Fintech is a combination of finance and technology aiming to provide better solutions in the financial world by using modern technology. For instance, with Fintech tools the banking and non-banking institutions are upgrading the payment and intermediation systems to the next level such as the usage of cell phones in financial transactions and digital finance institutions. According to a survey by Gallup financial institutions are paying more attention to social media interactions in order to rethink their product development process.

Islamic finance is necessarily social finance not only in terms of facilitating the transfer of resources from the rich to the poor through zakāh, sadaqā and waqf, but also by providing finance to effectively link credit and finance with the real economy. It could enhance the social, ethical, environmental, and financial performance of Islamic financial institutions (IFIs) for the benefit of the stakeholders rather than just being limited to Sharī’ah compliance in form while serving only the shareholders. In this perspective, the target in terms of business must be promoting entrepreneurship at the micro level, enhancing financial and social inclusion, and reversing the process of widening the gap between the rich and the poor in the society.

The Islamic finance industry is also fully engaged with fintech, as both Fintech and Islamic Fintech share a similar definition, except for the Sharī’ah compliance requirement in Islamic finance. Accordingly, no financial transaction is allowed, irrespective of the level of technology involved, which does not conform to the tenets of the Sharī’ah.

According to Jaseem Ahmed, former Secretary-General of the Islamic Financial Standard Board (IFSB) “There are tremendous opportunities for Islamic Fintech and Islamic banking institutions are taking up Islamic Fintech to reach out and improve the attractiveness of their products at a lower cost”. The technologies such as Big Data, Artificial Intelligence, business analytics, personalized digital services (e.g., robot-based advisors, and financial support), and open banking-related initiatives are potentially reshaping the financial sector leading to quicker finance solutions and better customer experience for individuals and SMEs with automation and lower transaction cost.

When we redefine the role of the Islamic finance industry (IFI) in the Industry 4.0 world, finance becomes the beneficiary of the technological transformation. As such, it provides
the IFI tremendous potential to leverage the change. Importantly, the Islamic financial system needs to be redesigned (as fintech supported by web 3.0 is challenging the traditional business model of financial institutions) in order to attain a socially optimal level of maturity transformation and sustainable and equitable funding opportunities to the productive industry and its respective value chains. Some recent global trends are given below:

- **GAFA Pay** is a digital payment system by the big 4 techs, Google, Apple, Facebook, and Amazon, a fintech venture to achieve diversity and financial inclusion.

- ‘Fnality International’, which started exploring how Blockchain and Distributed Ledger Technology (DLT) could be used for settling securities trading, would be developing digital currencies like USD, EUR, CAD, JPY, and GBP to be backed by central banks.

- **JP Morgan** is experimenting JPM Coin which is its own crypto.

- **Al Hilal Bank** is leveraging blockchain technology for the resale and settlement of ṣukūk and other Islamic capital market instruments.

- The Emirates Islamic Bank has introduced blockchain technology into its cheque-based payment system.

In the modern era of Web 3.0 and fintech, the IF industry has yet to explore the potential both at national and global levels. As an example, the traditional social institutions of zakāh, ṣadaqāh and waqf have a tremendous potential to be revolutionized for shared growth and welfare of underprivileged people. These institutions that could collectively be termed as the tools of philanthropy for welfare are emerging as global phenomena not restricted to Muslim majority countries only but have been aligned to several SDGs such as SDG 1 (no poverty), SDG 2 (zero hunger), SDG 3 (reduced inequalities), SDG 16 (Promote peaceful and inclusive societies for sustainable development), etc. The main issue with the zakāh fund is its effective utilization to the really deserving beneficiaries, in addition to mobilization. It requires using digital technologies for E-KYC for its better distribution and enhanced collection of funds to unlock the true potential of Islamic philanthropy. **Waqf** is also among the leading charitable modes of social finance that could play a role in broad-based welfare of the community. Currently, **waqf** is facing challenges regarding the legal, management, and governance structures. Technology can take care of many operational issues in this context provided the requisite framework is provided that would encourage the philanthropists to contribute through the awqāf system.

Many issues pertaining to **waqf** could be resolved using solutions provided by blockchain for fundraising and respective administrative issues like lack of security, low transparency and inefficiency. The study report on the potential role of **waqf** as a financial intermediary prepared by the researchers of RCIB and submitted to the HEC in February 2023 provides detailed discussions on the **waqf**-related frameworks and structures, also including the Fintech. Malaysia-based ‘Finterra Technologies’ is a blockchain-based social finance fintech company that provides easy cash **waqf** opportunity and **waqf**-projects participation solutions through crowdfunding. Replicating such initiatives in all markets could help in overcoming the
challenges being faced by the social institution of waqf.

