International Conference on Sustainable Economics, Management, and Accounting (ICSEMA 2025)
Proceedings
Vol. 01 No.01 Year 2025, Page 1776-1798

ENHANCING THE SUSTAINABILITY OF QARD HASAN THROUGH THE MESBAH POINT: A MATHEMATICAL AND ETHICAL FRAMEWORK

Ibrahim Kouzo[1*], Doddy Setiawan[2], Falikhatun[3], Taufiq Arifin[4]

[1-4] Faculty of Economics and Business, Universitas Sebelas Maret, Indonesia
*Email corresponding author: Ibrahimkouzo@student.uns.ac.id

Abstract

Qard Hasan, or interest-free benevolent loans, represent one of the most ethically significant instruments in Islamic finance, yet their operational sustainability remains a persistent challenge, particularly in formal Islamic microfinance institutions (IsMFIs). This study introduces a critique and development of the concept of the *Mesbah Point*–defined as the interest rate at which the present value (PV) of total interest payments under a conventional loan structure reaches its theoretical maximum. The *Mesbah Point* serves as a financial benchmark to estimate the institutional opportunity cost of offering *Qard Hasan* without violating the principles of *Shari'ah*. A mathematical model is derived and simulated, identifying the PV turning point under varying loan terms and interest scenarios. While direct application of this value as an upfront payment is ethically and practically problematic, the paper proposes the Investment *Mesbah Point*s Portfolio (IMPP) as a *Shari'ah*-compliant institutional solution. The IMPP allows IsMFIs to generate returns equivalent to the Mesbah benchmark through halal investments, thereby ensuring sustainability without compromising ethical integrity. This research offers a novel framework that bridges financial engineering and Islamic social finance to support inclusive development.

Keywords: *Qard Hasan*, *Mesbah Point*, Islamic Microfinance, Time Value of Money, *Shari'ah* Compliance

INTRODUCTION

Poverty alleviation remains one of the most formidable global challenges, occupying the foremost position among the United Nations Sustainable Development Goals (SDGs). While conventional policy frameworks often prioritize macroeconomic growth and structural reforms, the Islamic economic paradigm adopts a fundamentally different approach–one rooted in the ethical imperative of wealth redistribution. This distinctive framework seeks to uplift the poor and marginalized through mechanisms that promote social justice and economic equity, underscoring Islam's deep moral commitment to inclusive development (Firmansyah, 2016).

Among the instruments derived from this ethical foundation, *Qard Hasan* has garnered increasing attention for its dual capacity to foster both financial and social inclusion. By expanding access to essential financial services, *Qard Hasan* acts as a catalyst for community-level equity and integration, particularly among segments traditionally excluded from formal financial systems (Haider Syed et al., 2020; Iqbal et al., 2015). Its potential extends beyond financial access; when embedded within the formal financial system, *Qard Hasan* can serve as a practical conduit for alleviating poverty and advancing social participation. In doing so, it contributes to both material well-being and a more cohesive social fabric (Muneer & Khan, 2019).

The socio-economic functions of *Qard Hasan* are diverse and impactful. It supports individuals in financial distress, facilitates the ethical circulation of idle wealth, and embodies a spirit of altruism that is central to Islamic financial ethics. More importantly, it enables the poor and marginalized to pursue entrepreneurial ventures by leveraging their inherent skills and talents. This empowerment contributes meaningfully to reducing structural inequalities and promoting upward mobility within disadvantaged communities (Haider Syed et al., 2020; Junaidi et al., 2017; saqib et al., 2015).

In this context, *Qard Hasan*-based microfinance models offer a particularly compelling solution for enhancing the welfare of low-income households. These models provide interest-free capital to microenterprises, aligning financial access with Islamic ethical values. Notably, this financing structure not only promotes inclusion but also safeguards borrowers from the risks of indebtedness, particularly in situations where repayment delays occur (Ülev et al., 2023). Such ethical safeguards are especially relevant in poverty-focused financial schemes, where debt burdens can otherwise exacerbate vulnerability.

The alignment of *Qard Hasan* with the principles of corporate social responsibility (CSR) further reinforces its contemporary relevance. Both frameworks share a foundational goal: to support economically disadvantaged individuals in ways that elevate social welfare. This convergence highlights the normative dimensions of *Qard Hasan* as a financial tool grounded in communal responsibility and ethical stewardship (Firmansyah, 2016).

