Islamic Microenterprise Institutions: Risks and Challenges in the Post-COVID-19

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Abstract
Purpose: This paper aims to explore the risks and challenges faced by microenterprise institutions within the context of digitalization post-COVID-19, offering valuable insights into the existing literature on this subject. Furthermore, the study incorporates a behavioural perspective when evaluating the efficiency of microenterprise institutions that provide banking services.
Design/methodology/approach: The study relies solely on related literature and highlights the risks and challenges in Islamic microenterprise institutions. Reviews of previous studies normally have their own terminology in research methodology. This section covers the various facets of digital finance risk, including cybersecurity threats, data privacy concerns, and operational vulnerabilities, as well as how these risks may influence clients' trust, adoption, and engagement with technology-based banking services.
Findings: The findings of this research shed light on the multifaceted risks and challenges faced by microenterprise institutions. Digital finance and its role in enhancing financial inclusion offer numerous advantages to users of financial services, digital finance providers, governments, companies, and the overall economy.
Research limitations/implications: The highlight of this study is several persistent challenges that, when effectively addressed, can further improve the effectiveness of digital finance for individuals, businesses, and governments alike.
Practical implications: The digital finance issues highlighted in this article hold significance in ongoing discussions and country-level initiatives aimed at promoting greater financial inclusion through digital finance in developing and emerging economies.
Originality/value: A compelling avenue for future research could involve investigating the connection between digital finance and economic crises, and examining whether digital finance plays a role in spreading financial contagion in times of crisis, and to suggest possibilities for reform.

Keywords: Risk Management, Digital Finance, Fintech, Challenge; Islamic Microenterprise Institution

Introduction

The future of microenterprises in supporting small businesses is promising, with several key trends and developments shaping its role in helping entrepreneurs and fostering economic growth. The global microenterprise market, which had an estimated value of USD200 billion in the year 2022, is on a trajectory for substantial expansion (Wood, 2023). Projections indicate that by the year 2030, it will have grown to a noteworthy size of USD506 billion, reflecting an impressive compound annual growth rate (CAGR) of 12.3% over the analysis period spanning from 2022 to 2030. This ascending trend in the global microenterprise market is noteworthy and has been consistent since 2014 and is expected to continue through 2030. It's imperative to delve into the specifics of this market's dynamics, particularly its lending activities conducted by both traditional banks and non-bank entities. Within this, there is a particular focus on lending to distinct business segments, which include small enterprises, solo entrepreneurs, and micro-enterprises. The significance of these lending activities extends beyond mere financial transactions. They play a pivotal role in advancing financial inclusivity on a global scale, thus facilitating access to economic opportunities and bolstering entrepreneurial ventures across the world. It's essential to acknowledge that while various factors such as inflation concerns and evolving demand patterns may temporarily impact corporate investments, the horizon holds promise (Ruslan et al., n.d.). Emerging technologies are poised to mitigate these challenges and pave the way for new avenues of growth and prosperity. These technologies encompass a wide spectrum, including generative artificial intelligence (AI), applied AI, machine learning industrialization, next-generation software, cloud/edge computing, renewables, and climate technologies offer global investment opportunities (Ozili, 2018). They not only offer global investment opportunities but also have the potential to revolutionize industries and reshape economic landscapes. In the short term, both consumers and investors will undoubtedly encounter a mix of challenges and opportunities arising from these technological advancements. However, it's crucial to highlight that businesses and leaders who demonstrate resilience and adaptability can seize these prospects and harness their full potential.

