the study aims to identify the potential for the growth of Islamic finance in Finland. By identifying the challenges and opportunities for the growth of IBF in Finland, this study can guide policymakers and financial institutions on developing and promoting IBF products in Finland.

2. Literature review

2.1 Towards a growing Muslim community in Finland

According to Statistics, the official population of Finland was 5,548,241 at the end of 2021. In 2021, the population grew by 14,448 persons, with a population growth of 0.3 % (Official Statistics Finland, 2022). Also, the number of native speakers of Finnish, Swedish, or Sami decreased by 10,747 persons, while the number of foreign-language speakers grew by 25,195 persons, which is the most in at least 40 years. The number of people with foreign origin was second highest after Åland, in Greater Helsinki, where the share of the population was 15.7 percent (Official Statistics Finland, 2022); according to Brekke (2020), the estimated Muslim population in 2020 was 80 000 (Brekke & Larsen, 2020), while other statistics report in 2016 that 2,7 % of the Finnish population was Muslim, which is about 148 500 persons (Hackett et al., 2017).

Furthermore, one-half of all people with foreign backgrounds lived in Greater Helsinki. Examined by municipality, the share of people with foreign backgrounds among mainland Finland municipalities was highest in Vantaa, 23.4 percent, and Espoo 20.1 percent (Official Statistics Finland, 2022). Also, the concentration of the Muslim community in Greater Helsinki is significantly high.

However, in a study comparing homeownership in three Nordic capitals: Stockholm, Copenhagen, and Helsinki; Helsinki was the capital with the lowest homeownership among immigrants as the mainstream immigrants live in social housing (Kauppinen, Andersen, & Hedman, 2016). On the other hand, Öblom and Antfolk 2017 stated in their study that individuals with Arabic-sounding names have difficulties accessing the rental housing market and that this influences their well-being on different scales (Öblom & Antfolk, 2017).

Also, Kauppinen, Andersen, and Hedman (2016) emphasized that immigrants living in public rentals in Helsinki are not willing to enter homeownership compared to other Nordic capitals even if their income increases over time. (Kauppinen, Andersen & Hedman, 2016)

The expensive prices of dwellings in the Nordic capitals oblige buyers to take out credits to become homeowners (Skovgaard et al., 2015).

Kauppinen and Vilkama (2016) stated in their study that ethnic discrimination is one of the important reasons that may influence immigrants' homeownership in Finland even if the question of whether the opportunity to get a credit loan is directly related to ethnic discrimination is not identified (Kauppinen & Vilkama, 2016). The researchers concluded that the ethnic minorities from Sub-Saharan and North Africa have fewer opportunities than other minority groups. Additionally, the researchers suggested that the other reason for not becoming homeowners might be non-compliance with the available loans with their religious background (Kauppinen & Vilkama, 2016). Mensah and Williams noticed the same findings in a similar study in Canada, where the interviewed Muslims evoked their religious background as a reason for avoiding taking interest-based mortgages (Mensah & Williams, 2014). Skovgaard, Holmqvist, Dhalmann, and Søholt have also explained in their study how the interviewees from the Somali community considered the firm prohibition of paying interest when taking a mortgage for homeownership as one of the reasons not to purchase a dwelling in Helsinki, because paying interest is not complying with their faith (Skovgaard et al., 2015). In a similar research conducted in Norway, the findings were that the interviewees who were Muslim women had to consider the issue of Riba (interest) related to a mortgage as a prerequisite to enter homeownership due to the unaffordable prices of dwellings (Skovgaard et al., 2015). In another recent research conducted in Norway among



Muslim women, the findings were that the religious norms namely the prohibition of *riba* constitute a major factor influencing their entrance to homeownership (Borchgrevink & Birkvad, 2021).

Even Muslims who think that taking a mortgage and paying interest can be considered as an exception, if housing stability is vital for them, and when there are no other alternatives available, they can be socially stigmatized by the community as interest -considered a form of *riba*- is prohibited in the Quran (Skovgaard et al., 2015).

