

## **Abstract**

**Book Title – *Fintech in Islamic Finance: Theory and Practice.***

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### **Chapter 4 : *Fintech: An Opportunity to Move from Collaborative Finance to Community-based Finance***

Finance has been one of the most affected industries in this new techno-collaborative economy, transforming the world of finance in un-precedent ways.

In this new emerging environment, is Islamic finance, well placed?

This chapter analyzes three fundamental aspects of the Islamic fin-tech phenomena :

- The new collaborative economy and the sociological elements behind this new form of group economic relationships.
- Collaborative Fintech, the chapter will then explore new forms of technological financial intermediation devices being launched in the market between capital holders and capital seekers,
- Finally the chapter will explore the strengths and challenges for Islamic Finance. Would the industry become agile and flexible as the new financial forms demand?, or traditional slow procedures will hamper creativity by an excessive demand to standards compliance?. Would the Islamic finance new thinkers and scholars be able to create a new guidelines of principles for the new fin-tech devices? Would the young entrepreneurs in the Muslim world team up with the established industry to create a new Islamic fintech ecosystem. And most of all, would the new technology help in putting finance at the service of the community as inherent in Islamic Financial principles?.

## Chapter 4

### *Fintech: An Opportunity to Move from Collaborative Finance to Community-based Finance*

Celia de Anca

#### Introduction

Collaboration is the watchword of our times: co-creation, co-sharing, co-working, co-design, co-thinking, and particularly co-finance. Working with others is a key element in the new forms of economic activity. Is this the result of new technological developments or collaborative communities that have used new technologies to adapt to the emerging collective paradigm? Either way, the techno-collaborative economy has arrived, and all the signs suggest it will be with us for many years to come.

Finance has been particularly affected by this new techno-collaborative economy. Automated complex reasoning, big data, blockchain and other technologies included under the generic heading of Fintech are transforming the world of finance in unprecedented ways. Fintech is not only transforming the way we make financial transactions, but also the way we connect, creating a global ecosystem of capital holders and capital seekers that connect outside the mainstream financial intermediation institutions, and that is often referred to as the democratization of investment.

How well-placed is Islamic finance in this emerging environment? In many ways, collaborative finance has always been at the core of Islamic finance principles. That said, Islamic finance has very precise rules and a legal monitoring process that these agile communities lack and are unlikely to adopt.

This chapter analyzes three fundamental aspects of Fintech solutions in Islamic finance: firstly, the new collaborative economy and the sociological elements behind this new form of collective economic relationships. Secondly, collaborative Fintech, and new forms of technology-driven financial intermediation solutions being launched in the market between capital holders and capital seekers. Finally, the chapter explores the opportunities and challenges for Islamic Finance. Could the industry become agile and flexible, as new financial forms require, or will its slower procedures and standards compliance requirements hamper creativity? Could new thinkers in Islamic finance create guidelines for Fintech? Could the new generation of entrepreneurs in the Muslim world team up with the established industry to create a new Shari‘ah-compliant Fintech ecosystem? And importantly, could new technologies help place finance at the service of the community as is inherent within Islamic finance principles?

### **Community at the heart of the collaborative economy: The story of Ahmed Barrad**

Ahmed, lives in south Spain. “He is Muslim, Granadino, Engineer, Ecologist, and Real Madrid Fan”. These are the very words he uses when asked about his identity, by order of priority, he normally adds. Muslim and born in Granada by birth; a Real Madrid fan and engineer by choice. Proud of all his identities, and living them to the full, when he thinks about what he want to do in the future, particularly in terms of his career, he believes he can make an important contribution to the environmental community. He and his friends are developing ideas in the agribusiness sector he believes can improve greatly the lives of the people in the communities he shares, while allowing him to make a living at the same time. Work is hard to find in Spain after the 2008 global financial crisis, but he has managed to make a living from his shared communities, saying he prefers earning around €1,000 a month working on a common good project than three times that figure working with people whose values and objectives he does not share.

Skilled in IT, he is up-to-date with the latest apps and the possibilities of the Internet of Things. He and a group of people with the same ideals have created a platform called *Al-Andalus Nature* that uses an app he designed to connect consumers with producers of tropical fruits, specifically mangoes, avocados, kiwis and

others, organically grown on the Malaga and Granada coast as well as in northern Morocco. The platform also offers a series of mechanisms to arrange logistics, obtain licenses and to transport produce from the seller to the consumer, and from which he takes a small share.

Now Ahmed and his partners are designing an innovative payment system based on Islamic principles that will allow producers and consumers to trade without interest. Buyers commit to buy part of the production in advance, allowing producers to purchase equipment and other resources. They are also designing a cryptocurrency that can be used to pay part of the transaction, but that also will help create an internal community of goods and services among the users of the platform.