Literature Review

History of microenterprise

The origins of microenterprises, facilitated by microenterprise institutions lending, can be traced back to the mid-1970s in Bangladesh. In 1976, Muhammad Yunus established the Grameen Bank with the purpose of extending microloans to disadvantaged individuals, particularly women, enabling them to initiate self-sustaining businesses (Muhammad, 2009). This pioneering model has since been adopted by numerous financial institutions worldwide, with a notable presence in developing nations. Nevertheless, microenterprise institutions have faced substantial criticism for imposing high interest rates since the advent of microcredit in the late 1970s, a concern that has garnered worldwide attention among policymakers. Fostering and promoting the expansion of small-scale industries and micro-enterprises within a nation can have a positive impact on its per capita income, stimulating overall economic growth (Asian Development Bank, 2016). According Ozili (2018) small enterprises can play a crucial role in narrowing the development divide between rural and urban economies. Micro businesses leverage local community resources and skills. When these businesses promote region-specific art forms or handicrafts, they contribute to the preservation of these unique skills. Additionally, they enhance the appeal of such products or services to visitors and tourists, thereby creating an additional source of income for the community (AfPI, 2018). Establishing a large company that employs thousands of individuals requires substantial capital and carries greater risk. Conversely, supporting numerous microenterprises, each employing just one or two individuals, accomplishes the same employment objectives with reduced financial investment and risk. Microenterprises offer a means of livelihood to individuals who may lack the formal education or skill set required to enter the conventional job market. Microenterprises represent minute-scale business ventures initiated with limited capital. Despite their diminutive size and localized operations, they exert a considerable influence on the economic landscape. Presently, numerous nonprofit organizations and financial institutions extend microcredit facilities to individuals embarking on microenterprise initiatives (Mukherjee, 2023). Developing countries have recognized the significance of microenterprises in augmenting per capita income levels. Consequently, governments and financial institutions are actively fostering the expansion of these enterprises. Microenterprises also contribute to the enhancement of living standards in underdeveloped communities (Malanga & Banda, 2021). Microenterprises represent a unique segment of the business landscape that requires specific considerations and tailored financial services.

Islamic microenterprise

The concept of Islamic microenterprise is not a new one within the banking industry. It represents an Islamic viewpoint on firms and enterprises, rooted in the belief that Islam and business are interconnected. Islamic scholars widely concur on this relationship, drawing attention to the ethical aspects, roles, responsibilities, prohibitions, and benefits outlined in the Al-Quran (Mohd Thas Thaker et al., 2016). According to Gani & Bahari (2020); Kismawadi (2023) Islamic banking was introduced as an alternative for Muslim consumers who cannot participate in conventional banking due to Shariah prohibition. According to Shafiai & Ali, (2018) conventional banking relies on elements like *riba* (interest), *gharar* (uncertainty), and *maisir* (gambling), which are not permitted in Islam. Islamic banking, on the other hand, operates within the boundaries of Shariah law, offering services such as financing and deposits like traditional banks. However, it distinguishes itself by using Shariah-compliant contracts like *mudharabah, ijarah,* and *murabahah* in its operations to ensure compliance with Islamic principles and avoid riba. In Malaysia, Islamic banking has experienced significant growth over the past three decades, providing a viable financial option for Muslims while adhering to their religious beliefs (Kismawadi, 2023).

