



INTERNATIONAL RESEARCH JOURNAL OF SHARIAH, MUAMALAT AND ISLAM (IRJSMI)

www.irjsmi.com



A LITERATURE REVIEW ON ISLAMIC FINANCE MODES AS AN ALTERNATIVE APPROACH TO FINANCE THE BUSINESS MODEL OF A CIRCULAR ECONOMY

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Article Info:

Article history:

Received date: 30.03.2021

Revised date: 21.04.2021

Accepted date: 26.08.2021

Published date: 01.09.2021

To cite this document:

Akintan, I., Dabiri, M., & Salaudeen, J. (2021). A Literature Review On Islamic Finance Modes As An Alternative Approach To Finance The Business Model Of A Circular Economy. *International Research of Shariah, Muamalat and Islam*, 3 (8), 31-48.

DOI: 10.35631/IRJSMI.38003.

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Abstract:

This study explores how Islamic Finance Modes can provide alternative sources of financing business models in a circular economy. A comparative analysis of the Islamic Finance Modes such as Musharakah, (Equity Sharing), (Mudarabah), (Silent partnership), Forward sale (Salam), Manufacturing Financing (Istisna), Leasing (Ijarah), Sukuk (Investment Certificate), Qard Hassan (Beneficence Loans), Wakalah, (Agency contract) Kafalah (Suretyship Contract), and Ju'ala (Service Agency) were undertaken in relation to its suitability as a source of financing businesses in a circular economy. This study relies heavily on secondary data through literature reviews and research works of authors and researchers on Islamic Finance and Circular Economy. The study concludes that Ijarah, Sukuk, Qard Hassan, Istisna, Musharakah, Mudarabah, Wakalah, Kafalah, and Ju'ala financing modes are essential for providing alternative solutions to financing challenges confronting business models such as balance sheet extension, working capital, and increased credit risk in a circular economy. This paper recommends that Islamic Banks should review and redesign their products and services in order to cater for financing businesses in a circular economy and also support them by providing professional services in analyzing the creditworthiness of companies and viability of projects.

Keywords:

Islamic Finance Modes, Business Models, Circular Economy, Analysis, Alternative Sources

Introduction

Businesses across the world are confronted with increasingly demanding customers, markets and opportunities, but constrained by financial resources which will enable them to expand and generate more profits. In addition, lack of funding, high interest rates, and lack of adequate collateral have been the most prevalent problems faced by businesses in accessing finance from conventional banks (Elasrag, 2016). Hassan and Saraç (2020) pointed out that providing an effective and sustainable source of financing is the key to the financial needs of the implementation of the circular economy. Hence, Islamic Finance is a promising alternative source that can effectively support business financing, economic growth and development. It also promotes financial sector development and broadens financial inclusion by expanding the range and reach of financial products (Elasrag, 2016).

Islamic finance is fundamentally different from the conventional finance model as it is based on a profit and loss structure which requires that a financial institution invests with a client in order to finance their needs, as against lending money to the client. Because of the inherent risk involved in an investment, the financial institution is entitled to profit from the financial transaction. Thus, Islamic finance is a financing model that complies with Islamic principles, known as Shariah or Islamic law, based mainly upon the prohibition of *riba* (interest), speculation, *gharar* (excessive risk), unjustified enrichment, *maysir* (gambling), and other unethical practices. Moreover, Islamic finance is also based upon asset-backing tenets; which implies that each financial transaction must be tied to a tangible identifiable underlying asset, the sanctity of contracts, profit sharing, risk sharing, and other Shariah-compliant principles (Djebbar, 2011).

In the same vein, Islamic finance is one of the ways of financing infrastructural projects, and also part of the Islamic economic system that deals with ethical value, considering the major constraints in this type of funding which must still comply with Shari'ah (Abdullah, Al Zyoud, & Ayman, 2013). Many authors and historians claim that Islamic Finance is much better in terms of dealing than other models. One significant instance was written in Derbel, Bouraoui, and Dammak (2011), where it declared that Islamic finance is more stable than conventional finance. Implying that even in terms of stability, Islamic finance performs better than traditional finance.

Moreover, Hassan and Lewis (2007) identify the following basic types of Islamic financing modes in Islamic banking: *Musharakah* (partnership), *Mudaraba* (finance by way of trust), *Murabaha* (cost-plus financing), *Ijara* (leasing), *Salam* (advance purchase), *Bai bi-thamin ajil* (deferred payment financing), *Istisnaa* (commissioned manufacture) and *Sukuk* (participation securities). In addition, Bakhita (2017) opined those Islamic modes of finance are designed to facilitate financing by the principles of the Islamic Sharia, such as *Muḍārabah*, *Mushāraka*, *Ijarah*, *Istisna* and *Salam*.