A compelling example of this convergence can be observed in the Micro Credit–*Qard Hasan* Financing (MCZF) initiative in Indonesia. As documented by Adnan (2017), the program channels zakat funds into interest-free, *Shari'ah*-compliant business capital for *Asnaf* entrepreneurs. Loan amounts are carefully assessed and approved by financial institutions, ensuring responsible disbursement and ethical use of funds. By preserving the principal and promoting repayment discipline, the initiative supports entrepreneurship while upholding the moral and social values central to Islamic finance.

One of the key advantages of *Qard Hasan* lies in its simplicity. Typically involving small-scale transactions, it features a straightforward process that enhances accessibility for both borrowers and providers. This procedural ease aligns well with local cultural practices, facilitating smoother implementation at the grassroots level (Iqbal et al., 2015).

Moreover, within the context of Islamic commercial jurisprudence (*Muamalat)*, where the prohibition of *Riba* is unequivocal, *Qard Hasan* offers a distinctive *Shari'ah*-compliant alternative to interest-based lending. Its ethical appeal and inherent flexibility have made it a preferred instrument in Islamic finance, particularly due to its defining characteristic–complete exemption from interest (Abidin et al., 2013).

The motivations underlying interest-free lending through *Qard Hasan* can be broadly categorized into material and spiritual dimensions. On one hand, lenders may seek intangible social benefits such as enhanced reputation, reciprocal support, or community goodwill. On the other, and more prominently in Islamic thought, such lending is viewed as a virtuous act driven by religious devotion. It is regarded as a means of attaining divine reward (Hasanat) and earning the pleasure of Allah by aiding those in need. Among *Shari'ah* scholars, this latter motivation holds greater moral weight, reflecting the spiritual essence of *Qard Hasan* (Abdullah, 2015).

Despite these profound ethical and spiritual underpinnings, *Qard Hasan* remains a peripheral feature in formal Islamic financial institutions. Its limited uptake is primarily attributed to concerns over economic viability. As Izadyar and Ragnath (2014a) observe, the absence of profit-generating mechanisms disincentivizes Islamic Financial Institutions (IFIs) from offering *Qard Hasan* products. This issue is even more acute in microfinance, where the high administrative and operational costs pose

significant barriers to the scalability and long-term sustainability of such models (Gutiérrez-Nieto et al., 2017; Uddin et al., 2024).

In response to these constraints, some scholars and practitioners have explored innovative frameworks aimed at reconciling financial sustainability with *Shari'ah* compliance. Among the most notable is the "*Mesbah Point*" model developed by Izadyar and Ragnath (2014a). This model proposes that the borrower make an upfront payment equivalent to the present value of interest in a conventional loan. This sum is then invested by the lender to cover operational costs and potentially generate a return, thereby ensuring the financial sustainability of the loan without violating Islamic legal principles. It serves not as a pricing mechanism, but as a theoretical benchmark to help Islamic financial institutions measure the value they forgo by not charging interest, and thus strategically estimate the financial buffer needed to sustain *Qard Hasan* operations.

Understanding the *Mesbah Point* is crucial for two reasons. First, it offers a quantifiable measure of the "lost opportunity" that arises when interest is foregone–information essential for calculating required returns from permissible investment vehicles (e.g., *Sukuk*) or charitable buffers (e.g., *Waqf*). Second, it provides clarity for institutional planning: by identifying the point of maximum PV, institutions can develop funding strategies that are financially efficient yet ethically sound.

What makes the *Mesbah Point* conceptually and mathematically unique is its turning point property: beyond a certain interest rate, increasing the rate further actually causes the present value of the payments to decline due to the compounding effect of discounting. This creates a parabolic relationship between the rate and PV–a relationship that Islamic institutions can exploit not to charge interest, but to simulate how much capital needs to be strategically invested in halal assets to support *Qard Hasan* sustainably.

This study critically examines the *Mesbah Point* using analytical modeling, partial derivatives, and numerical simulation, and proposes the establishment of–the Investment *Mesbah Point*s Portfolio (IMPP)–which enables IsMFIs to internalize the Mesbah logic without burdening borrowers or violating *Shari'ah* principles. In doing so, the paper offers a novel contribution to the discourse on Islamic sustainable finance by integrating financial reasoning with ethical imperatives. In doing so, the paper offers a novel contribution to the discourse on Islamic sustainable finance by integrating financial reasoning with ethical imperatives.