2.2 Usury vs. Interest

Usury is a notion more frequently linked with financial ethics constructed on religions whether Christianity, Judaism, or Islam, than with the secular sector of modern finance (Mews & Abraham, 2007). Usury was prohibited in all monotheist religions; in Judaism, clear texts forbid the practice of usury when lending money (Ahmad, 1981; Calder, 2016; Maulidizen, 2018a). And even if many religions have banned usury, only Islam gives treatment to weaken the causes leading to this “evil” institution; none is willing to pay interest on borrowed money. Interest payment is the only alternative or solution to get a loan when the loan is desperately needed and there is no other option (Buyukcelebi, 2005). Also, Islamic law distinguishes between trade and usury. Therefore, it makes a comprehensible and explicit difference between business earnings and interest on moneylending: “They have said that trade is just like unlawful interest. God has made trade lawful and has forbidden usury (Riba)” (Quran 2:275). (Buyukcelebi, 2005) Another reason for the ban on usury is the unilateral risk to the borrower who is paying interest to the lender (the richer), the lender in this position is taking no risk and making a profit from the weaker party. This is illustrated in the example of gambling and lotteries, where a borrower expresses a huge temptation to make an effortless and fast profit. Still, the situation might not be as favorable as expected for the borrower to pay back the agreed amount of interest to the lender who has taken no risk at all (Buyukcelebi, 2005; Calder, 2016).

However, the concept of usury is not a recurrent topic of debate in modern financial ethics; the term suggests an unclear idea of charging excessive interest that is rationally hard to explain and is also hard to protect by law. Accordingly, it is hard to find what creates excessive interest especially if nowadays the principle of charging interest on a loan is considered as commonly acceptable and ethically correct (Mews & Abraham, 2007).

After completing a literature review that touched on the topic previously, we concluded that the topic has yet to be studied accurately in Finland. While previous literature has provided some evidence of the obstacles hindering entry into homeownership for immigrant minorities. Researchers have clarified that for the Muslim community, one of the reasons for not taking a mortgage was to avoid payment of interest due to religious proscriptions and that Muslim minorities did not have other alternatives, such as taking interest-free loans. However, there is a gap in earlier literature about whether the religious background of the Muslim community is the primary consideration of Muslims regarding homeownership. In other words, what are the possible reasons that may influence the entry of the Muslim community into homeownership? And what are the options offered for Finnish Muslim citizens to fulfill their homeownership rights?

Although there has been a growing interest in IBF in Finland, there remains a gap in research on the perceptions of Muslims in Finland towards *riba* and IBF. This study aims to bridge this gap by exploring the perceptions of Muslims living in Finland towards *riba* and IBF and examining the potential implications for the development of IBF in Finland.

Moreover, we are especially interested in this study by the Muslim community living in Finland and the financing possibilities they have as a minority group. We are interested in the question of whether they have equal rights with other citizens to enter homeownership in Finland.

Also, the purpose of this research is to understand how Muslims living in Finland view the traditional banking system as they are living in a country where the Muslim community is considered a minority, regardless of whether they were born in Finland, or came from another country.

This study is important because there is a lack of scientific research in this field in Finland (Ali & AlQuradaghi, 2019), it differs from earlier studies in many aspects, first, it analyses the Finnish regulation concerning Islamic Finance alternatives for minority groups living in Finland and wishing to have financial products that are compliant with their beliefs. Second, it analyzes the possible alternatives that may create new opportunities for the Finnish financial sector in the future. We try as well to distinguish the legal reasons that may hinder the establishment of Islamic finance in Finland.



3. Methodology

This study aims to explore the perceptions of Muslims in Finland on *riba* and IBF. To achieve this goal, a survey-type methodology is used, which involves using a structured questionnaire to collect data from a representative sample of the population (Mentz, 2012). The survey will be conducted to collect quantitative data on the perceptions of the Muslim community in Finland towards *riba* and IBF. Utilizing a questionnaire, data collection, analysis, and discussion of research results is intended to provide a more complex understanding of the research question (Kadi, 2022). The methods aim is to bring together information about the financial practices of Muslim residents in Finland and to understand the religious standards and their impact on their financial behavior. Scientific methodologies are important because they support researchers in producing objective and valid laws based on objective and demonstrable facts. The population of interest in this study is the Muslim community in Finland. The sample will be selected using a random sampling technique to ensure that the sample is representative of the population. We will try to ensure that the sample size is large enough to detect significant differences in perceptions of IBF.

Primary data will be collected using a structured questionnaire developed based on a thorough review of the literature on IBF and previous studies on Muslim perceptions of finance. Secondary data will be collected from academic journals, government reports, and other relevant sources to provide background information.

The data collection process will involve processing a self-administered questionnaire to the selected sample of participants. The questionnaire will be designed to collect data on the following variables: demographic characteristics, knowledge of IBF, attitudes towards forms of living, and perceptions of *riba* and IBF. The questionnaire will be written in Finnish and English, and participants can also write in Arabic to ensure that all participants can understand and respond to the questions. This study adheres to ethical considerations; participants will be informed about the purpose of the study, the voluntary nature of their participation, and the confidentiality of their responses.

A survey was completed in October 2022, where 80 respondents participated and answered questions. The questions of the survey were selected according to the research question.