The post-COVID-19 landscape for microenterprise practices

The COVID-19 pandemic has brought forth profound implications for microenterprise practices, significantly impacting this microenterprise sector. Economic disruptions caused by lockdowns and reduced economic activity posed challenges for microenterprise borrowers, leading to income volatility and difficulty in loan repayments (Kumar & Singh, 2021). The surge in non-performing loans (NPLs) and credit risk necessitated a meticulous assessment of borrowers' creditworthiness. Besides, microenterprise institutions faced liquidity constraints as loan repayments slowed down, hindering their ability to disburse new loans and potentially limiting their outreach. Governments and regulators introduced measures such as loan moratoriums and interest rate caps to protect borrowers and stabilize the sector (Aftab et al., 2021). Regulatory responses varied, with some countries implementing loan moratoriums and interest rate caps to protect borrowers and stabilize the microenterprise sector (Shafiai & Ali, 2019). Nevertheless, the crisis spurred the acceleration of digital transformation in the microenterprise sector, as microenterprise institutions rapidly adopted digital platforms for loan disbursements, repayments, and customer interactions to ensure business continuity. The pandemic underscored the critical need for resilience in the sector, rewarding microenterprise institutions with diversified loan portfolios, robust risk management practices, and access to liquidity. It also highlighted the importance of client protection and ethical treatment of borrowers facing financial distress (Rahman et al., 2023). Despite the immediate challenges, lessons learned from the pandemic are expected to lead to a stronger emphasis on risk management, digitalization, and financial inclusion in the microenterprise sector's future outlook as economies strive to recover and microenterprise institutions continue their essential role in supporting underserved individuals and small businesses. The COVID-19 pandemic has exposed vulnerabilities in microenterprise practices but has also led to greater resilience, adaptability, and a renewed emphasis on digitalization, ethical lending, and financial inclusion in the sector's future outlook. According Yıldırım & Erdil (2023)The COVID-19 pandemic has brought about a seismic shift in the banking sector, catalyzing a rapid and comprehensive transition towards a digital-first approach. As lockdowns, social distancing measures, and health concerns made physical banking a challenge, microenterprise institutions had to adapt swiftly to ensure the uninterrupted delivery of financial services. This transformation extended across various facets of the financial landscape (Shafiai et al., 2022). Firstly, it accelerated the adoption of digital banking platforms, with a surge in online and mobile banking usage. Customers increasingly embraced digital channels for everyday transactions, from fund transfers to bill payments and even investment management. Secondly, the pandemic underscored the importance of contactless payments and digital wallets, propelling their popularity and rendering cash transactions less favorable. Thirdly, remote work became the norm for bank employees, leading to an emphasis on cybersecurity and remote access solutions to protect sensitive financial data. Moreover, artificial intelligence and automation gained prominence in customer service and fraud detection (Banna & Alam, 2021). Lastly, the crisis expedited the development and rollout of central bank digital currencies and digital payment infrastructure, reinforcing the trend towards a cashless society. This digital transformation is not only a response to immediate challenges but a glimpse into the future of banking, where technology, convenience, and security converge to reshape the way financial services are accessed and delivered(Yıldırım & Erdil, 2023).

BNM Second Financial Inclusion Framework 2023 – 2026

The purpose of BNM's 2nd Financial Inclusion Framework for 2023-2026 is to create a structured and comprehensive approach to advancing financial inclusion in Malaysia (BNM, 2023). By addressing barriers to access, promoting financial literacy, ensuring consumer protection, and harnessing the potential of technology, the framework aims to foster a more inclusive and resilient financial ecosystem that benefits all segments of society. It provides a clear roadmap with seven policy goals to fill existing gaps and speed up progress in financial inclusion, while also presenting key strategies to ensure the successful execution of the plan. The key objectives and purposes of the Second Financial Inclusion Framework 2023 – 2026 are as follows:

Key Objectives	Purposes
Enhancing Financial Access	The framework seeks to expand access to financial services for underserved and marginalized segments of the population, including low-income individuals, micro-entrepreneurs, and those in rural areas. By doing so, it aims to bridge the gap between those with access to formal financial services and those without.
Promoting Financial Literacy and Capability	It places a strong emphasis on improving financial literacy and capability among Malaysians. This includes initiatives to educate consumers about responsible financial management, budgeting, and understanding financial products and services.

Ensuring Consumer Protection	The framework is designed to ensure that financial products and services are transparent, fair, and in compliance with consumer protection regulations. It aims to safeguard the rights and interests of financial consumers.
Supporting Inclusive Growth	By promoting financial inclusion, the framework contributes to broader economic and social development goals. It recognizes that access to finance is a fundamental driver of economic empowerment and poverty reduction.
Leveraging Technology	The Second Financial Inclusion Framework acknowledges the transformative potential of digital financial services. It encourages the adoption of technology and innovative financial solutions to reach underserved populations and enhance the efficiency of financial service delivery.
Strengthening Collaboration	BNM collaborates with various stakeholders, including financial institutions, government agencies, fintech companies, and civil society organizations, to implement the framework effectively. Partnerships and cooperation are seen as essential to achieving the objectives of financial inclusion.
Monitoring and Evaluation	The framework includes mechanisms for monitoring and evaluating progress toward financial inclusion goals. Regular assessments help identify areas that require adjustment or additional focus.