However, a circular economy is an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models. (Ellen MacArthur Foundation, 2013). Furthermore, Koos (2015) posits that the circular economy goes beyond the intention of not harming the environment as it is restorative and regenerative by intention and design. It shifts the focus from a 'take, make and waste' way of production to a 'reduce, reuse and recycle' mentality. This shift spins off

several commercial opportunities and business innovations. The circular economy's general aim is to drastically reduce waste of resources, including but not limited to raw materials and energy, in order to decouple resources consumption from GDP growth while ensuring reduction in environmental impacts and increase in human well-being, including maintaining or increasing employment (Geldron, 2013). This paper intends to explore Islamic Finance Modes as alternative sources of financing business models in a circular economy.

Research Problem

Koos (2015) identified that the main financial challenges of circular business models are balance sheet extension, increased working capital needs and increased credit risk on the users of pay-per-use services. Similarly, lack of funding becomes a vital issue and a major obstacle for circular economic models because it lacks investors' confidence (Hassan et al., 2020).

Objectives of the study

The purpose of this study is to identify which Islamic Financing modes are suitable for providing alternative sources of Finance in order to resolve the financial challenges facing business models in a circular economy.

Research Questions

To investigate the research gap, the following two research questions were formulated:

- 1: Which of the main Islamic Financing modes are suitable for financing business models in a circular economy?
- 2: What are the other recommendations that can be useful in financing a circular economy?

Review of Literature on Islamic Finance and Circular Economy

Definition of Islamic Finance

According to Jobst (2007), Islamic finance is a financial relationship involving entrepreneurial investment which is subject to moral prohibitions. Islamic finance is based on principles that prohibit risk-taking, interest-earning, sinful activities, gambling, speculative trade and money lending to customers. It believes in trading based on real goods and services and a reward-sharing contract. It also focuses on providing an ethical financial system with a motive of wealth redistribution, which will have a long-term effect on poverty alleviation (Hayat, 2009).

In the same vein, Islamic finance operates on the basis of Sharī'ah principles by observing the pillars and conditions of contract in the operational mechanism. Its grounding principles are the objectives of Sharī'ah (*Maqāsid al-Sharī'ah*): to realise human well-being (*Maṣlaḥah*) and to repel harms and difficulties (*Mafsadah*) in people's lives (Laldin & Furqani, 2012). In addition, Akram (2014) posits that Islamic finance integrates ethics into finance by prohibiting unethical investment practices and activities such as *Riba* (usury), *Gharar* (uncertainty), *Maisir* (gambling), *Zulm* (oppression) and *Tadlis* (cheating), while emphasising justice and fairness (*Adl*) and equality (*Musawah*) in financial transactions. Islamic finance works on the basis of partnership and cooperation among the financiers and investors/entrepreneurs, with risk and reward sharing, which ensure greater market discipline. It inculcates greater transparency and disclosure, and greater fiduciary duties and accountability for the benefit of both the financiers and the customers.

Another valid point that is central to Islamic finance is the fact that money itself has no intrinsic value. As a matter of faith, a Muslim cannot lend money to, or receive money from someone and expect to benefit. This means that interest (known as *Riba* in Islam) is not allowed and making money from money is forbidden. Money must be used in a productive way, by which wealth can only be generated through legitimate trade and investment in assets. The principal means of Islamic financing is based on trading. Any gains relating to the trading are shared between the party providing the capital and the party providing the expertise. As a result, the Islamic banks have developed four main Islamic financing approaches, which are: Mudaraba, Musharaka, Ijara and Murabaha (Bakhita, 2017).

On the other hand, a circular economy is defined as an exchange and production-based economic system that, at all stages of the product or service life cycle, aims to increase the efficiency of resource use and reduce the impact on the environment while developing the well being of individuals (Geldron, 2013). Ellen MacArthur Foundation (2013) views the circular economy as an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and as well, business models.

Similarly, Geng and Doberstein (2008) describe the circular economy as the realization of a closed-loop material flow in the whole economic system. Webster (2015) adds that a circular economy is one that is restorative by design, and which aims to keep products, components and materials at their highest utility and value, at all times. The circular economy is presented as a resilient, long-term model set-up to enable the decoupling of economic growth and development from finite resources consumption, as well as providing innovation opportunities in all sectors (Ellen MacArthur Foundation, 2013).

The concept of a circular economy aims to present a solution to the challenges of emissions, waste production and resource depletion by combining revenue with social impact. It enables businesses to grow and prosper while keeping the environment and society intact, ensuring growth for themselves as well as future generations (Internationale Nederlanden Groep (ING), 2015). It described how natural resources influence the economy by providing inputs for production and consumption as well as serving as a sink for outputs in the form of waste, thereby investigate the linear and open-ended characteristics of contemporary economic systems.