We analyze and discuss the data collected in the discussion part, as it is essential to conduct legal research to derive new laws from the religious texts on usury through methodological, epistemological, and logical transformations and get a formal theory about everyday economic activities such as property, ownership, trade, moneylending, and contracts. (Calder, 2016) It is, for instance, important to understand why usury is considered immoral and whether it limits the economic welfare of people.

After analyzing the research question, a questionnaire was designed and sent to different Islamic organizations and associations; it was also advertised and explained on different social media platforms, the survey took place in Finland from 1-31st October 2022, and 80 respondents participated in the survey. The questionnaire was designed for the Muslim community. However, few answers from non-Muslims were received as well.

3.1 Survey

The survey was composed of three parts; the first part was about the respondent's background such as gender, age, nationality, and education, the second part was about the respondents' forms of living and their financial activities, and the third part was about the respondents' religious background and what they think about usury or *riba*.

3.2 Methods

We proceeded with advertising the questionnaire by explaining the aim and importance of the survey; we asked people to answer and forward the link to their friends and relatives as this method, called snowball sampling, is effective in getting a maximum of specific respondents in a quick time.

To understand the background of the participants in the survey, the respondents answered different questions where different options were proposed. Two open questions were included to allow the respondents to express their thoughts.

The answers were gathered anonymously, and no personal or sensitive questions were addressed to avoid any kind of misinterpretation.

3.3 The conduct of the survey

The questions were written in both English and Finnish. There were in total 80 respondents. 41 men and 38 women and one respondent did not want to answer this question “Fig. 1”. The age of the respondents was between 18 and more than 67 years. The higher group of respondents was aged between 36-45 years with 38 respondents “Fig. 2”.

1. gender, sukupuoli (0 piste)

[Lisätietoja](#)

● man, mies	41
● woman, nainen	38
● I do not want to answer, en halu...	1

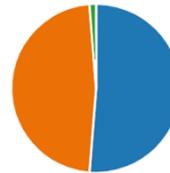


Figure 1. Gender division of the respondents.

Source: (Authors' elaboration).

2. Age, ikä (0 piste)

[Lisätietoja](#)

● 18-25	7
● 26-35	24
● 36-45	38
● 46-55	7
● 56-65	3
● 66 ja yli	1

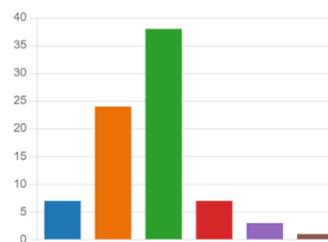


Figure 2. Age division of the respondents.

Source: (Authors' elaboration).



3.4 Some remarks

3.4.1 Origin of the respondents:

The highest number of respondents originated from Iraq with 23 respondents followed by respondents from North Africa with 18 respondents. This is probably because those two groups are active groups living in a community. The third group was the native Finnish respondents with 13 participants followed by participants from the Middle East with 11 participants. (Table 1.)

Origins	No
Native Finnish	13
Russian Republics	1
Middle-East	11
Iraq	23
Syria	8
Somalia	7
Turkey	1
North Africa	18
Sub-Sahara	0
Afghanistan	1
East-Asia	0
Caucasus	0
Central Africa	0
Other country or area	3

Table 1. The origin of the respondents

(The total is more than 80 because some of the respondents have more than one nationality)

Source: (Authors' elaboration)

3.4.2 Double or multiple nationalities:

When counting the total of the respondents, there were more than 80 which can be explained that some of the respondents can have two or more nationalities at the same time.

3.4.3 Non-Muslim respondents:

Since the survey was designated specifically for Muslims, the questions were designed on that basis as well. However, we received few answers from non-Muslim respondents as well. In general, results are going to focus on the Muslims' perceptions, nevertheless, we will mention some of the interesting findings that we observed about the non-Muslim participants as "exceptions" that may lead to further research in the future by using comparative research methods between Muslims and non-Muslims.

4. Results

We have noticed that the respondents were divided almost equally in gender, “Fig. 1” which can be interpreted that the question of *riba* is an important issue for both genders.

4. Are you a finnish citizen, oletko Suomen kansalainen? (0 piste)

[Lisätietoja](#)

[Oivallukset](#)

Yes, kyllä	56
No, ei	24



Figure 3. 70% of the respondents are Finnish citizens.

Source: (Authors' elaboration).