Purpose of study

The purpose of this study is to comprehensively discuss the multifaceted landscape of microenterprises, focusing on the digital risks and challenges that shape this sector. In an era marked by increasing financial inclusion efforts and technological advancements, understanding the intricacies of microenterprises is pivotal. This research paper endeavours to shed light on the nuanced risk factors and challenges that microenterprise institutions and entrepreneurs encounter, ranging from digital risk and regulatory compliance to socioeconomic dynamics and technological disruptions. By dissecting these issues, this study aims to provide valuable insights that not only contribute to a deeper comprehension of the microenterprise ecosystem but also offer practical recommendations for enhancing its resilience, sustainability, and positive impact on underserved communities and small enterprises.

Method

The study relies solely on related literature and highlights the risks and challenges in Islamic microenterprise institutions. Reviews of previous studies normally have their own terminology in research methodology. This section covers the various facets of digital finance risk, including cybersecurity threats, data privacy concerns, and operational vulnerabilities, as well as how these risks may influence clients' trust, adoption, and engagement with technology-based banking services.

Findings

Issue 1: Digital finance-related risks

The ongoing digital finance is revolutionizing microenterprise. Digital platforms, mobile apps, and online lending platforms are making it easier for small businesses to access microenterprise services. These technologies streamline loan applications, disbursements, and repayments, reducing costs and increasing efficiency (Syed et al., 2022). To ensure the success of inclusive digital finance, regulators must be equipped with the appropriate tools for supervision and oversight (Yıldırım & Erdil, 2023). The transformation of financial services extends beyond traditional banking, encompassing a broader and more diverse array of participants, including non-banks such as FinTech companies (Al-Okaily et al., 2023; Elia et al., 2023) . In this evolving ecosystem, each entity assumes distinct responsibilities based on its area of expertise, often collaborating through intricate partnerships. Industry players play a pivotal role in orchestrating this intricate dance between digital finance and microenterprise, with a primary objective of advancing financial inclusion. To achieve this, they must identify opportunities to optimize synergies between these two domains. Key areas of focus encompass safeguarding consumers through robust consumer protection measures for digital financial services, ensuring compliance with Know Your Customer (KYC) norms to verify customer identities, effective credit risk management, data privacy safeguards, fostering innovation, streamlining reporting mechanisms, enhancing financial education, and addressing various other dimensions (Elia et al., 2023). In essence, microenterprise institutions must act as enablers, enabling a seamless integration of digital finance and microenterprise, and creating an environment that promotes financial inclusion while safeguarding the rights and interests of consumers. According (Muhammad Iqmal et al., 2023; Shaikh, 2021) Fintech innovations are playing a significant role in the future of microenterprise. Fintech companies are introducing innovative lending models, alternative credit scoring methods, and online marketplaces that connect small businesses with lenders and investors. This opens up new avenues for funding and financial inclusion. Nonetheless, microenterprise encounters many challenges and risks, particularly during times marked by crises and uncertainty, including natural disasters, pandemics, conflicts, or political instability (Belke & Beretta, 2020; Murthy & Gopalkrishnan, 2023). How can fintech, or financial technology, support the resilience and sustainability of microenterprise in these situations?

Issue 2: Client risks and challenges

According (Oladapo et al., 2022), one of the early challenges encountered when introducing a digital product is a lack of awareness among potential clients. This arises from the fact that clients need a clear understanding of the benefits a product or service offers and how to effectively use it. To address this challenge, it becomes essential to integrate client education into the digital product and service strategies of microenterprise and digital finance providers who partner in delivering these solutions (Eriksson et al., 2020). Microenterprise providers are well-aware of the significance of this challenge and are well-positioned to tackle it. They possess valuable assets in the form of loan officers and established customer relationships, which can be harnessed to provide the necessary education and support to clients. As digitalization progresses, some microenterprise institutions have gone a step further by digitizing loan reimbursements and savings collection processes. This transformation has opened up new opportunities for these microenterprise institutions to use group meetings as educational platforms or touchpoints with loan officers. These meetings serve a dual purpose: maintaining the trust relationship with clients while imparting essential knowledge about the digital products and services being offered. By providing real-time assistance and addressing any queries or concerns, loan officers play a pivotal role in demystifying digital tools and creating a supportive environment for clients transitioning into the digital financial landscape. Furthermore, microenterprise providers can collaborate with their digital finance partners to develop tailored educational materials, such as instructional videos, guides, or interactive tutorials. These resources can be easily accessed by clients, empowering them with the knowledge and confidence needed to make the most of the digital financial services on offer