Ahmed's story is not unusual: well-educated young people all over the world have similar dreams. Some of them have ended in success stories backed by big capital venture funds, while others have managed to survive without much capital but with a dedicated client base, while others have failed after a few months. By analyzing three main aspects of Ahmed's experience, we can identify the role of such stories in the emerging paradigm of collaborative initiatives within an ecosystem of technological mechanisms applied to finance, and particularly to Islamic finance. Such an analysis can shed light on new ways of doing business that are not only disruptive in terms of technology, but also in the management of new economic units, while at the same time challenging traditional approaches to doing business.

The three main elements to further explore are: a new community drive applied to a new way of doing business in the collaborative economy; new connectivity technologies that help change financial transactions; and how Islamic finance principles can adapt to these new ways of doing business. The rest of the chapter will be analyzing each of these elements.

### **The emergence of community-based finance in the collaborative economy**

The sharing economy is generally defined as “the peer-to-peer-based activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based online services” (Hamari et al., 2015, p.1). As the definition suggests, the sharing or collaborative economy includes three different types of actors.

1. Providers who share goods or services on an occasional basis;
2. The users of these good or services; and
3. The developers of collaborative platforms that connect the two other players.

Collaborative economy transactions generally do not involve a change of ownership and can be carried out for profit or not-for-profit. (COM(2016)). While initial numbers are still low, at around \$14 billion, many experts estimate the potential for growth in the sharing economy as being up to \$335 billion in 2025 (Niam and Shamika 2017). In the European Union alone, it is estimated that collaborative platforms generated revenues of €3.6 billion in 2015, approximately 0.2 % of the EU’s GDP. (COM(2016))

On average, more than 85% of gross revenue generated by collaborative economy platforms goes to providers. The internet has been the main driver of the collaborative economy, and particularly the use of smartphones, providing the basis for developing collaborative platforms and for linking them with service providers and purchasers. In addition to the role of the internet, other social factors such as population density have played an important role in the development of the collaborative economy, since larger populations in cities have provided the critical mass to support online shared services (Niam and Shamika 2017).

In addition to new technological solutions and population density, a sociological phenomenon that some sociologists have labeled a “new tribalism” (Maffessoli, 1988) has emerged: a new form of being together that means sharing our emotional and productive lives. In this new paradigm, individuals seek to transcend their individualities by playing a role in open and free tribes that provide them with temporary identification. A similar concept was used by Castells (2004), called *project identities*, whereby individuals link their personal projects together with others for a common good.

These *projected identities* are one result of the emerging forms of relationships enabled by new information and communication technologies, creating network societies in the process. According to Castells, these networks allow for a new kind of social relationship characterized by collective behaviour rather than a collective sense of belonging (Castells, 2004).

It is now a question of individuals choosing identities that they consciously want to be a part of and contribute to. These digital communities are not only a way to share experiences, but a new way of projecting economic ideals with people that might be of different origin or creed, but with whom we share the same goals and values and with whom we want to build a common project. Community then is not an end but the means for a common project to be successful.

The fact that this new form of togetherness is a product of decision and not of necessity is what makes it so rewarding to participate in. These communities of the network society, unlike those of the 1960s, are much more about sharing ideas and projects than sharing feelings—i.e., feeling good is fine and desirable, but it is not the primary objective for joining.

The collective energy of the new paradigm—whether labeled *projected identities* (Castells 2004), *aspirational identities* (de Anca 2012), or *liquid identities* (Bauman 2008) —represents a form of temporary engagement to a group that is bound together by a common interest and that uses the differences between its members to collaborate, co-create, or execute other kinds of joint action within a collaborative economy.

Shared action is the driving force behind collaborative economics. According to Von Mises (1949), the central issue in traditional economies is action as an individualistic application of human reason to select the best means of satisfying individual ends. In a complementary way, the collaborative economy could be defined as the joint application of human reason to select the best means of satisfying the collective ends of the group. Collaborative economics is defined by two complementary factors: the collaborative nature of needs (ends) and means. To qualify as collaborative, an activity must satisfy a shared need within a group.

For example, car sharing is a response to a shared need for transportation. The sharing economy implies a collective use of need-oriented means within the group to satisfy a previous need.

The collaborative economy is prominent in five key sectors; peer-to-peer accommodation; peer-to-peer transportation; online skills, comprising either on-demand household services or on-demand professional services; and collaborative finance.

Collaborative finance is a fundamental element within the collaborative economy. Collaborative finance takes advantage of the disintermediation process that began in the 1970s and that has accelerated more recently through new technological developments. Financial institutions are no longer the only intermediaries between savers and borrowers, and instead a myriad of online platforms now channel cash into different projects, initiatives, or to borrowers.

A specific form of collaborative finance is **community-based finance**, which can be defined as a form of cash-flow that channels the financial resources of savers in a community into the wellbeing of that community via economic activities, which members of the community believe should be undertaken and therefore willingly support with their savings (de Anca 2012).