5. How long have you lived in Finland? Kauanko olet asunut Suomessa? (0 piste)

[Lisätietoja](#)

All my life, I was born in Finland,...	12
less than one year, alle 1 vuotta	3
less than 2 years, alle 2 vuotta	0
2-5 years, 2-5 vuotta	6
5-10 years, 5-10 vuotta	30
10-15 years, 10-15 vuotta	8
more than 15 years, yli 15 vuotta	21

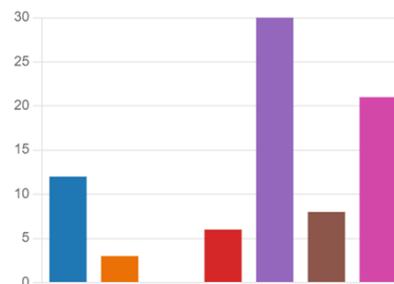


Figure 4. Duration of living in Finland: More than 90% have lived for at least 5 years in Finland.

Source: (Authors' elaboration).

4.1 Prohibition of Riba

This study aims to address the topic of interest on loans. The issue of usury *-riba-* in Islamic banking and finance is one of the most critical issues; it means an excess compensation or surplus value without due consideration. Trying to define due consideration from the theological point of view is an issue that is in conflict of interest with financial and banking institutions. Surplus value and speculation were major reasons for the 2008 global monetary crisis. Of course, it is not in the interest of banks to prohibit interest, as interest is one of the ways of profit-making. Even if more ethical banks are nowadays involved in promoting sustainability and protecting the environment.

For the question: Have you heard about *riba*? 74 out of 80 of our respondents have confirmed that they heard about *riba*, only 5 respondents did not know the term and one respondent was unsure about it. Also, 93% of the respondents who are born Muslim have heard about *riba*. This indicates that *riba* is a familiar concept for Muslims and a well-recognized part of their belief.

4.1.1 The reasons not to own a dwelling in Finland

The reasons not to own a dwelling in Finland: 33 of the respondents directly link the reason not to own a dwelling in Finland to the prohibition of interest by Islam, they believe that they should not take usury loans and prefer to live in a rental house rather than apply for a loan to buy a dwelling. However, also the high price of houses in Finland constitutes a challenge to own a house, thus 35 of the respondents answered that houses are too expensive “Fig. 6” However, on the question we asked about whether you have considered buying a home in Finland, 48 out of 80 answered yes, 3 answered that they had thought about this several times and 9 had considered sometimes. 19 respondents out of 80 answered that they did not think about buying a house in Finland. “Fig. 5” This indicates that although the respondents refrain from buying a dwelling in Finland, a large percentage of them have already thought about buying a dwelling. This indicates as well that the high prices of dwellings in Finland would oblige them to apply for a mortgage which is not in compliance with *Sharia*.

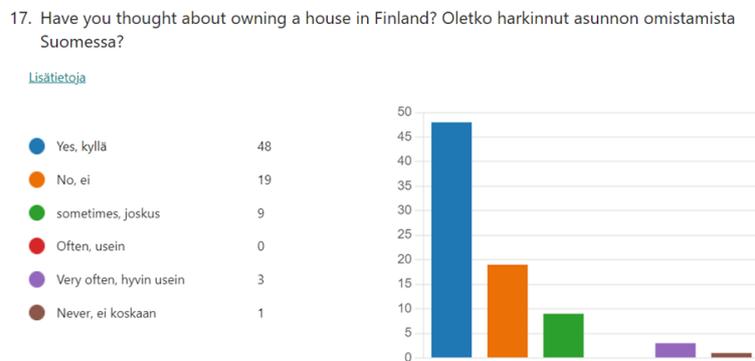


Figure 5. 75% of the respondents have considered owning a dwelling in Finland.

Source: (Authors' elaboration).

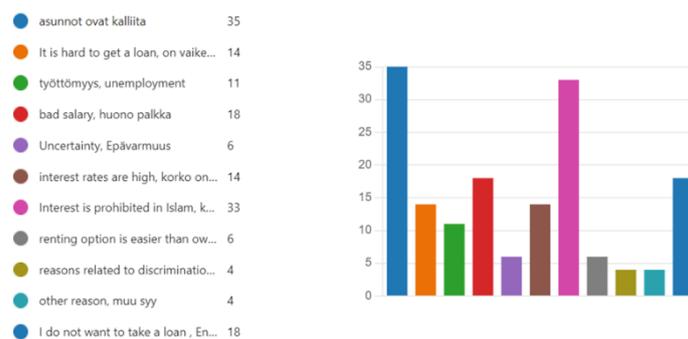


Figure 6. Reasons not to own a dwelling in Finland.

Source: (Authors' elaboration).