(Abdulquadri et al., 2021). This not only enhances the client experience but also ensures the long-term sustainability and adoption of digital financial services.

The rise of digital technology is changing the banking world. Microenterprise institutions will focus more on serving customers better using digital platforms. Existing microenterprise institutions will need to change how they work (Chauhan et al., 2022). This digital change can make this industry more efficient, bring in new ways of doing things, and create a competitive financial system. This can help more people get access to financial services. But it might also make it harder for existing microenterprise institutions to make money, so they might take more risks. It's a competition to see who can do the best in this changing financial world.

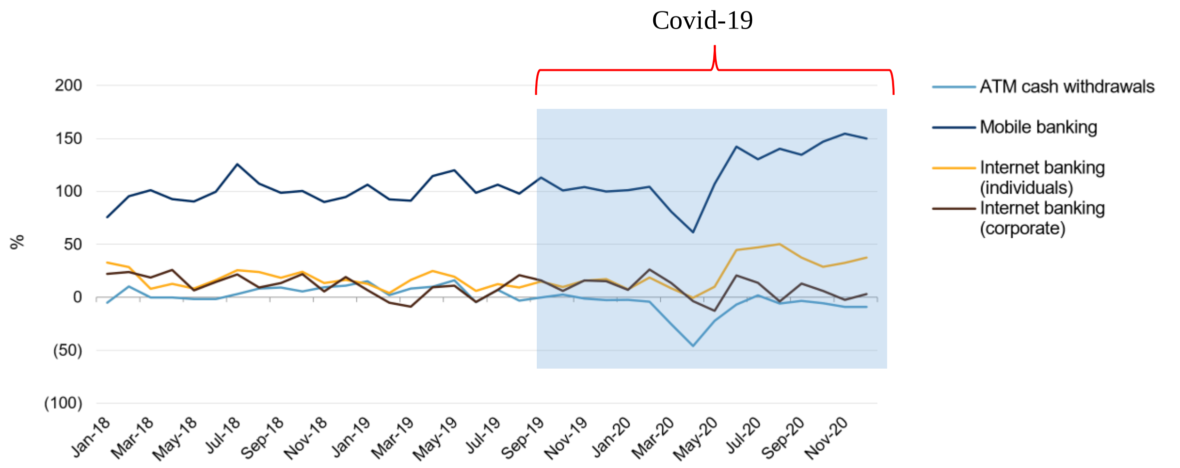

Figure 1. Mobile Banking: Malaysia's Fastest Growing Payment Channel (Year-on-year difference in transaction value)
Source: (BNM, 2021)Standard & Poor's Financial Services LLC (2021)

Figure 1 illustrates the progression of mobile banking in Malaysia spanning from 2018 to 2021. The graph delineates four distinct activities: conventional ATM cash withdrawals, mobile banking, individual internet banking, and corporate internet banking. The utilization of mobile banking services has experienced significant growth, whereas traditional ATM cash withdrawals have witnessed a slowdown, primarily attributable to the digital transformation within the financial sector. It's evident that mobile payments have become a standard global payment channel within the financial industry. Banks must leverage this advantage to enhance their customer service efficiency while simultaneously safeguarding customer privacy.