Community finance not only takes advantages of the opportunities provided by new means of financial disintermediation and the channels opened by technology, but represents a change in people's values: a step further in the movement that was initiated in the 1970s, linking values with finance. At that time, investors demanded greater transparency in investments, and specifically they wanted to invest in projects in line with their values. This value-based financing involved many popular initiatives, including ethical banking, microfinance, co-operative banking and Islamic finance. What all these have in common is a belief that the financial institution, regardless of its size, is there to serve the community at local or global level.

The binding element that creates a community can be of two kinds, either a proximity of space, as with some cooperative banking elements, or a proximity in values, that can be the binding element of financial transactions, including ethical or Islamic finance, or some crowdfunding operations. The feeling of proximity drives savers and borrowers to work for the community, to produce the goods and services they believe will help their community to advance.

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### **Disruptive technologies in the era of hyper-connectivity**

In a recent financial report, (De la Torre; Torralba 2017) a number of reputed financiers identified five main technologies as the basis for technological disruption, among them artificial intelligence (AI) and its robotic implications, the internet of things (IoT), autonomous vehicles, Blockchain, and 3D and 4D printing. These five technologies will disrupt the future of key sectors of the economy and are driving the venture capital revolution. Especially relevant for the financial industry are AI, blockchain and the IoT, the basic technologies that make up Fintech. “Fin Tech usually refers to the segment of the technology start-up scene that is disrupting sectors as such as mobile payments, money transfers, loans, fundraising and asset management.” (De la Torre, Torralba p 3).

Artificial intelligence (AI) enables computers to replicate tasks or responses traditionally considered the domain of humans. When applied to replicating human thinking and supplied with enough data, general AI can perform accurate financial predictive analytics. When the purpose is applied to automating various daily tasks to improve efficiency, the process is called narrow AI (De la Torre, Torralba 2017, p 11).

The key to the internet of things is the smartphone, now used by more than half of people on the planet. Using smartphones, transmitters can be located in large interconnected networks where data can be shared, analyzed and managed (De la Torre, Torralba 2017, p 13).

Blockchain is essentially a transaction log. With this new technology based on decentralized and encrypted information, it is possible to manage records of transactions in a decentralized and comprehensive manner, creating trust between all parties, since any information can be verified (De la Torre, Torralba 2017). Blockchain became popular with cryptocurrencies, in particular bitcoin, “however, the capacity to be able to record any transaction in a secure way, eliminating intermediaries, will soon make it possible to carry out international payments at zero cost, and can thus be used to simplify the process of buying shares, contract enforcement, smart contracts facilitate tax connection etc.” (De la Torre, Torralba 2017 p.19).

The revolution initiated by these three technologies is transforming the way we make payment exchanges and especially the relationship between capital holders and capital seekers, whether through the intermediation of a financial institutions or without it. This revolution has produced an emerging ecosystem of start-ups finding solutions to connect savers and borrowers directly, while the traditional financial industry has also responded with its own innovations.

### **Fintech and the democratization of finance in the collaborative economy**

The trend toward financial disintermediation reflects the desire for stronger links between the real economy and the financial sector that emerged in the wake of the 2008 financial crisis, partly caused by the overabundance of derivatives and complex synthetic products. The resulting mistrust toward banks has sparked a growing movement of young people all over the world to invest or borrow without intermediaries. These new ventures, which in the opinion of some experts could create a \$90 billion investment market by 2020 (Barnes 2016), take advantage of technological innovation, and most of all, of the global use of the internet and smartphones.

By connecting through digital platforms, savers and borrowers have driven a return to the real economy, and more importantly, these alternative financing methods claim to be transparent, giving both savers and borrowers more direct control over their finances.

The terms collaborative finance, internet finance, or generic alternative finance, as outlined by Milne and Parboteeah (2016), encompasses a number of business models, such as:

- **Peer to peer finance**, also called marketplace lending, which consists of online platforms such as Prosper or Zopa, that directly connect savers and borrowers.
- **Crowdfunding refers** to platforms such as Crowdclub or Angellist, where money is raised for an specific projects by a number of smaller individual contributions.
- **Foreign exchange services** include platforms like CurrencyFair or CurrencyCloud, where international traders can directly find their currency needs.
- FirstCircle or Kabbage are platforms to provide cash to **small businesses**
- Platforms, such as MarketInvoice, which specializes in **invoice discounting**, offer small firms ways to improve their cash flow by securing advances from investors against due invoices
- Finally, one of the most popular innovations has been **cryptocurrencies** like bitcoin or litecoin, which use blockchain technologies to create digital money without a central issuer, allowing instant, online payments.