4.1.2 Purchase loans

60 out of 80 of the respondents have answered that they have not taken loans before to buy equipment or cars while only 20 participants answered yes to that question; 19 respondents have paid interest on these loans. This interestingly shows that only 20% of the respondents have taken purchase loans while 80 % are still reluctant to pay interest on loans even for other purposes than buying a dwelling. One of the respondents explained:



“...I haven't taken any loans because it is forbidden in Islam...I wish if there were loans without interests...”
Anonymous 5

“...I'm not used to taking loans because life is good for me if I can buy I do it, otherwise I won't have to... But I buy phones from the communication companies because they do not impose interest...” Anonymous 10

“...The Finnish system is good, I don't miss the cause Muslim and Christian you are advocating, no religion is confused with business activities...” Anonymous 6

There were some exceptions in the views of the respondents, while many respondents consider that economic activities are an important part of the belief and should be following the teachings of the religion, we can notice exceptions, for example, that religion and business activities should not be mixed.

4.1.3 Other remarks

An interesting answer from a Jewish respondent was that paying interest is not a problem, but receiving interest would constitute an issue:

“...I found having a loan is very easy if you have a job, and it helps really to establish lives in foreign lands. For us Jews and for most of my Muslim friends, paying interest on a loan isn't a big deal, and the problem lies if you are the person receiving the interest. I hope I could be of some help...” Anonymous 12

This is interesting to note in this research, as the quantitative results show as well that none of the respondents received interest from banks but 25% of the respondents have paid interest before.

4.2 Social Justice

All religions in the world offer guidance on how one should deal with money ethically and responsibly. Thus, both Judaism and Christianity considered interest on loans as an immoral practice and forbidden in the first place (Ahmad, 1981; Calder, 2016). Islam condemns excessive wealth accumulation (Rusnanda & Fathoni, 2022). Besides, the objectives of Islamic law (*Maqasid-al-Sharia*) provide a deep understanding of how to promote social well-being by establishing fairness (Brescia et al., 2021) and reject injustice and lessening poverty (Kamdzhlov, 2022; Papa & Rossi, 2022).

There is evidence that the Islamic financial model inspired by the *Maqasid-al-Sharia* is ethical and in compliance with green and sustainable finance (Kamdzhlov, 2022; Lanzara, 2021). Thus, the Islamic banking and finance sector is getting attention globally (Meskovic, Kozarevic, & Avdukic, 2021) because of its “strong connection with the public and social sector” (Biancone et al., 2022). On the other hand, Muslims in Finland face different challenges, among them, the absence of interest-free loans (Otterbeck, Tuula Sakaranaho, & Hajjar, 2008), in other words, Muslims in Finland do not have other options to get a loan but to pay interest. This makes them unable to economically progress, even if they have better living standards. At the same time, Muslims who have savings will not invest these savings in banks because they do not want to receive interest from their deposits.

4.3 Financial Exclusion of Muslims in Finland

4.3.1 The option of living in rental houses

As “Fig. 7” shows the forms of living for the Muslim community in Finland, living in a rental house is the easiest option to stay compliant with the teachings of Islamic law, even when the person earns a good income, which can constitute a financial exclusion for Muslims as they will never improve their standard of living.

“...Not having Islamic banking options puts Muslims in Finland in a very difficult position as practicing Muslims are forced to live in rental properties their entire life. That can feel frustrating as rents are very high and there is no way to get that

money back, for your children to benefit from in the future. Among middle-class Muslims there is often this idea that you can make an exception to the rule (*riba* is haram) when buying a primary accommodation where you live in. Many of my practicing friends have used conventional banking to buy a house because of this fatwa. We live in a global world that works on interest, so it makes one wonder if this is what was intended with the prohibition of interest. Also, I have seen many in my social circle struggle with finding information on the topic in English. this is also frustrating because there doesn't seem to be a trusted authority to give fatwas for Muslims in the West...” Anonymous 5

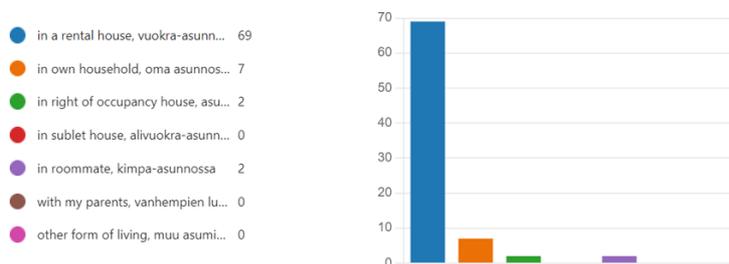


Figure 7. Forms of living for Muslims in Finland.

Source: (Authors' elaboration).

4.3.2 The option of referring to fatwas

Anonymous 5 has referred to the need for a fatwa for Muslims living in Western countries about this issue, yet most scholars agree on the fact that paying interest is forbidden because interest is considered *riba* (Siddiqi, 2004). Moreover, the survey confirmed that most Muslims associate interest with *riba*, only 8 respondents out of 80 think that interest is allowed and is not considered *riba* if there are no other options left. What was even more interesting in the survey is that none of the respondents answered that interest is allowed and is not considered *riba*.