Benefits of digital finance

The financial sector is poised to harness numerous opportunities through the strategic deployment of digital technology, paving the way for a transformative future (Chauhan et al., 2022). Hence, digital technology enables financial institutions to enhance customer experience significantly. With user-friendly mobile apps and intuitive online platforms, customers can access a wide array of financial services, from account management to investment, with unprecedented ease and convenience. Moreover, data analytics and AI-driven insights empower banks to personalize offerings, providing tailored financial solutions that cater to individual needs (Jain & Raman, 2022). Nevertheless, digitalization optimizes operational efficiency. Automation of routine tasks, streamlined workflows, and improved data management reduce costs and errors while accelerating decision-making processes. Moreover, digital technology serves as a catalyst for financial inclusion. Mobile banking and digital wallets empower the unbanked and underbanked populations, granting them access to essential financial services and fostering economic participation. Blockchain technology also presents opportunities for enhanced security, transparency, and efficiency in transactions and record-keeping, benefiting not only traditional banking but also the burgeoning realm of cryptocurrencies and decentralized finance (Elsaid, 2021). In addition, digitalization opens up new horizons for financial innovation. Fintech startups are disrupting traditional models, offering innovative solutions in lending, payment processing, robo-advisors, and more, often collaborating with established financial institutions to harness their expertise and reach. Finally, digital technology's data-driven nature facilitates risk assessment and management, allowing banks to make more informed lending decisions and anticipate potential financial downturns. By capitalizing on these opportunities, the financial sector can embrace a digital future that not only benefits institutions' profitability but also enhances the overall financial well-being and accessibility for individuals and businesses alike (Bapat, 2022).

Digital finance offers a multitude of advantages in cost reduction for customers within the banking sector (Elsaid, 2021). Firstly, it eliminates the need for physical branches and associated operational expenses, leading to lower overhead costs. This, in turn, enables banks to offer competitive interest rates and reduced fees to customers. In addition, the convenience of conducting transactions online or via mobile applications reduces the need for customers to travel to physical bank locations, saving both time and transportation costs. Moreover, digital finance allows for streamlined and automated processes, reducing the administrative burden on microenterprise institutions and potentially lowering service charges. Hence, increased competition among digital banks and fintech companies drives innovation and cost-efficiency in the industry, ultimately benefiting customers through improved financial products and services at more affordable rates.

Discussion and Conclusion

Digital finance has undeniably brought about both risks and challenges within the financial sector, notably concerning data security, customer adoption hurdles, and varying degrees of technology literacy. While these concerns are valid, it is equally crucial to recognize the immense potential for microenterprise institutions to leverage technology to enhance their services. Rather than shying away from digitalization, microenterprise institutions should embrace this advantage to better serve their customers. The key lies in implementing robust security measures to protect sensitive data, simplifying technology interfaces to make them more user-friendly, and investing in technology literacy programs to bridge the digital divide. By striking this balance, financial institutions can harness the power of digital finance to provide customers with improved services that are both secure and user-friendly, fostering a win-win scenario for all stakeholders in the financial ecosystem. The purpose of the BNM Second Financial Inclusion Framework for the period 2023 to 2026 is to continue and expand upon the central bank's commitment to advancing financial inclusion and ensuring that a wider segment of the population has access to a broad range of financial services and products. This framework is designed to build upon the achievements and lessons learned from the previous financial inclusion initiatives while addressing emerging challenges and opportunities in the financial landscape.

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References

Abdulquadri, A., Mogaji, E., Kieu, T. A., & Nguyen, N. P. (2021). Digital transformation in financial services provision: a Nigerian perspective to the adoption of chatbot. *Journal of Enterprising Communities*, *15*(2), 258–281. https://doi.org/10.1108/JEC-06-2020-0126

AfPI. (2018). *Digital transformation of Microfinance and Digitalization of Microfinance Services to Deepen Financial Inclusion in Africa*.