A circular economic approach, in contrast to the traditional linear model, is an economic system with the primary goal is making the best and most sustainable use of resources by increasing efficiency and thereby reducing waste. It aims at value creation through efficient use of resources and drastic transformation of production and consumption techniques (Kirchherr, Reike, & Hekkert, 2017). The greater part of circular economy literature emphasizes its production benefits (Rizos, Tuokko, & Behrens, 2017), value creation ability (Lewandowski, 2016), and social advantages encompassing an economic model based on renewable energy and resource efficiency (Wijkman & Skanberg, 2015). According to Hobson & Lynch (2016), a circular economy has the ability to bring massive changes to the day-to-day lives of people. Although the scientific literature fails to provide enough understanding of such alterations and the strategies involved in promoting a circular economy (Repo, Anttonen, Mykkanen, & Lammi, 2018).

Furthermore, the circular economy is an industrial model where waste is designed out, by addressing and changing how products are supplied and constructed. This process includes phasing out the need for extracting finite resources as well as improving the production processes. Improving the way things are produced, refers to having products that are durable, easily and economically repaired, upgraded or remanufactured. Furthermore, they are to be designed to be easily recovered and recycled. The concept of the circular economy also requires a change in consumption behaviours to support the transformation from a linear to a circular industrial model (Green Alliance, 2011).

In a circular economy, economic activities build and rebuild the overall system health. The concept recognizes the importance of the economy needing to work effectively at all scales whether for large and small businesses, for organizations and individuals, globally and locally.

The circular economy is a model pegged against the “linear“economy which is arguably focused on the ‘take, make, dispose’ model (basically: cradle-to-grave versus cradle-to-cradle) while using (too much) resources powered by (often) non-renewable energy. It, therefore, replaces disposability with restoration (Nguyen, Stuchtey, & Zils, 2014). In addition, financial institutions can support the changeover towards a circular economy by empowering companies to make the transition through their financial decisions and investments. Thus, financial institutions need to review and realign their business models in terms of products and services to cater to the requirements of circular business models (Working Group Finance, 2016)

In the same vein, transitioning to a circular economy does not only amount to adjustments aimed at reducing the negative impacts of the linear economy. Rather, it represents a systemic shift that builds long-term resilience, generates business and economic opportunities, and provides environmental and societal benefits. (Ellen MacArthur Foundation, 2013)

The contemporary understanding of the circular economy and its practical applications to economic systems and industrial processes has evolved to incorporate different features and contributions from a variety of concepts that share the idea of closed loops.

Accordingly, Yuan, Bi, & Moriguichi (2008) stated that the core of the circular economy is the circular (closed) flow of materials and the use of raw materials and energy through multiple phases. The concept has also gained attraction with policymakers, influencing governments and intergovernmental agencies at the local, regional, national, and international levels. Germany was a pioneer in integrating the circular economy into national laws, as early as 1996, with the enactment of the “Closed Substance Cycle and Waste Management Act” (Su et al., 2013). This was followed by Japan's 2002 “Basic Law for Establishing a Recycling-Based Society” (METI, 2004), and China's 2009 “Circular Economy Promotion Law of the People's Republic of China” (Lieder & Rashid, 2016). Supranational bodies have also incorporated circular economy concerns most notably the EU's 2015 Circular Economy Strategy (European Commission, 2015).

Principles of Islamic Financial System

According to Iqbal and Mirakhor (2011), the following are the basic principles of the Islamic Financial System:

i. Prohibition of interest. The central tenet of the system is a prohibition of *riba*, a term that literally means “an excess” and is interpreted as “any unjustifiable increase of capital whether

in loans or sales”. More precisely, any positive, fixed, predetermined rate tied to the maturity and the amount of principal (guaranteed regardless of the performance of the investment) is considered *riba* and is prohibited. The direct implication of prohibition of interest is the prohibition of pure debt security with a predetermined interest rate. This prohibition is based on arguments of social justice, equality, and property rights. Islam encourages the earning of profits but forbids the charging of interest because profits, determined after business activities, symbolize successful entrepreneurship and creation of additional wealth, whereas interest, determined before business operations, is a cost that is accrued irrespective of the outcome of business operations and may not create wealth in the event of business losses. Social justice demands that borrowers and lenders share rewards as well as losses in an equitable fashion and that the process of wealth accumulation and distribution in the economy be fair and representative of true productivity.

ii. Risk Sharing: This means that the provider of financial capital and the entrepreneur share business risks in return for shares of the profits and losses, which make suppliers of funds, become investors instead of creditors.

iii. Asset-Based Transactions: The prohibition of debt and encouragement of risk-sharing suggests a financial system where there is a direct link between the real and the financial sector. As a result, the system promotes linking financing directly with the underlying asset so that the financing activity is clearly and closely identified with the real sector activity. There are strong linkages between the performance of the asset and the return on capital used to finance it.

iv. Money as “Potential” Capital: This means that Money becomes actual capital only when it joins with other resources to undertake a productive activity. Islam recognizes the time value of money, but only when it acts actively as capital, not when it is “potential” capital.

v. Prohibition of Speculative Behavior: The Islamic financial system discourages hoarding and prohibits transactions featuring extreme uncertainties, gambling, and risks.

vi. Sanctity of Contracts and Preservation of Property Rights: Islam upholds contractual obligations and the disclosure of information as a sacred duty. This feature is intended to reduce the risk of asymmetric information and moral hazard. Islam places great importance on the preservation of property rights; defines a balance between rights of individuals, society, and the state; and strongly prohibits encroachment of anyone’s property rights.