“...*Riba* is forbidden by law... The definition of usury is what is added to the loan with the condition to be of the same kind... For example, if you borrow 100€, you return it 101€, and the difference is 1€, it is considered usury, which is forbidden by Islamic law... In many buying and selling transactions, when one of us goes to an office to buy a car or a house, the owner receives the price from the bank, gives the bank the money, and the bank gets back the money if of the same kind... If the debt is delayed, the bank increases the money, and this is called the *Nasi-a usury* ... The commodity becomes its guarantee with the bank... The issue is thorny, and we don't want to prolong it...” Anonymous 9

5. Discussion

5.1 The Principle of Profit and Loss Sharing

The principle of profit and loss sharing points toward a real concern of the Islamic bank as a creditor for the lucrativeness of the project (Iqbal & Mirakhor, 2011; Varga & Bánkuti, 2021). The conventional bank is concerned as well with the success and the lucrativeness of the financed investment, obviously because it must ensure that the installments are regularly paid according to the pre-agreed schedule if the condition of loan and interest payment is respected, the profits of the conventional bank will not be affected directly in the case of the low profitability of the creditor (Iqbal & Mirakhor, 2011). However, Islamic finance has a different way to do finance (Calder, 2016), the Islamic bank must pay attention to and emphasize the lucrativeness of the project because the latter is directly associated with its profitability. For an entrepreneur, the relation between the payment of the credits to the creditor and the lucrativeness of the project is significant (Iqbal & Mirakhor, 2011; Varga & Bánkuti, 2021).



Moreover, in profit-sharing agreements, risk management is taken into consideration as the payment is balanced according to the economic situation of the entrepreneur (Iqbal & Mirakhor, 2011). For example, if we have a system based on interest when a conventional bank accords a loan to an entrepreneur, the payments are mandatory without seeing whether the real project is making beneficent or not; the bank may end the lending if it notices that the entrepreneur has payment troubles, in other terms “debt-servicing difficulties” (Iqbal & Mirakhor, 2011). However, if the debtor is making delays in only some payments for a period, due to a temporary economic recession, the bank might still consider it as a risk of a regime change, which may lead to an unexpected end of the contract by the bank, which is seen as an overact of the bank (Iqbal & Mirakhor, 2011). But, in a situation of an Islamic model, the bank would react differently to this momentary change because they follow continuously their client’s project, to evaluate their part of the profits, which is a great benefit for instance, the reimbursement to the bank is linked with the continuity of the project (Iqbal & Mirakhor, 2011). However, many argued that Islamic banking failed in different aspects because of internal and external reasons such as the fact that Islamic banks operate in a capitalist global world, or the dominance of using Murabaha financing instruments (Cebeci, 2012; Maulidizen, 2018c).

5.2 *The Islamic Microfinancing*

The option of microfinancing is a simple and easy way to implement in an Islamic financial framework, firstly because it offers persons modest funding opportunities (Katterbauer & Moschetta, 2022), and secondly, because it can constitute a good alternative for Muslims when no interests are imposed. In Finland, some fintech financial services offer different solutions of online factoring on some consumer goods with no interest if the term of repaying the loan is short. Also, some respondents referred to the solutions they get from telecommunication companies that sell equipment with 0% interest. Also, there is the possibility of microfinance loans with collateral. However, all these options constitute a small area of financing and do not solve the Muslim community's problem when they want to invest in long-term projects such as owning a dwelling or creating a business activity. It would be interesting to see social enterprises and social cooperatives in Finland taking the example of the different instruments already existing in Islamic finance; this would support the social development goals and would have a positive impact not only for the Muslim community but for all citizens living in Finland (Daniel & Jonathan, 2020). This would also promote development goals (Maulidizen & Nida, 2019) and social welfare in Finland.

5.3 *The Economic Rights of People*

If we want to talk about the economic rights of people, such as the right to an adequate standard of living, the right to housing, or the right to have health care and work, we need to know what rights are. (Rancière, 2004) We need to examine rights from a standpoint that claims that people do not suffer injustice. Islam undoubtedly specifies that efforts made to render integration possible cannot prosper if justice and fairness are missing (Chapra, 2001). As the study shows, 70 % of the respondents are Finnish citizens “Fig. 3”, yet 69 respondents out of 80 still live in rental houses, even though, 75% of the respondents have considered owning a dwelling in Finland “Fig. 5”. Moreover, more than 90% of the respondents have lived in Finland for at least 5 years “Fig. 4”, the answers of the respondents to the open questions in the results section of the study highlight the interest they are showing in having an IBF alternative in Finland.