According to the World Bank data, most formal jobs in emerging markets are generated by SMEs, which create 7 out of 10 jobs. However, access to finance is a key constraint to SME growth. SMEs’ unmet financing need is $5.2 trillion every year, which is equivalent to 1.4 times the current level of global SME lending. According to the World Bank, the expected market of crowdfunding could be worth around $39.79 billion. This overwhelming response may lead to altering the global innovation ecosystem by microbusinesses and startups. Waqf and other social funding tools can play a role through technological solutions such as Crowdfunding.

In the same vein modern technological interventions are needed in other important tools such as šukūk for raising capital by the corporate and micro entities. As promoting entrepreneurship is an effective solution to the currently faced problems in economies like that of Pakistan, smart-šukūk for small business and production projects could be the best tool for microfinance both for the investors and the entrepreneurs. Smart šukūk could also facilitate micro-takāful, and other cooperative risk mitigation techniques to create an equitable and sustainable financial ecosystem. The fintech wealth management business model automates wealth managers (Robo-advisors) to provide financial and investment consultation. For developing the Islamic capital market at the micro level, mutual fund marketplace and financial robo-advisory solutions could play a crucial role in involving small investors in promoting equity finance.

Islamic Fintech ecosystem comprises a variety of business models with main functions such as deposit taking, borrowing/lending, treasury, trade financing, wealth management and takāful. The literature has indicated the application of these models for all finance-related operations from funding, financing, investing and wealth management. Based on the technological revolution, Islamic financial institutions have to leverage emerging technology to advance economic and social goals by embracing it as an opportunity, because its potential for social impact, in addition to business, is enormous.

The Fintech crowdfunding business models could especially revolutionize Islamic social finance functions. Crowdfunding activities can be classified into four models, namely, donation-based; reward-based; debt-based/peer-to-peer (P2P); and equity-based. FinTech can help social finance by poverty alleviation, helping any calamity-affected areas/persons, and by promoting entrepreneurship by financing micro businesses, cottage industries for women empowerment, farms, and SMEs, and for financing health, education, small housing, and other social sectors. Developing the fintech ecosystem is specifically urgent for economies like that of Pakistan where the entire financial system is to be transformed to Islamic principles of finance pursuant to the judgment of the Federal Sharī‘at Court (2022).

Equity crowdfunding could facilitate social/small housing, SME financing, small tech companies, income-generating assets, and impact investment opportunities. Charity crowdfunding is an effective tool for channeling cash into welfare activities through zakāh, ‘ushr, šadaqāt and waqf.

Crowdfunding platforms are needed for matching donors and campaign runners and support to individuals in raising funds for emergencies. Property crowdfunding platform would
facilitate the participation of common investors in social housing schemes for low-income groups, government employees, and staff of private entities. ETHIS Crowd platform is operating in Indonesia since 2014 to provide opportunities for social housing development projects. Similarly, the Agritech financing platform in Indonesia is providing farmers with access to finance, training, knowledge, and the market. The impact of big data on fintech horizontal-technologies business models could have negative implications as well in the context of social finance. This segment, increasingly moving to gaming and online video racing, an immoral activity as per any ethical and sustainable activities, could be a way of financial inclusion. In Islamic perspective, however, fintech entities must avoid gambling activities that currently have become an increasing part of the gaming industry. As such, for Islamic Fintech companies social finance is the best option to realize the economic as also ethical objectives of value-based finance.

Effective governance is required to strengthen security and online protection in any fintech model. The regulatory technology or regtech may have to step up its proactive regulations to regulate fintech applications. Further, the regulators are desired to take steps to improve public perception about the Islamic banking and finance institutions. The third strategic plan (2021-2025) of the State Bank of Pakistan is said to have an “extensive focus on improving public perception of Islamic banking as a distinct and viable system capable of catering to financial services needs of various segments of the society. It would capitalize on the potential of Islamic finance for achieving the shared vision of a vibrant and sustainable Islamic banking sector in Pakistan”. The use of technology, whether in the collection or distribution of social funds, is necessary to ensure a more efficient and systematic zakāh and awqāf management that contributes to social justice. The IFIs can take advantage of Fintech innovations to gain a competitive advantage, lower the prices of their products, and close the credit gap facing the financially excluded population. Lastly, the laws, rules, and regulations covering Fintech companies providing digital.smart solutions to individuals, firms, corporate bodies, NPOs, social sector entities, and State institutions have to be introduced and implemented effectively.

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