Principles of Circular Economy

Ellen MacArthur Foundation (2013) identifies three major principles guiding circular economy as follows:

i. Design Out Waste: This principle means that waste does not exist when the biological and technical components of a product are designed by intention to fit within a biological or technical materials cycle designed for remarketing, remanufacture, disassembly or repurposing. The biological materials are non-toxic and can easily be returned to the soil by composting or anaerobic digestion and may also yield higher-value substances before decomposing. Technical materials — polymers, alloys, and other man-made materials — are designed to be recovered, refreshed, and upgraded, minimizing the energy input required and maximizing the retention of value (in terms of both economics and resources).

ii. Keep Product and Material in Use

This principle states that people should refrain from wasting resources, products, and materials by ensuring that they are kept in the economy. This is achievable by designing products and components, so they can be reused, repaired, and re-manufactured, especially products such as food packages.

iii. Regenerate Natural Systems

This principle means there is no concept of waste in the ecosystem. Everything is food for something else e.g a leaf that falls from a tree feeds the forest. Furthermore, instead of simply trying to do less harm, we should aim to do good by returning valuable nutrients to the soil and other ecosystems in order to enhance our natural resources

Theoretical Framework of Islamic Finance Modes and Circular Economy

Theory of Interest

The Theory of Interest according to (Qureshi, 1946) looked upon finance as a social service that should be sponsored by the government like public health and education. Qureshi (1946) took this point of view since the bank could neither pay any interest to account holders nor charge any interest on loans advanced. Qureshi (1964) also spoke of partnerships between banks and businessmen as a possible alternative, sharing losses if any. No mention was made of profit sharing. Ahmad (1952) envisaged the establishment of Islamic banks on the basis of a joint-stock company with limited liability. In his scheme, in addition to current accounts, on which no dividend or interest should be paid, there was an account in which people could deposit their capital on the basis of partnership, with shareholders receiving higher dividends than the account holders from the profits made. The principle of *Mudaraba* based on Shariah was invoked systematically by Uzair (1955). His principal contribution lay in suggesting *Mudaraba* as the main premise for 'interest less finance'. However, his argument that the bank should not make any capital investment with its own deposits rendered his analysis somewhat impractical. Al-Arabi (1966) envisaged a finance system with *Mudaraba* as the main pivot. He was actually advancing the idea of a two-tier *Mudaraba* which would enable the bank to mobilize savings on a *Mudaraba* basis, allocating the funds so mobilized also on a *Mudaraba* basis. A pioneering attempt at providing a fairly detailed outline of Islamic finance was made in Urdu by Siddiqi in 1968. His Islamic finance model was based on *Mudaraba* and *Shirka* (partnership or *Musharaka* as it is now usually called). His model was essentially one based on a two-tier *Mudaraba* financier entrepreneur relationship, but he took pains to describe the mechanics of such transactions in considerable detail with numerous hypothetical and arithmetic examples. He classified the operations of an Islamic bank into three categories: services based on fees, commissions, or other fixed charges; financing on the basis of *Mudaraba* and partnership; and services provided free of charge.

Chapra Model of Islamic Finance

Chapra's model of Islamic finance, (Chapra, 1982), was based on the *Mudaraba* principle. His main concern, however, centered on the role of artificial purchasing power through credit creation. He even suggested that 'seigniorage' resulting from it should be transferred to the public exchequer, for the sake of equity and justice. Chapra was also much concerned about the concentration of economic power private banks might enjoy in a system based on equity financing. He, therefore, preferred medium-sized banks which are neither so large as to wield excessive power nor so small as to be uneconomical. Chapra's scheme also contained proposals for loss-compensating reserves and loss-absorbing insurance facilities. He also spoke of non-

bank financial institutions, which specialize in bringing financiers and entrepreneurs together and act as investment trusts. Al-Jarhi (1983) went so far as to favour the imposition of a 100 per cent reserve requirement on commercial banks. Mohsin (1986) has presented a detailed and elaborate framework of Islamic finance in a modern setting. His model incorporates the characteristics of commercial, merchant, and development banks, blending them in a novel fashion. It adds various non-banking services such as trust business, factoring real estate, and consultancy, as though interest-free banks could not survive by finance business alone.