The first Fintech start-ups were Peer to Peer (P2P). P2P began with the establishment of UK-based company Zopa in 2005 and the US-based Prosper in 2006. Both facilitated lending directly from savers to borrowers without the use of banks. P2P still represents less than 1% of total banking lending. However, in some countries such the UK, P2P lending has become an important source of loans for smaller companies, amounting to 13% of new conventional bank loans to firms with turnovers of less than £1-£2 million per year. (Bajpai, 2016)

Crowdfunding followed P2P. It generally refers to an open call to the public to raise funds for a specific project, which can be for profit or non-profit. Funding can come in different ways: non-returnable cash donations, sponsoring through crowdfinance, when donors receive something in return for donations in a non-cash form. Crowdfunding can also come in the form of profit-sharing schemes. Finally, there are crowdfunding lending companies, whereby savers lend cash, with or without interest. COM (2014)

Among the users of crowdfunding are SMEs, startups, micro-entrepreneurs, social entrepreneurs, the self-employed, the cultural and creative sectors, public authorities, innovative or environmental projects, public interest bodies, researchers, consumers or the unemployed. COM (2014).

### **The financial industry's response to Fintech**

A 2017 PwC global survey of 1,308 financial services and Fintech executives of the transactions customers were conducting via Fintech companies showed that among the activities executives perceived most likely to be lost to these new on-line ventures, were, in order of priority: payments, fund transfers, personal finances, personal loans, traditional deposits and insurance and wealth management, (Global Fintech Report 2017)

Although the Fintech movement has been driven by independent startups, looking to new spaces for disintermediation and capturing some business away from the banks, the traditional financial industry has begun fighting back. A business that began with a network of small ventures is increasingly turning into a broader ecosystem of different businesses, new startups, plus traditional financial institutions looking in many cases for partnerships (PwC 2017). Both parties are benefitting from the new partnership schemes: traditional financial institutions by partnering with innovators in outsourcing part of their R&D and bringing solutions to market quickly; while Fintech companies also benefit from these partnerships, as they need both financing to try out new models, as well as a large customer base to try out their new mechanisms. New partnering schemes are producing a change from B2C to B2B business models, for example robo-adviser

products are now starting to be used by financial institutions to cater to their installed client base. (Global Fintech Report 2017)

### **Is the Islamic finance industry ready for Fintech?**

The Islamic financial industry is young, highly technological and with the excess liquidity required to finance innovation. Moreover, this global network of young Muslims, experienced and educated in finance, new technology and big data, is eager to contribute to new ventures based on an Islamic principles. It is hardly surprising that the Islamic Fintech Industry is growing more quickly than its conventional equivalents.

In this context, there are three areas worth exploring: new independent ventures created in the Islamic Fintech ecosystem; the response by Islamic financial institutions; and institutional support to promote Fintech innovation in leading Muslim countries.

In the emerging Islamic Fintech landscape, the IFN Fintech platform, supported by the REDmoney group, a financial based media company with a specific focus on the global Islamic finance industry, has been tracking the landscape of new Fintech ventures with either Shariah-certified products, or that are in the process of securing a Fatwa. (ifnFintech 2017 (a) In its December 2017 report, ifnFintech identified 116 Fintech companies in 24 countries, particularly in Malaysia, the UAE, and Indonesia. Nine business models were identified: crowdfunding platforms; (37) banking software (20); payments (16); peer to peer finance (12); personal finance trading and investment (15); blockchain and crypto currencies, (6); digital banking (6); insurance (2); data and analytics (2) (IfnFintech 2017 b).

The development of financial business models by the new Fintech ventures have followed a similar path to their conventional equivalents: the most-developed sector has been crowdfunding and personal finance and investment, followed by payments remittance and forex. There have also been some key initiatives in the

creation of gold-based cryptocurrencies, in which Islamic financing is moving at an even faster speed than conventional equivalents.

Below, a few brief examples from each category:

#### *Crowdfinancing*

Beehive P2P, based in Dubai, is the UAE's first online peer-to-peer finance platform that facilitates Shariah-compliant financing solutions for SMEs. The company is regulated by the Dubai Financial Services Authority (DFSA) and has certified that its business is Shariah compliant by engaging with Bahrain's Shariah Review Bureau (SRB) to undertake the Shariah supervisory board's certification and Shariah audit functions for its Islamic operations. Beehive has raised funds to a total value \$10.5 million by 2017. (Beehive 2017) (IfnFintech ©)

Yielders is the UK's first Islamic Fintech company, and one out of five real estate crowdfunders to be directly regulated by the Financial Conduct Authority (FCA). (Yielders 2017) (IfnFintech d)

#### *Payments remittance and forex*

**OneGramCoin (OGC)** is the first Shariah compliant-certified cryptocurrency. Based in Dubai, OneGram uses blockchain technology to create a new kind of cryptocurrency linked to gold. It launched an Initial Coin Offering (ICO) in May 2017, obtaining over \$40 million. The currency has been a success, and at the time of the closing of the ICO on September 4<sup>th</sup>, was valued at \$50 and now is currently trading at about \$355. (Onegram 2017) IfnFintech (b)

NOWMoney was the first Fintech in the Gulf region to use mobile banking technology to provide financial services to low-income migrant workers, who used it send home remittances. (Nowmoney 2017) (IfnFintech c)