Aftab, R., Naveed, M., & Hanif, S. (2021). An analysis of Covid-19 implications for SMEs in Pakistan. *Journal of Chinese Economic and Foreign Trade Studies*, *14*(1), 74–88. https://doi.org/10.1108/JCEFTS-08-2020-0054

Al-Okaily, M., Alsmadi, A. A., Alrawashdeh, N., Al-Okaily, A., Oroud, Y., & Al-Gasaymeh, A. S. (2023). The role of digital accounting transformation in the banking industry sector: an integrated model. *Journal of Financial Reporting and Accounting*, 2022–2023. https://doi.org/10.1108/JFRA-04-2023-0214

Asian Development Bank. (2016). *Impact of Restrictions on Interest Rates in Microfinance* (Issue 45). www.adb.org

Banna, H., & Alam, M. R. (2021). Impact of digital financial inclusion on ASEAN banking stability: implications for the post-Covid-19 era. *Studies in Economics and Finance*, *38*(2), 504–523. https://doi.org/10.1108/SEF-09-2020-0388

Bapat, D. (2022). Exploring the relationship between lifestyle, digital financial element and digital financial services experience. *International Journal of Bank Marketing*, *40*(2), 297–320. https://doi.org/10.1108/IJBM-12-2020-0575

Belke, A., & Beretta, E. (2020). From cash to central bank digital currencies and cryptocurrencies: a balancing act between modernity and monetary stability. *Journal of Economic Studies*, *47*(4), 911–938. https://doi.org/10.1108/JES-07-2019-0311

BNM. (2021). *Malaysia ' s Payment Statistics Statistics on Payment and Settlement Systems (PSS) in Selected Countries* (Issue July).

BNM. (2023). *Financial Inclusion Framework (2023–2026) Strategy Paper* (Issue June).

Chauhan, S., Akhtar, A., & Gupta, A. (2022). Customer experience in digital banking: a review and future research directions. *International Journal of Quality and Service Sciences*, *14*(2), 311–348. https://doi.org/10.1108/IJQSS-02-2021-0027

Elia, G., Stefanelli, V., & Ferilli, G. B. (2023). Investigating the role of Fintech in the banking industry: what do we know? *European Journal of Innovation Management*, *26*(5), 1365–1393. https://doi.org/10.1108/EJIM-12-2021-0608

Elsaid, H. M. (2021). A review of literature directions regarding the impact of fintech firms on the banking industry. *Qualitative Research in Financial Markets*. https://doi.org/10.1108/QRFM-10-2020-0197

Eriksson, K., Hermansson, C., & Jonsson, S. (2020). The performance generating limitations of the relationship-banking model in the digital era – effects of customers' trust, satisfaction, and loyalty on client-level performance. *International Journal of Bank Marketing*, *38*(4), 889–916. https://doi.org/10.1108/IJBM-08-2019-0282

Gani, I. M., & Bahari, Z. (2020). Islamic banking's contribution to the Malaysian real economy. *ISRA International Journal of Islamic Finance*, *13*(1), 6–25. https://doi.org/10.1108/IJIF-01-2019-0004

Jain, N., & Raman, T. V. (2022). The interplay of perceived risk, perceive benefit and generation cohort in digital finance adoption. *EuroMed Journal of Business*. https://doi.org/10.1108/EMJB-09-2021-0132

Kismawadi, E. R. (2023). Contribution of Islamic banks and macroeconomic variables to economic growth in developing countries: vector error correction model approach (VECM). *Journal of Islamic Accounting and Business Research*. https://doi.org/10.1108/JIABR-03-2022-0090

Kumar, S., & Singh, N. (2021). Entrepreneurial prospects and challenges for women amidst COVID-19: a case study of Delhi, India. *Fulbright Review of Economics and Policy*, *1*(2), 205–226. https://doi.org/10.1108/frep-09-2021-0057

Malanga, D. F., & Banda, M. J. (2021). The use of mobile phones by women microenterprises in Malawi: a sustainable livelihoods perspective. *Global Knowledge, Memory and Communication*, *70*(8–9), 777–800. https://doi.org/10.1108/GKMC-09-2020-0143

Mohd Thas Thaker, M. A. Bin, Mohammed, M. O., Duasa, J., & Abdullah, M. A. (2016). Developing cash waqf model as an alternative source of financing for micro enterprises in Malaysia. *Journal of Islamic Accounting and Business Research*, *7*(4), 254–267. https://doi.org/10.1108/JIABR-09-2014-0029

Muhammad, A. (2009). Grameen and Microcredit: A Tale of Corporate Success. *JSTOR Economic and Political Weekly*, *44*(35), 35–42.