Mohsin's model clearly was designed to fit into a capitalist environment; indeed he explicitly stated that *riba*-free banks could coexist with interest-based banks. The point that there is more to Islamic finance than mere abolition of interest was driven home strongly by Chapra (1985). He envisaged Islamic banks whose nature, outlook, and operations could be distinctly different from those of conventional banks. Besides the outlawing of *riba*, he considered it essential that Islamic banks should, since they handle public funds, serve the public interest rather than individual or group interests. In other words, they should play a social-welfare oriented rather than a profit-maximizing role. He conceived of Islamic banks as a crossbreed of commercial and merchant banks, investment trusts, and investment-management institutions that would offer a wide spectrum of services to their customers.

Unlike conventional banks which depend heavily on the crutches of collateral and of non-participation in risk, Islamic banks would have to rely heavily on project evaluation, especially for equity-oriented financing. Thanks to the profit-and-loss sharing nature of the operations, bank-customer relations would be much closer and more cordial than is possible under conventional finance. Finally, the problems of liquidity shortage or surplus would have to be handled differently in Islamic finance, since the ban on interest rules out resort to the money market and the central bank. Chapra suggested alternatives such as reciprocal accommodation among banks without interest payments and creation of a common fund at the central bank into which surpluses would flow and from which shortages could be met without any interest charges.

Spaceship Theory

Kenneth Boulding (1966) postulated the iconic image of “spaceship earth” as a metaphor for the material constraints humanity faces on earth. His diagnosis was that industrial society acts like a “cowboy economy”, where a herd can simply be moved to a new pasture once the grass is grazed. Instead, he argued, humanity needs to acknowledge that the earth is “a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution”. In such a “spaceman economy“, where sources and sinks are two sides of the same coin, endless growth is not feasible and materials need to circulate as long as possible within the socioeconomic system. Therefore, man must find his place in a cyclical ecological system” (Boulding, 1966). The development of the spaceship theory is therefore interpreted to be an early representation of the circular economy concept (Xie, 2004).

The Circular Economic Theory

The circular economy system is a restoration industry system. The model is made to redesign the business model by utilizing the waste products from the business that has been run (Macarthur, 2013).

A circular economy is a change in the environment in the face of global needs for economic ecology. It requires human economic activities consistent with the three basic principles of

reducing, reusing and recycling (Lahti, Wincent, & Parida, 2018). Like the basic principle of a circular economy, the system aims to design waste into a product outline re-optimized for its benefits (Macarthur, 2013). The presence of the circular economy concept is a paradigm for economic development. Besides, it is also a response to the unsustainable conventional economic model using a linear economic system called "take-make-dispose". Therefore, circular economy replaces the concept with a business model such as "end-of-life", which can achieve sustainable development's economic goals and beckon the creation of environmental quality, social equality, and economic prosperity for present and future generations (Berg, Antikainen, & Hartikainen, 2018)

Previous Studies

Acheampong (2016) conducted a study on Green Financing and found out that all financing needs of the companies studied are financed from internal sources, particularly retained earnings before external debt financing is accessed, and also indicated the willingness of banks to finance circular economy companies. The study concluded that the circular economy companies studied do not need financial support from the government or its agencies to succeed even though favourable laws are welcomed.

Ibrahim & Shirazi (2020) examined the role of Islamic Finance in fostering circular business investments with specific focus on OIC countries. The paper explores ways Islamic finance can support circular businesses within OIC countries to achieve economic growth that is not at the expense of the environment. The study concluded that Islamic finance could use compassionate contracts, equity-like, and risk-sharing financing modes to support circular businesses motivated by the holistic objective of Maqasid Shari'ah.

Maura, Brescia, and Davide (2020) conducted a study on Islamic countries and Maqasid al-Shariah towards the circular economy, with Dubai as the case study. The study concluded that the Islamic finance system is a necessary criterion in the development of the circular economy, but policies do not consider it as an element within the model development system.

Mohamed (2020) carried out research work on Bringing Islamic Finance Home Through the Circular Economy Social Finance discourse. The study proposed that economic decision-making in Islamic economics must include a concern for others, including its environmental and human impact.

Hassan et al., (2020) conducted a study on the circular economy, sustainable development, and the role of Islamic Finance. The study found out that the Islamic financial system, being a pioneer in financing sustainable development, can be a major driver in the transformation towards a circular economy. The study concluded that principles of Islamic finance, accompanied by Shari'ah regulations and Sustainable Development Goals (SDGs), will provide a solid guideline and framework as well as an ample amount of funding sources for effective transition of the linear economy into the circular paradigm.

Khan (2019), a study on Venture Waqf and the Circular Economy found out that Venture Waqf and Islamic Venture Capital instruments can provide the needed investments tools to incentivize and protect investments into circular businesses.

Business Models of a Circular Economy

Zott and Amit (2010) conceptualize a business model as a system of interdependent activities that transcends the focal firm and spans its boundaries. The business model enables the firm, together with its partners, to create value and appropriate a share of that value.