#### *Trading Investment and personal finance*

**The Farrington Group** was established in 2007 in Malaysia. The company offers wealth management to individuals across the Asia Pacific region, Russia and Central Asia. The company is pioneering the creation of a robo-adviser, using artificial intelligence (AI) to predict financial analytics based on raw data. (Farrington 2017)

**Arabesque** is a London-based asset management company founded in 2013. It is one of the first Shariah-compliant companies to screen environmental, social and governance (ESG) parameters and does so by leveraging on machine learning and big data. The firm has officially rolled out the Arabesque S-Ray, a new diagnostic tool which processes ESG data points to monitor the sustainability of over 4,000 of the world's largest corporations. The technology integrates over 200 ESG metrics with news signals from an excess of 50,000 sources across 15 languages. (IFNFintech e) (Arabesque 2017)

### **The Islamic finance industry's response**

The Islamic banking industry has reacted more quickly than its conventional counterparts, in two fundamental areas; developing innovation in its own capacity and partnering with new Islamic Fintech ventures. Islamic Banks are exploring the possibilities of new technologies, particularly AI and blockchain to provide the latest and most efficient products to their clients.

One example is BIMB Invest, a wholly-owned subsidiary of Bank Islam Malaysia Berhad, which has recently started to incorporate AI and big data analytics into its strategy to eliminate any biases and intuition in the decision-making process. (BIMB Invest 2017) (IfnFintech b)

Saudi Arabia's Al Rajhi Bank, which holds the largest pool of Islamic banking assets globally, recently concluded a cross-border money transfer using Ripple blockchain technology. Having completed its first blockchain cross-border deal, the bank is now looking to use blockchain to serve its retail and corporate

customers, and is exploring how to integrate blockchain technology to provide remittance solutions to its clients. Saudi Arabia is one of the leading countries for remittances and Al Rajhi has the largest remittance center network in the country (over 200) and is in discussions with the Saudi Arabian Monetary Authority. (IfnFintech b) (AlRajhi 2017)

Bank Muscat's Meethaq, a pioneer in providing Islamic solutions in Oman, has recently launched a digital SME platform combining digital technology and its SME expertise to support the development of small and medium businesses at every stage of the business lifecycle. Meethaq's Accelerate SME portal also serves as a marketplace for discounted business services tailored for SMEs, allowing start-ups, entrepreneurs and business owners free access to business resources, services and funding solutions. (Meethaq 2017), (IfnFintech b 2017)

Like their conventional counterparts, Islamic Banks have been very active in partnering with innovative startups. An interesting example is Bahrain Islamic Bank's (BisB) partnership with Flat 6 Labs Bahrain – a start-up accelerator program under the Cairo-based Flat 6 Labs umbrella. Flat 6 Labs has launched over 75 companies backed by more than 300 entrepreneurs. (BisB 2017) (ifnFinTech b)

One of the most remarkable aspects of the Islamic Fintech industry is the development of public partner institutions to create ecosystems for new startups. For example, in Bahrain, the UAE or Saudi Arabia, there is intense cooperation between public centers to foster entrepreneurship between private banks and young entrepreneurs. One of the most active such institutions in recent years has been the Dubai International Financial Center (DIFC), which has an agreement with the Dubai Islamic Economic Development Center (DIEDC) for the purposes of establishing Shariah-compliant financial technology start-ups. The agreement will involve public centers, young entrepreneurs and also established Islamic financial institutions such as Emirates Islamic, Dubai Islamic Bank and Abu Dhabi Islamic Bank, that will be integrating the platform as mentors to innovators in the field of Islamic Fintech. (IfnFinTech e)

## **Fintech from a Sharī'ah perspective**

To understand any possible Shariah issues, it is important to analyze the different components of Fintech.

	<b>Existing Islamic finance industry</b>	<b>Emerging initiatives outside financial intermediation organizations</b>
Capital holders	New banking products partnering with collaborative startups (crowdfunding , peer to peer)	Crowdfunding, peer to peer
Capital seekers	New banking products partnering with collaborative startups (crowdfunding , peer to peer)	Crowdfunding, peer to peer
Payments methods	blockchain based technologies (cryptocurrencies, etc...	E commerce, blockchain-based technologies etc...

Fintech is revolutionizing the financial world through automated complex reasoning mechanisms and new technologies able to make more efficient decision making procedures. These new technologies are resulting in the creation of new products and in parallel a series of ethical demands by scholars to guide both the industry and potential consumers. Some experts say Fintech financing is inherently Islamic, as it connects owners (*rab-ul-maal*) and users of capital directly. Moreover, Islamic finance is concerned with the wellbeing of the community and in the transparency of the transaction. As a result, most Islamic scholars do not oppose Fintech.