LITERATURE REVIEW

Islamic finance rests on a foundation of principles that prioritize social justice, equity, and ethical conduct. Central to its framework is the categorical prohibition of *Riba* (interest), accompanied by a strong emphasis on risk-sharing through profit-and-loss arrangements. Unlike interest, which is fixed and remains detached from the outcomes of economic ventures, profit in Islamic finance is derived from the actual performance of underlying activities. This linkage renders profit ethically acceptable, as it reflects real economic value creation and encourages productive enterprise. Such a distinction reinforces the broader Islamic commitment to fairness in the distribution of wealth and the alignment of financial rewards with tangible contributions to the economy (Alam et al., 2017; Ayub, 2009; Fianto et al., 2019; IsDB, 2021).

Contrary to the common perception of Islamic finance as merely interest-free banking, it is governed by a comprehensive ethical and legal architecture derived from *Shari'ah*. This framework is articulated through five foundational principles: first, the unequivocal prohibition of *Riba*; second, the exclusion of *Maysir* (gambling) and excessive *Gharar* (uncertainty or ambiguity) from financial contracts; third, the endorsement of profit-and-loss sharing (PLS) structures that promote equitable distribution of risk and return; fourth, the requirement that financial transactions be asset-backed to ensure they are

rooted in real economic activity; and finally, the necessity of honoring contractual commitments and limiting financial operations to those explicitly sanctioned by Islamic jurisprudence (Alam et al., 2017; Ayub, 2009; Franzoni & Ait Allali, 2018; IsDB, 2021).

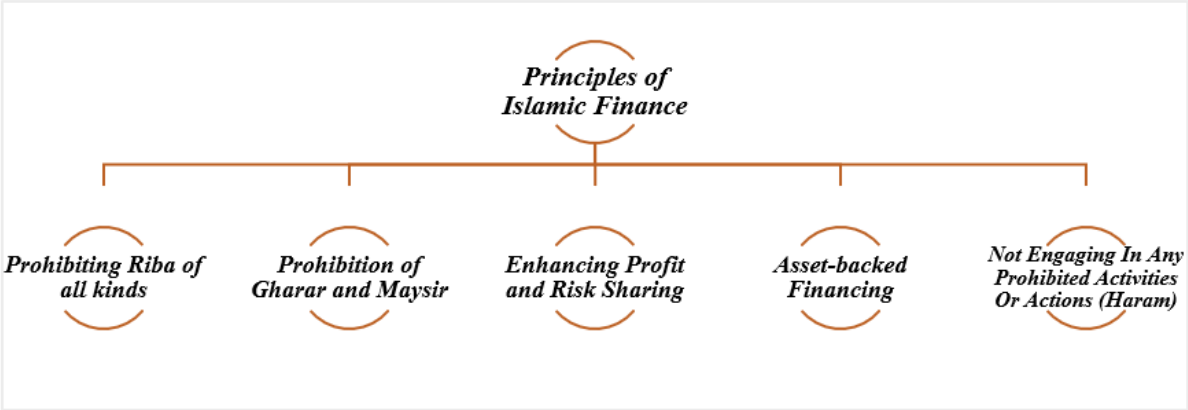

Figure 1. Principles of Islamic Finance

Complementing this legalistic foundation are the ethical norms that shape Islamic commercial behavior. Islamic business ethics advocate for justice, transparency, and the fulfillment of contractual obligations. They emphasize the values of mutual support, the alleviation of hardship, and fair pricing practices in competitive markets, while seeking to eliminate exploitation and harm. These ethical imperatives not only safeguard the integrity of individual transactions but also aim to enhance the collective welfare of society (Ayub, 2009).

It is within this broader ethical and jurisprudential context that Islamic microfinance has emerged and evolved. Originally conceived within scholarly discourse, Islamic microfinance has since transitioned into a tangible and expanding sector within numerous Muslim-majority countries, including Indonesia, Bangladesh, Sudan, Pakistan, and Yemen (Tamanni Luqyanand Liu, 2017). This development marks a significant milestone, reflecting both its practical relevance and its growing capacity to reshape the socio-economic landscape of these regions.

The sector's evolution is closely aligned with the foundational principles of Islamic finance, particularly the emphasis on *Shari'ah* compliance. By rejecting interest-based transactions and advocating for risk-sharing arrangements, Islamic microfinance offers a model that integrates financial inclusion with ethical governance. As such, it stands as a viable mechanism for addressing poverty and promoting economic justice in ways that resonate with the core values of the Islamic economic system (Ahmad et al., 2020; Fianto et al., 2019).