Thus, a circular business model is designed to create and capture value while helping achieve an ideal state of resource usage (e.g., finding a model that most closely resembles nature and comes close to achieving the complete cycling of materials). Accordingly, the goal of the business model shifts from making profits through the sale of products or artifacts to making profits through the flow of resources, materials, and products over time, including reusing goods and recycling resources. This reasoning implies that companies can reduce negative impacts on the environment by delivering and capturing value through this alternative value proposition.

Meanwhile, Accenture (2014) identifies the following five Business Models driving the circular

Economy:

Circular Supplies

This business model is based on supplying fully renewable, recyclable, or biodegradable resource inputs that underpin circular production and consumption systems. Through it companies replace linear resource approaches and phase out the use of scarce resources while cutting waste and removing inefficiencies.

Resource Recovery

This business model recovers embedded value at the end of a product life cycle to feed into another one. This business model promotes return flows and transforms waste into value through innovative recycling and upcycling services.

Product Life Extension

This business model allows companies to extend the lifecycle of products and assets. Values that would normally be lost at the end of the life cycle are maintained or improved by repairing, upgrading, remanufacturing, or remarketing of products. And additional revenue is generated thanks to extended usage.

Sharing Platforms

This business model promotes a platform for collaboration among product users, either individuals or organizations. These facilitate the sharing of overcapacity or under-utilization, increasing productivity and user value creation.

Product As A Service

This business model provides an alternative to the traditional model of “buy and own”. Products are used by one or many customers through a lease or pay-for-use arrangement. With a ‘product as a service’ business model product longevity, reusability and sharing are no longer seen as cannibalization risks, but instead drivers of revenues and costs reduction.

Islamic Financing Modes

According to Hussein, Shahmoradi, and Turk (2015), Islamic Financing Models fall under one of the three categories: (a). Profit-and-Loss Sharing Products (PLS), (b). Non- Profit-and-Loss Sharing (PLS) products and (c). Fee-based products.

Profit-and-Loss Sharing Products (PLS)

Profit-and-Loss Sharing Products financing is closest to the spirit of Islamic finance when compared with Non-PLS financing, its core principles of equity and participation, as well as its strong link to real economic activities, helps promote a more equitable distribution of income, leading to a more efficient allocation of resources. There are two types of Non- Profit-and-Loss Sharing financing: *Musharakah* and *Mudârabah*.

i. *Musharakah* is a profit-and-loss sharing partnership and the most authentic form of Islamic financing. It is a contract of joint partnership where two or more partners provide capital to finance a project or own real estate or movable assets, either on a permanent or diminishing basis. Partners in *Musharakah* have a right to take part in management; they seem to bear the greatest risk among all Islamic financing modes with the potential for earning the highest reward. However, whereas profits are distributed according to pre-agreed ratios, losses are shared in proportion to capital contribution.

ii. *Mudârabah* is a profit-sharing and loss-bearing contract where one party supplies funding (financier as principal) and the other provides effort and management expertise (*Mudarib* or entrepreneur as agent) with a view to generating a profit. The share in profits is determined by mutual agreement but losses, if any, are borne entirely by the financier unless they result from the *Mudarib*'s negligence, misconduct, or breach of contract terms. *Mudârabah* is sometimes referred to as a sleeping partnership because the *Mudarib* runs the business and the financier cannot interfere in management, though conditions may be specified to ensure better management of capital. Islamic banks mainly make use of *Mudârabah* financing to raise funds; *mudârabah* contracts are also used for the management of mutual funds.

ii. *Musharakah/Mudarabah*: It is particularly suitable for consignment-based trade transactions, for short-, medium- and long-term project financing, import financing, pre-shipment export financing, and working capital financing. Project financing can be conducted under *Musharakah* through the issuance of TFCs or Sukuk.

iii *Diminishing Musharakah*: It is used for financing fixed assets like houses, motor vehicles, machinery, etc. In particular, it is suitable for financing the purchase, construction, and renovation of houses and commercial buildings. It may also involve "sale and leaseback" arrangements in cases where the property is already in the ownership of the customer.

Non- Profit-and-Loss Sharing (PLS) Financing Products

Non- Profit-and-Loss Sharing (PLS) Financing Products contracts are most common in practice. They are generally used to finance consumer and corporate credit, as well as asset rental and manufacturing. Non-PLS financing instruments include *Murâbahah*, *Ijârah*, *Salam*, *Istisna'* and *Sukuk*.

i. *Murâbahah*: is a popular Shari'ah-compliant sale transaction mostly used in trade and asset financing. The bank purchases the goods and delivers them to the customer, deferring payment

to a date agreed by the two parties. The expected return on Murâbahah is usually aligned with interest payments on conventional loans, creating a similarity between Murâbahah sales and asset-backed loans. However, Murâbahah is a deferred payment sale transaction where the intention is to facilitate the acquisition of goods and not to exchange money for more money (or monetary equivalents) over a period of time. Unlike conventional loans, after the Murâbahah contract is signed, the amount being financed cannot be increased in case of late payment or default, nor can a penalty be imposed, unless the buyer has deliberately refused to make a payment. Also, the seller has to assume any liability from delivering defective goods.