We can further analyze the three main types of operations from a Shariah perspective:

1. **Payment Exchange:** are blockchain technologies changing our traditional ideas of currency, or are they changing the way transactions are made?

Blockchain will affect traditional uses of money:

- a. Medium of exchange: we are moving towards a cashless, moneyless society. As long as these methods are clearly understood, transparent and fair, they should not pose any concerns to Shariah.
- b. Store of value. In principle, new technologies should not modify the store of value, unless crypto-currencies such as bitcoin become new forms of wealth storage. If they do, Shariah will have to make its own recommendations, since what is stored is not based on any real wealth.
- c. Unit of account. Will bitcoin initiatives affect how we value products and services? Is Shariah concerned with the mechanisms by which products and services are valued?

Since technology will be always be ahead of the experts, Shariah scholars could develop guidelines for any of the three uses of money, rather than waiting to react to any new product.

2. **Capital holders and capital seekers:** Fintech can provide solutions for the supply and demand side of financial products in a scenario with fewer intermediary institutions and where there are direct relationships between owners and users of capital. The most developed areas include:

- a. Online crowdfunding platforms that connect companies and investors that want to contribute to the funding of small businesses or start-ups by providing some form of equity capital. Social media can be used to raise financial resources from large networks of people to support initiatives. Investors can receive in return either the capital invested, (*qard Hassan*), return the capital with a mark-up, (*murabaha*), receive in exchange a product (as a way to advance sales, (equivalent to *Salam* or *Istisnaa*) or they can be a form of non-cash related compensation, (e.g., a small role in a movie, tickets to the performance of the movie produced, a book signed by the author, along the lines of a gift (*wadiah*)).

- b. **Peer-to-peer lending** Whether outside the banks or as a new investment vehicle for them, P2P platforms finance real products and services. Payments can be made on a *murabaha* basis, so in principle it would also be acceptable from a Shariah point of view. The question is whether the industry can lead the way by creating Shariah-compliant P2P platforms on a *mudaraba* basis, for example. This will open the way to other emerging initiatives.

*Fiqh* and *Ijtihad* have sometimes been accused of being too reactive. In this emerging scenario, Shariah scholars need to take a more pro-active approach rather than simply reacting to the three main components: new methodologies for exchange of payments, new channels for capital holders, and new resources for capital seekers. Investments, loans and payment systems can be created to allow new initiatives to emerge by outlining Shariah principles in terms of:

- Remuneration of the capital supply.
- Non-interest based relationship
- Eliminating uncertainty
- Transparency of contracts.

## **Conclusion**

In concluding this chapter, it is important to answer the question whether Fintech solutions in Islamic finance provide an opportunity to move from collaborative finance to community finance? In a talk about the 2008 crisis, the Islamic economist Umar Chapra argued that financial systems should take the savings of the few to meet the needs of the many, but that somehow the system has been reversed in recent decades, and now the financial system channels the savings of billions of people to the businesses of the few.

Chapra and other Islamic economists saw the 2008 crisis as an opportunity to reverse some of the wrongdoings of the conventional financial system. For many, Islamic financial principles based on non-

speculation, non-interest, and using the financial system to help the community rather than for individual gain, could offer an alternative to the conventional system, in which financial solutions could help both the individual and the community.

From a public interest principle, the question is: can Islamic finance, supported by new technologies, finance the needs of the many?

According to a World Bank Report on developmental financial needs (World Bank 2012), global financial needs are huge:

- 2.5 billion people, or 70% of the adult population in developing markets, still have no access to basic financial services and are predominantly from Islamic countries.
- Of the estimated 365 million to 445 million formal and informal MSMEs in the developing world, approximately 70% do not use external financing from financial institutions, while another 15% are underfinanced.
- The unmet need for credit by formal or informal MSMEs in emerging markets is in the range of \$2.1 trillion to \$2.5 trillion. In the Middle East that figure is between \$165 billion to \$200 billion

Islamic Finance, based on the principle of public interest, raises the following three questions:

- How can technological financial innovation based on Shariah principles can help meet the economic and financial demands of the community?
- What instruments of the new Fintech scenario should it be focusing on?
- What are the limits of Shariah for financial innovation?

Fintech is a revolution born out technology and at the same time is a community revolution. New collaborative scenarios have made block chain technologies and crowdfunding platforms possible. Young people around the world have reacted to the 2008 financial crisis by demanding new approaches to finance whereby individual greed will be replaced by community finance. Alternative financing initiatives have been particularly popular among young people, since not only has the crisis within the financial system cut

lending opportunities for their projects, but also because they will continue to bear the excess leverage that has led to the present situation. Within a few years, what started out as a community demand to democratize finance has created a few players who have managed to capitalize on most of the benefits through a few corporate initiatives. What started out as a community-based economy has quickly turned into a collaborative-based economy that risks mirroring the conventional financial system that led us into the current crisis.

Community-based finance, as Umar Chapra argues, should be about channeling billions of people's savings into the needs of the many, but collaborative finance could quickly turn into a few gaining from the savings of the many.