5.4 *The Role of Islamic Finance in the Achievement of the 2030’ Sustainability Goals*

The ethical principles of Islamic finance are globally recognized. (Prandi & Colecchia, 2021) The debate on utilizing Islamic finance’s principles to reach the goals of sustainable development is an undeniable fact (Antoniazzi, 2022), usury ban principle was debated for a long time and it is inadequate to claim that some religious convictions proscribe usury merely for the reason that their religious manuscripts condemn it. (Calder, 2016) Therefore, there is a strong connection between IBF principles and the sustainability goals of the 2030’ agenda, (Brescia et al., 2021) firstly because IBF can promote financial inclusion and improve access to finance for the Muslim community, and secondly, because Muslims who are not willing to engage in business investments in the conventional system can have another alternative to invest their money, which can influence positively the Finnish national economy as well.

5.5 *The Need for a Further Survey to Reveal New Results*

As revealed in the results, Muslims in Finland are reluctant to pay interest on loans, this confirms previous research results conducted by Skovgaard, Holmqvist, Dhalmann, and Søholt when they studied the cultural background of Somalis in the Nordic



capitals' housing Markets (Skovgaard et al., 2015). While previous studies showed that one of the reasons for Muslims not taking loans is the Islamic prohibition of usury (Mensah & Williams, 2014; Skovgaard et al., 2015), our study shows that the major reasons for Muslims in Finland are both, the high prices of dwellings and the prohibition of *riba* (Fig.6), yet 80% of the respondents were reluctant to take any kind of loans because of the interest imposed. We can take the example of other EU states that have implemented Islamic finance. The British experience however remains the most interesting to when studying and discussing the legal aspects of Islamic finance in other European countries. Furthermore, as the literature on Islamic banking in Finland is very limited, there is a need to conduct further research on interest-free loans with the Muslim community in Finland on a larger level. For example, we are interested in whether the Muslim community in Finland is interested in using Islamic financial products if they were accessible, and whether they will become customers of Islamic financial institutions if they are established in Finland.

5.6 The Difficulties in Establishing Islamic Banks in Finland

The fact that Muslims in Finland are interested in using Islamic financial products suggests potential demand for IBF in the country. However, our study also highlights the regulatory challenges that currently hinder the development of IBF in Finland.

It is a challenging mission to establish Islamic banks in Finland. First, it demands lots of effort from the legal standpoint, the Islamic banking and finance sector need to follow the EU banking regulation and Finnish regulation. Secondly, it is required to have special regulations to permit the functioning of both conventional banks and Islamic banks. Moreover, new technologies such as blockchain and AI are highly influencing how financial and business activities are developing globally (Calandra et al., 2022; Zulfikri et al., 2022). In that sense, the IBF sector faces the challenge of competition with conventional banks, thus the main challenge for Islamic finance is to afford competitive, varied, and pioneering financial products and services compared to conventional banking products, yet in compliance with Islamic law. (Nidyanti & Siswanto, 2022) Finally, the establishment of Islamic finance in Finland faces the challenge of the difference in governance between the conventional and Islamic systems (Mabrouk, Farah, & consultant -ProximaB Group, 2021). Islamic banks and financial institutions are ruled by Islamic law (Sharia-compliant) and must have a Sharia supervisory board SSB which is one of the most important bodies of the Islamic financial sector; furthermore, payment of interest and speculation are both forbidden and financial instruments must rely on a profit and loss sharing basis (PLS) (Mollah & Zaman, 2015). Also, Islamic banks do not have enough methods to manage their liquidity risks compared to conventional banks (Mabrouk, Farah, & consultant -ProximaB Group, 2021). Finally, the need for scholars and qualified employees in the Islamic financial sector in Finland could constitute a challenge as they need special training to work in this sector.

Despite the obstacles, the study reveals a substantial potential demand for IBF in Finland. If a more favorable regulatory environment is established, IBF could have a greater impact on promoting financial inclusion and fulfilling the requirements of Muslims living in Finland who prefer financial products that comply with Islamic principles. Further research is required to gain a better understanding of the expectations and preferences of Finnish Muslims concerning IBF and to assess the potential influence of IBF on financial inclusion and the economic development of Finland.