ii. *Ijārah*: is a contract of sale of the right to use an asset for a period of time. It is essentially a lease contract, whereby the lessor must own the leased asset for the entire lease period. Since ownership remains with the lessor, the asset can be repossessed in case of non-payment by the lessee. However, the leaser is also responsible for asset maintenance, unless damage to the leased asset results from lessee negligence. This element of risk is required for making *Ijārah* payments permissible. A variety of *Ijārah* takes a hire-purchase form, whereby there is a promise by the leaser to sell the asset to the lessee at the end of the lease agreement, with the price of the residual asset being predetermined. A second independent contract gives the lessee the option to buy the leased asset at the conclusion of the contract or simply return it to the owner.

iii. *Salam* is a form of forward agreement where delivery occurs at a future date in exchange for spot payment. Such transactions were originally allowed to meet the financing needs of small farmers as they were unable to yield adequate returns until several periods after the initial investment. A vital condition for the validity of a *Salam* is payment of the price in full at the time of initiating the contract, or else the outcome is a debt-against-debt sale, which is strictly prohibited under *Shari'ah*. The subject matter, price, quantity, and date and place of delivery should be precisely specified in the contract. In the event that the seller can neither produce the goods nor obtain them elsewhere, the buyer can either take back the paid prices with no increase or wait until the goods become available. Should one of the parties fail to fulfill their contract, the bank will get back its initial investment, but will have to accept the loss of profit. To reduce exposure to credit risk, the bank may ask for a financial guarantee, mortgage, advance payment, or third-party guarantee.

iv. *Istisna* is a mode of financing where the commodity involved is manufactured to the specifications of the purchaser. This is widely used in the housing finance sector, where the client seeks finance for the construction of a house. The financier may undertake to construct the house on a specified land either belonging to the client or purchased by the financier, on the basis of *Istisna'*, with payment fixed in whatever manner the parties may wish. It is also widely used in infrastructure finance (Sanusi, 2011). In theory, the *Istisna* contract could be directly between the end-user and the manufacturer, but it is typically a three-party contract, with the bank acting as an intermediary. Under the first *Istisna* contract, the bank agrees to receive payments from the client on a longer-term schedule, whereas under the second contract, the bank (as a buyer) makes progress installment payments to the producer over a shorter period of time.

vi. *Sukuk* is a certificate of ownership applied to an underlying asset. It can also be defined as an investment certificate that represents the ownership interest of the holder in an asset or pool of assets. In a *Sukuk*, the issuer sells the certificate of ownership to a buyer. The buyer rents it back from the issuer based on a pre-determined rental fee. The issuer also makes a contractual

obligation to buy back the bond, the contractual instrument, at a future date at par value. Sukuk can have a variety of underlying assets from which revenue streams derive. Effectively, ownership in a Sukuk is partial ownership in a debt (Murabaha), asset (Ijarah), project (Istisna), business (Musharaka), or investment (multiple structures). As of July 2014, Sukuk's amounts outstanding were approximately \$296b, with sovereign-issuers accounting for 36% of the total market by volume. The largest issuer is Malaysia. In June of 2014, Great Britain became the first western country to issue a sovereign Sukuk and Nigeria's government in 2018 raised Sukuk of 100 billion Naira for Road construction due in 2025 at a return of 15.743% with rental payment semi-annually.

vii. Qard Hassan (Beneficence loans): These are zero-return loans that the Qur'an encourages Muslims to make to the needy. Banks are allowed to charge borrowers a service fee to cover the administrative expenses of handling the loan. The fee should not be related to the loan amount or maturity.

Fee-Based Products

Islamic banks offer a wide spectrum of fee-based services using three types of contracts, Wakalah, Kafalah, and Ju'ala. They are usually auxiliary to the main Murâbaḥah and Mudârabah transactions, though they generate various types of fees and commissions. The fee-based services provided by Islamic banks include bank transfers, issuing letters of credit and guarantees, credit cards, and offering collection and safe-custody services, mostly used in trade financing.

i. Wakalah is an agency contract, where the account holder (principal) appoints an Islamic finance institution (agent) to carry out investment activities. Hunt-Ahmed and Al-Amine (2013) claims that *Wakalah* "allows a much more efficient recycling of short-term liquidity in the Islamic banking system".

ii. Kafalah is a financial guarantee whereby the bank gives a pledge to a creditor on behalf of the debtor to cover fines or any other personal liability. It is widely used in conjunction with other financing modes or documentary credits. It is a pledge given to a creditor that the debtor will pay the debt, fine, or liability. A third party becomes surety for the payment of the debt if unpaid by the person originally liable. (AAIOFI 2010).

iii. Ju'ala is essentially an arrangement where a party pays another a specified amount of money as a fee for rendering a specific service in accordance with the terms of the contract stipulated between the two parties. This mode usually applies to transactions such as consultations and professional services, fund placements and trust services (Hussein, Shahmoradi, & Turk, 2015).