Hopes the collaborative economy would create more jobs and serve the needs of the many has turned into an unstable and precarious job market. At the same time, consumers throughout the world have seen their rights diminished by an industry that seems to resist regulation. Only a handful of new companies, such as Uber or Airbnb, have been able to benefit from the new paradigm, while the majority can only watch as this new wave of opportunities passes by without benefitting them.

Islamic Fintech has proved to be as technological an industry as it is dynamic, and as innovative as its parallel counterpart. However, Fintech, based on Islamic principles, can still offer something the conventional banking system lacks: a well-defined, cohesive community which holds, at its core, a value system with established rules and definitions of how to operate, as well as what type of business should be financed for the wellbeing of all type of communities.

In that regard, there are encouraging signs of a number of Fintech ventures whose aim is to find solutions for the underserved, such as the creation in 2016 of the the Islamic Fintech Alliance, where eight crowdfunding platforms with social aims joined together to help the sharing economy for Muslims, as well as to serve the global community by providing universally attractive ethical financial solutions. (Islamic Fintech industry snapshot report 2016. )

Other encouraging initiatives aimed at social improvement include Finocracy, which describes itself as “the world's first *zakat*-driven, humanitarian crowdfunding platform”. On its website, Human Crescent says it aims to channel *zakat* donations to impactful projects that it divides into the following categories: human trafficking victims, refugees/internally displaced persons, microfinance, education, disaster victims and poverty alleviation. (Bensar & Rodriguez 2018) (Finocracy 2017)

Fintech offers a way whereby new technologies can help channel Islamic principles to create a new generation of financial products that can satisfy the demands of future generations. The advantage of this approach is that if the community feels an organization is straying from those basic principles, it will immediately stop using its services and destroy the reputation of the provider of such services in the process. Thus, change does not come from the industry itself, but from conscious communities that demand financial services operate within a system of rules with one crucial premise: to help individuals in the community develop economic ventures for the betterment of the community itself

The principle of public interest can be the basis for new Fintech alternatives, while Shariah academics need to help with the creation of new products, defining clearly what complies with Shariah principles and what departs from those principles, in a pro-active rather than a reactive way.

In following the principles of *maslaha*, scholars should be asking:

- Is Fintech closer to the real economy?
- Is it free from financial speculation?
- Can it help alleviate poverty?
- Can it help improve financial inclusion?
- Can it help resolve social problems or help protect the environment and improve food and water security?

In a rapidly changing scenario with greater diversity, Islamic financial experts cannot afford to wait for new products to emerge and then form an opinion. Instead, a proactive methodology of defining principles and guidance for capital holders, capital seekers and transactions offers a more realistic approach to managing the emerging Fintech industry.

Young people like Ahmad dream of a place within a community where they can contribute to its wellbeing. We can change the Fintech industry's current paradigm of winner takes all to a win-win approach by applying new technologies based on Islamic finance principles, creating jobs in communities while creating products and services to improve people's lives. If the principles of Islamic finance are not applied soon, restricted access to liquidity for the majority, along with overly complex regulations, risk creating yet another self-serving industry controlled by a tiny minority.

## References Chapter 4:

Al Rajhi Bank 2017, Al Rajhi Bank, Al Rajhi Bank home page, available from: <http://www.alrajhibank.com.sa/en/pages/default.aspx>. (27 December 2017).

Arabesque 2017, Arabesque home page, available from: <https://arabesque.com/> (26 December 2017).

BiS 2017, Bahrain Islamic Bank, available from: <https://bisb.com/> (26 December 2017)

Barnes, S, 2016, *The Rapid Growth of Alternative Finance*, Available from: International Banker, December 1, 2016. <https://internationalbanker.com/finance/rapid-growth-alternative-finance/>. (22 December 2017).

[Bensar Z & Rodriguez, G 2018, , “Islamic Fintech and the paradigm Shift in the Financial Landscape”, in Cattalan, V, \(eds\) Up coming](#)

BIMB Investment 2017, BIMB Investment home page. Available from : <http://www.bimbinvestment.com.my/> (20 December 2017)

Bauman, Z 2008. *Community; seeking safety in an insecure world* 7 th ed. Polity Press, Cambridge.

Bajpal, P 2016, *The Rise of Peer to Peer (P2P) Lending*, September 27, 2016. Available from: <http://www.nasdaq.com/article/the-rise-of-peertopeer-p2p-lending-cm685513> ( 27 December 2017).

Beehive 2017 . Beehive Home page. Available from: <https://www.beehive.ae/> (22 December 2017).

Castells, M 2004, *The Power of Identity, The Information Age: Economy, Society and Culture Vol. II. 2<sup>nd</sup> ed.*, Blackwell, Oxford, UK.