Muhammad Iqmal, H. K., Mustafa Mohd, H., Shaharuddin, A., Abdullah Mohammed, A. A., & Nur Adilah, O. (2023). Development of Fintech in Islamic Social Finance in Malaysia. *International Journal of Economics, Management and Accounting*, *31*(1), 177–204.

Mukherjee, S. (2023). The business model canvas of women owned micro enterprises in the urban informal sector. *Journal of Enterprising Communities*, *17*(2), 398–418. https://doi.org/10.1108/JEC-05-2021-0068

Murthy, N., & Gopalkrishnan, S. (2023). Exploiting fear and vulnerabilities of senior citizens: are regulatory changes required to prevent digital frauds? *Working with Older People*, 2022–2023. https://doi.org/10.1108/WWOP-06-2023-0021

Oladapo, I. A., Hamoudah, M. M., Alam, M. M., Olaopa, O. R., & Muda, R. (2022). Customers' perceptions of FinTech adaptability in the Islamic banking sector: comparative study on Malaysia and Saudi Arabia. *Journal of Modelling in Management*, *17*(4), 1241–1261. https://doi.org/10.1108/JM2-10-2020-0256

Ozili, P. K. (2018). Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, *18*(4), 329–340. https://doi.org/10.1016/j.bir.2017.12.003

Rahman, M. J., Zhu, H., & Chen, S. (2023). Does CSR reduce financial distress? Moderating effect of firm characteristics, auditor characteristics, and covid-19. *International Journal of Accounting and Information Management*. https://doi.org/10.1108/IJAIM-04-2023-0081

Ruslan, R. A. M., Shafiai, S., Chua, M.-S., & Roslen, S. N. M. (n.d.). *View of Unraveling the Determinants of Microcredit Interest Rate*.

Shafiai, S., & Ali, E. R. A. E. (2018). Risk Management in Islamic Finance: What does Islam Say about Mukhāṭarah? *AL-ITQĀN*, *Special Is*(November), 81–93.

Shafiai, S., & Ali, E. R. A. E. (2019). *The Need for Credible Reporting of Shariah Non-compliance Event by Islamic Banks in Malaysia* (N. Z. M. Sidek, R. Said, & W. N. W. Hasan (eds.)). Springer Singapore.

Shafiai, S., Engku Ali, E. R. A., Hassan, R., & Rashid, I. M. A. (2022). Implications of COVID-19 Towards Islamic Banks Practices in the Risk Management August. In

Selected Proceedings from the 1st International Conference on Contemporary Islamic Studies (ICIS 2021) (Issue 25). Springer International Publishing. https://doi.org/10.1007/978-981-19-2390-6

Shaikh, S. A. (2021). Using Fintech in scaling up Islamic microfinance. *Journal of Islamic Accounting and Business Research*, *12*(2), 186–203. https://doi.org/10.1108/JIABR-10-2019-0198

Syed, A. A., Özen, E., & Kamal, M. A. (2022). Do Digital Financial Services Influence Banking Stability and Efficiency: an Ardl Analysis of a Developed and a Developing Economy. *Contemporary Studies in Economic and Financial Analysis*, *109A*, 13–30. https://doi.org/10.1108/S1569-37592022000109A002

Wood, L. (2023). *Microfinance Market Research Report 2023 - Cumulative Impact of COVID-19 , Russia Ukraine Conflict , and High Inflation - Global Forecast to 2030*. https://www.researchandmarkets.com/r/myuqcw About

Yıldırım, A. C., & Erdil, E. (2023). The effect of Covid-19 on digital banking explored under business model approach. *Qualitative Research in Financial Markets*, 2022–2023. https://doi.org/10.1108/QRFM-08-2021-0142