Islamic microfinance operates through a diverse set of financial instruments, each tailored to accommodate the heterogeneous needs of micro-entrepreneurs while remaining consistent with *Shari'ah* principles. At its foundation, the sector utilizes three principal financing structures: equity-based instruments (micro-equity), trade-based arrangements (microcredit), and charitable support mechanisms. These classifications reflect a functional and ethical diversification aimed at addressing both entrepreneurial and social welfare goals (Tamanni Luqyanand Liu, 2017). According to the Islamic Development Bank (IsDB), these modalities can be broadly grouped into three categories: benevolence-oriented, trade-oriented, and investment-oriented financing.

Benevolence-oriented financing is epitomized by *Qard Hasan*, an interest-free loan extended solely for the purpose of offering financial relief, with no expectation of profit or commercial return.

Trade-oriented mechanisms–such as *Murabaha* (cost-plus financing), Bay' Al-Salam (advance payment sales), and ijarah (leasing)–are designed to facilitate commerce in a *Shari'ah*-compliant manner by embedding asset-based structures into transactions. Investment-oriented financing includes equity-based contracts such as *Musharakah* (joint venture), Mudarabah (trust-based partnership), and *Musharakah Mutanaqisah* (diminishing partnership), all of which foster risk-sharing and align the interests of capital providers and entrepreneurs through equitable profit-and-loss distribution (Saleem et al., 2024).

More comprehensively, Islamic finance distinguishes between two overarching contractual paradigms: risk-sharing and non-risk-sharing. Risk-sharing instruments–commonly referred to as Profit and Loss Sharing (PLS) contracts–reflect the ethical core of Islamic finance, promoting accountability, fairness, and shared responsibility. These include *Musharakah*, Mudarabah, and *Musharakah Mutanaqisah*, which facilitate joint investment ventures wherein profits and losses are borne collectively based on pre-agreed ratios. Conversely, non-PLS or debt-based contracts offer structured trade solutions and include instruments such as *Murabaha*, *Ijarah*, *Istisna* (commissioned manufacturing), and *Bay' Al-Salam*. While these contracts do not involve direct risk-sharing, they maintain adherence to Islamic legal and ethical norms by ensuring that all transactions are backed by tangible assets and devoid of speculative elements.

Furthermore, the inclusion of contracts like *Musawamah* (bargained sale) and *Qard Hasan* broadens the scope of Islamic financial instruments, enabling institutions to meet a wide spectrum of financial requirements while preserving the normative principles of equity, social welfare, and ethical governance that define Islamic economic philosophy (Saleem et al., 2024). (Refer to Figure 2)