A thorough evaluation of the local environment is imperative to effectively carry out Islamic financing transactions. This encompasses the state regulatory framework, tax laws, and obligatory consumer protection rules. Adherence to mandatory jurisdictional regulations is essential in any Islamic transaction. Since different authorities have varying requirements, it is impossible to transfer a transactional form from one place to another without significant modifications and adjustments. In addition, paying attention to local peculiarities is also crucial, particularly regarding Sharia issues. An Islamic retail product must be customized to meet the specific needs of a particular Muslim community and must be based on local Sharia scholarship. While Sharia is a universal ideal, it is subject to diverse local interpretations that must be considered when creating a Sharia-compliant retail product. Consequently, developing Islamic retail products necessitates a dual acculturation process, which involves adapting to mandatory state law requirements and the target Muslim communities. This process requires flexibility from both regulators and Islamic scholars (Bälz, 2007). Therefore, successful Islamic financing requires analysis of the local environment, compliance with regulations, and product tailoring to meet specific Muslim community needs, which demands flexibility from regulators and Islamic scholars.

6. Conclusion

In conclusion, our study sheds light on the perceptions of Muslims living in Finland towards *riba* and IBF. Our findings confirm that Muslims in Finland are reluctant to take interest-based loans and are interested in using Islamic financial products. However, despite the potential demand for IBF in Finland, there are still regulatory challenges that hinder the development of IBF. Policymakers and financial institutions need to address these challenges and provide a supportive regulatory framework



to facilitate the growth of IBF in Finland. We present in this paper a new study-driven approach to the perceptions of the Muslim community in Finland about *riba*. We investigated whether the absence of the Islamic financial system has an impact on the economic well-being of the Muslim community in Finland, as well as on the national economy. Our findings confirm that the absence of an Islamic financial system in Finland has an impact on Muslims' financial inclusion. Muslims are not willing to take loans because most of them consider that paying interest is a form of *riba*. Moreover, Muslims are not willing to engage in business investments in the conventional system which can influence the national economy as well.

We have examined the religious background of the Muslim community and the financial policy of the Finnish State and identified the elements of national policy that have special significance for the economic outcomes of Muslim citizens living in Finland. We concluded that practicing Muslims tend to opt for avoiding conventional banking and financial activities because the element of *riba* is present in these financial products, which makes them financially excluded. This is illustrated in the example that despite a good income, devoted Muslims continue to live in rental houses. This makes them not capable of economically progressing, even if they have better living standards as housing in Finland is expensive. At the same time, Muslims who have savings will not invest these savings in banks because they do not want to receive interest from their deposits.

The results from the conducted survey and the statements collected from the respondents characterize a significant phase toward initiating a real debate about the future of Islamic financing possibilities in Finland. The results confirm previous research results concluding that the Muslim community in Nordic countries in general and in Finland in particular face difficulties in entering homeownership because they have no adequate financing possibilities that are following their belief, because most of the respondents think that paying interest on loans is considered as *riba*. Many arguments are raised in this study, first, that *riba* or usury is considered as unfair and immoral and therefore interest-free loans are a moral claim in all religions, second, this study raises the issue of the rights of Finnish Muslim citizens living permanently in Finland, as they form a legal community and have individual rights and individual legal persons, therefore they should be the bearers of economic rights as well (Habermas, 1995). Third, we debated in this paper the challenges that constitute a hinder in front of the establishment of Islamic finance in Finland even if there is a will from the Muslim community. Among these challenges are the differences between the regulations in Islamic banking and conventional banking, and the differences between the institutional bodies of both Islamic banks and conventional banks, and that despite the strong connection between Islamic finance principles and the sustainability goals of the 2030' agenda, establishing Islamic banks in Finland would necessitate a huge effort from different institutions and especially in the field of legal research. With a more favorable regulatory environment, IBF can play a greater role in promoting financial inclusion and meeting the needs of Muslims in Finland who are seeking financial products that align with their religious beliefs.

The findings of this study can help increase awareness among Finnish Muslims about the availability of Islamic financial products and services that meet their religious beliefs. It can also encourage financial institutions to consider the needs of Muslim customers and develop new products that align with Islamic principles. In addition to that, policymakers can use these results to develop a more supportive regulatory framework for IBF in Finland, which can promote financial inclusion and improve access to finance for the Muslim community.

Like any research, this study also has some limitations that need to be considered when interpreting the results, one of the main limitations of this study is the sample size, which consisted of relatively small number of participants. This could limit the generalizability of the findings to the larger Muslim population in Finland. Therefore, additional research is required to achieve more conclusive and accurate outcomes. Another limitation is the use of a self-administered questionnaire as the primary data collection method, which may have resulted in some participants providing incomplete or inaccurate responses. Additionally, the study focused only on the perceptions of Muslims of Finland towards *riba* and IBF and did not examine the perceptions of non-Muslims or other minority groups in Finland. Finally, the study was conducted at a single point in time. Despite these limitations, the study provides valuable insights into the perceptions of Muslims towards *riba* and IBF and highlights the potential demand for Islamic financial products in Finland.

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