Methodology

The qualitative method was used to review existing literature from secondary data sources such as scholarly journals, magazines, seminars, reports, and other related literatures of Islamic finance and Circular Economy.

Discussion on Proposed Islamic Financing Modes to Finance the Business Models of a Circular Economy

In view of the need to finance the business models of circular economy, the following Islamic Financing modes are proposed:

i. Most of the business in the circular economy are services-oriented businesses that needs working capital to meet their day to day obligation especially the pay per use earning model of the circular economy. Islamic banks can offer a financial guarantee in the form of Wakalah and Kafalah services as posited by Hunt-Ahmed and Al- Amine (2013) whereby the bank gives a pledge to pay on behalf of the small scale business. Furthermore, the bank can also act as agent in providing professional services in analyzing the creditworthiness of companies and carrying out bankruptcy tests on behalf of the small scale business through Ju'ala services. (Hussein, Shahmoradi, and Turk, 2015).

ii. Circular business models often require multiple forms of capital because of the capital-intensive nature of the equipment, plants, and machinery to be deployed in maintenance, remanufacture, refurbishment and recycling processes of products or services, The most vital Islamic financing alternative is Ijarah. This is based on the findings of Youssef (2015) who opined since products are considered to be viewed as services, and the easiest way to implement a circular economy model is for manufacturers to retain ownership of the products and subsequently lease it to the end-users, since manufacturers will be responsible for maintenance, they will be financially incentivized to produce durable goods. Furthermore, he posits that as for managing a leasing portfolio, Ijarah companies can play a pivotal role. Ijarah companies can lease the products from the manufacturers and subsequently sublease them to the end-users. Not only will that address the manufacturers' shortcomings in managing a leasing portfolio, but Ijarah companies will also benefit by requiring less capital for operations as they will be leased, as opposed to buying, from the manufacturers.

iii. Business models in circular economy involves transforming waste into value through innovative recycling and upcycling services that requires specific products design in form of manufacturing, repairing, and maintenance machinery which Istisna financing is suitable because of high capital involvement and specification of the required products that can be supplied at a future date. This is supported by UNDP IICPSD (2014) that Istisna is a purchase order to produce or build a specific product or commodity for a buyer. It is commonly used for project finance to finance long-term, large-scale facilities like manufacturing plants, power plants, airports, roads, and extractive resource operations.

iv. As a result of the high level of corporate debt that would be incurred either through interest on loan or bond in a conventional banking system that might affect balance sheet extension of businesses transforming from linear to a circular economy, the Islamic financing instrument of Sukuk especially Ijārah-based Sukuk could be used to fund the long-term transfer of an asset or service for a specified rent and term, frequently condition on the future repurchase of the assets for an agreed price is viable and highly recommended to mitigate operating and investment risks involved in circular business models that are long term in nature. This is in tandem with the view of Hussein, Shahmoradi, and Turk (2015) that Sukuk bonds are strategically important not only for the Islamic financial industry but can be a significant source of financing for infrastructure development projects.

v. It is well known that most circular businesses are still at their nascent stage, and are lacking in the performance track record that may result in credit risk for Deposits Money banks due to default payment. Such companies can be assisted with Qard Hassan (Beneficence loans) under Islamic Financing in which after utilizing the funds as start-up capital and immediately the business started yielding profits, the loan would be paid back to the Islamic Bank with no interest.

vi. Another way that Islamic Finance can provide an alternative source of financing business in a circular economy is Murabaha contract because most of the companies or entrepreneurs involved in circular business models may not afford the cost of procuring technical products that will recycle materials from the waste or disposed products. Islamic banks can offer to buy this technology at cost plus margin and sell to the companies on agreed installment payments. This is in line with the findings of Ausaf (1994) that Islamic banks use the concept of Murabahah sale to satisfy the requirements of various types of financing, such as financing of raw materials, machinery, equipment, and consumer durables as well as short-term trade financing.

vii. Islamic Banks can partner with Businesses or Entrepreneurs in circular business models on Musharakah and Mudarabah financing of products and services by providing equity financing based on profit and sharing agreements which are more appropriate than conventional bank loans because of the huge capital involved which requires most larger and mature circular businesses to meet the scale of capital market requirements.

Conclusion

This study concludes that that Ijarah, Sukuk, Qard Hassan, Istisna, Musharakah, Mudarabah, Wakalah, Kafalah, and Ju'ala financing modes are essential for providing alternative solutions to financing challenges confronting business models such as balance sheet extension, working capital, and credit risk in a circular economy.

Recommendations

This study recommends that Islamic Banks should review and redesign their products and services in order to support financing businesses in a circular economy and also support them by providing professional services in analyzing the creditworthiness of companies and viability of projects.

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