COM 2014, *Unleashing the potential of Crowdfunding in the European Union*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. COM (2014) 172 Final. Available from:

[http://ec.europa.eu/internal\\_market/finances/docs/crowdfunding/140327-communication\\_en.pdf](http://ec.europa.eu/internal_market/finances/docs/crowdfunding/140327-communication_en.pdf) . (22 December 2017)

COM 2016, *European agenda for the collaborative economy - supporting analysis*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Brussels, 2.6.2016 COM(2016) 356 final. Available from:

<http://www.eesc.europa.eu/resources/docs/com2016-356-final.pdf> (22 December 2017)

De Anca, C. 2012, *Beyond Tribalism*, Palgrave, UK.

Maffesoli, M. 1988. *Le temps des tribus: le déclin de l'individualisme dans les sociétés de masse*, Méridiens Klincksieck, Paris.

De La Torre, I and Torralba, L, 2017, *Technological Disruption is already here*, Arcano October 2017

Available from: <https://research.arcanopartners.com/documentos/economic-research-770818/english-771018/technological-disruption-is-already-here-771018/>. (20 November 2017).

Finocracy 2017, Finocracy Home Page. Available from: <http://finocracy.com/> (20 December 2017)

Hamari, J, Sjöklint, M & Ukkonen, A 2015, *The sharing economy: Why people participate in collaborative consumption*, Journal of the Association for Information Science and Technology. Available from: <https://doi.org/10.1002/asi.23552>. (20 November 2017).

Islamic Fintech Industry Snapshot Report 2016, Islamic Fintech Alliance Home page. Available from: <http://islamicfintechalliance.com/> (22 December 2017.)

Farrington 2017, Farrington Group Home page. Available from: <http://www.farringtongroup.com/> . (20 November 2017)

PwC 2017, *Global Fintech Report 2017*, Available from: <https://www.pwc.com/gx/en/industries/financial-services/assets/pwc-global-fintech-report-2017.pdf>. (20 December 2017).

OneGramCoin 2017, OneGram home page, Available from: <https://onegram.org/>. (20 December 2017)

IfnFintech(a) 2017, IfnFintech home page, Available at <https://www.ifnFintech.com/about-us>. (December 10 2017).

IfnFintech (b) IfnFintech Vol.1 Issue 9, IfnFintech December 2017. Available from: [file:///C:/Users/usuario/Dropbox/sharia%20law/islamic%20Fintech/v1i9%20\(1\).pdf](file:///C:/Users/usuario/Dropbox/sharia%20law/islamic%20Fintech/v1i9%20(1).pdf). (December 19 2017).

IfnFintech (c) IfnFintech Vol.1 Issue 8, IfnFintech November 2017. Available from:

[file:///C:/Users/usuario/Dropbox/sharia%20law/islamic%20Fintech/v1i9%20\(1\).pdf](file:///C:/Users/usuario/Dropbox/sharia%20law/islamic%20Fintech/v1i9%20(1).pdf) (December 19 2017).

IfnFintech (d) IfnFintech Vol.1 Issue 7, IfnFintech October 2017. Available from:

<file:///C:/Users/usuario/Dropbox/sharia%20law/islamic%20Fintech/v1i7.pdf> (November 20 2017)

IfnFintech (e) IfnFintech Vol.1 Issue 2, IfnFintech May 2017. Available from:

<https://www.ifnFintech.com/issue/volume-1-issue-2.> ( November 20 2017)

Meethaq 2017, Meethaq home page. Available from: Meethaq <http://www.meethaq.om/>. (20 December 2017)

Milne, A and Parboteeah, P, 2016, *The Business Models and Economics of Peer-to-Peer Lending*,

European Credit Research Institute, No. 17 May 2016. Available from: [www.ecri.eu](http://www.ecri.eu). (28 November 2017)

Mises, LV , 1949 *Human Action: A Treatise on Economics*, Ludwig Von Mises Institute, Auburn, Alabama.

NOW Money 2017. Now Money Home page. Available from <http://nowmoney.me/>. (20 December 2017)

Yaraghi, N & Ravi, S 2017, "The Current and Future State of the Sharing Economy," *Brookings India*

*IMPACT Series* No. 032017. March 2017. Available from : [https://www.brookings.edu/wp-](https://www.brookings.edu/wp-content/uploads/2016/12/sharingeconomy_032017final.pdf)

[content/uploads/2016/12/sharingeconomy\\_032017final.pdf](https://www.brookings.edu/wp-content/uploads/2016/12/sharingeconomy_032017final.pdf). (20 November 2017).

World Bank 2012, World Development Report, World Bank. Available from

[https://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-](https://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/Complete-Report.pdf)

[1315936222006/Complete-Report.pdf](https://siteresources.worldbank.org/INTWDR2012/Resources/7778105-1299699968583/7786210-1315936222006/Complete-Report.pdf) (20 December 2017)

Yielders 2017, Yielders Home Page. Available from: <https://www.yielders.co.uk/> (27 December 2017).