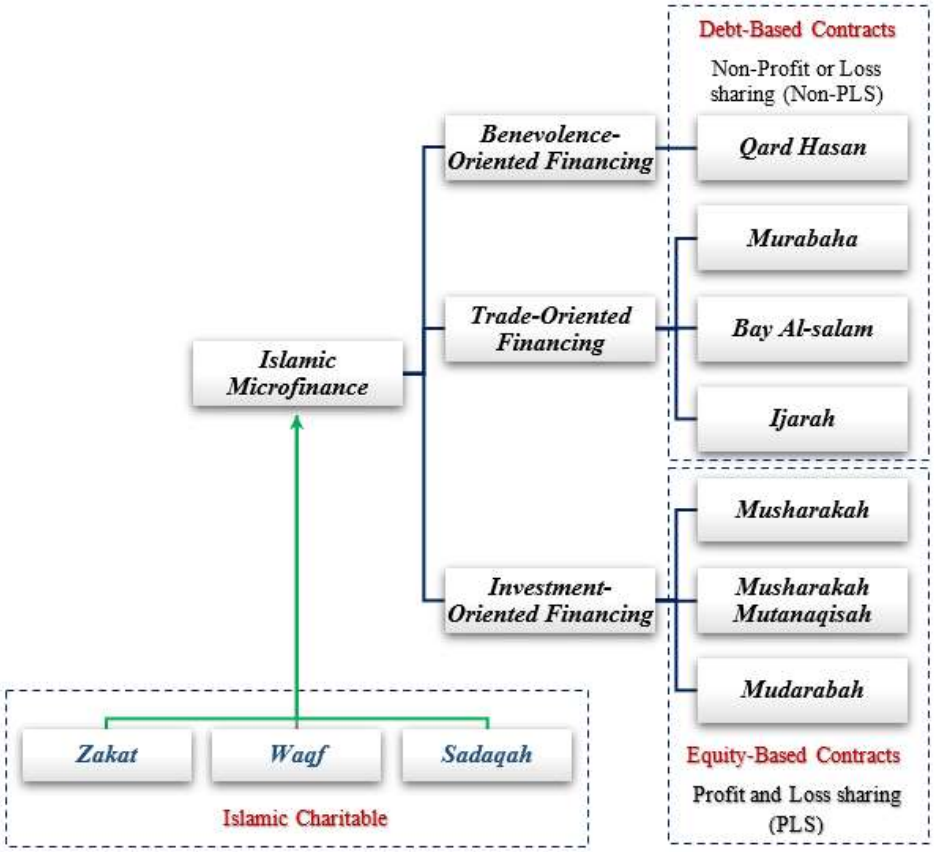

Figure 2. Islamic microfinance contracts

Within the framework of Islamic finance, *Qard Hasan* occupies a distinct and exclusive position as the only fully debt-based financial instrument that is both non-profit and strictly compliant with *Shari'ah* principles (IsDB, 2021). Under Islamic jurisprudence, loans are typically classified into salaf and Qard, with *Salaf* denoting a loan granted for a specified duration and Qard referring to one that is repayable upon demand. In this classification, Qard is considered a specific subset of *Salaf* (Abdullah, 2015).

Defined by its benevolent nature, *Qard Hasan* is designed to support individuals facing financial distress or those pursuing income-generating ventures. It is characterized by its altruistic intent: an interest-free loan extended to the economically vulnerable, with the sole condition being the full repayment of the principal within an agreed timeframe (Hasan et al., 2021; Selim, 2019). As such, *Qard Hasan* involves the temporary transfer of asset ownership to those in need, emphasizing assistance rather than commercial gain. Repayment terms are either demand-based or mutually scheduled, reinforcing a framework of fairness, dignity, and mutual respect between parties (Selim & Hassan, 2020). The lender, under this arrangement, is entitled to recover only the original principal, and no financial return is to be expected (Akhter et al., 2025).

The term *Qard Hasan* itself underscores its ethical foundations. It derives from the Arabic words *Qard*–originating from *Qirad*, meaning "to cut off," a metaphor for the temporary detachment of the lender's assets–and Hasan, rooted in Ihsan, which conveys benevolence and moral excellence (Shaikh et al., 2024). This linguistic composition reflects the spirit of selfless support that defines the institution.

Unlike traditional charitable giving, *Qard Hasan* offers a dignified alternative that allows recipients to meet urgent needs or pursue opportunities without compromising their self-worth. Rooted in the values of compassion and solidarity, it provides a mechanism for alleviating hardship while reinforcing

individual autonomy and human dignity (IsDB, 2021). For the lender, the primary motivation lies not in financial return but in spiritual merit. The expectation of divine reward in the afterlife serves as a lasting and transcendent form of gain, reinforcing the non-material incentive structure embedded within Islamic ethics (Aderemi & Ishak, 2023; Selim, 2019).

From a legal and ethical standpoint, any predetermined excess on a *Qard Hasan* loan is categorically considered *Riba* (interest), which is explicitly forbidden in Islamic law (Hasan et al., 2021; S. Khan et al., 2021). This prohibition is unequivocally supported by both the Qur'an and the Sunnah, and any surplus imposed on the principal is deemed usurious (Abdullah, 2015). The strict juristic stance is underpinned by the *Shari'ah* maxim, "any loan that brings benefit is *Riba*," which underscores that a loan must never serve as a vehicle for personal enrichment. Rather, it is intended as a purely altruistic act, free from material gain ((Abdullah, 2015).

The prohibition of excess benefits in *Qard Hasan* contracts reflects the broader Islamic commitment to ethical integrity in financial dealings. According to the guidelines of the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), *Qard Hasan* is defined as the transfer of fungible wealth to a recipient with an obligation to return an equivalent amount. AAOIFI explicitly prohibits any form of excess benefit–whether in quantity, quality, or service–linked to the loan, irrespective of whether such stipulations are formal, implied, or arise from cultural expectations. This applies across the loan's lifecycle, including initiation, deferment, and delayed repayment (AAOIFI, 2024).

This restriction reinforces the fundamentally altruistic nature of *Qard Hasan*, distinguishing it from profit-driven financial instruments. Islamic law prohibits any form of profit-making through this mode of financing, although reasonable charges for legitimate administrative expenses incurred during the loan process may be permitted, provided they are not inflated or disguised as profit (IsDB, 2021; Izadyar & Ragnath, 2014a).

Moreover, Islamic ethics encourage leniency toward borrowers facing genuine financial difficulties. While repayment is morally incumbent upon the borrower, *Shari'ah* encourages creditors to extend the repayment period or even forgive the debt entirely in cases of hardship, reflecting the compassionate dimension of Islamic finance (Aderemi & Ishak, 2023).

Although any return on a *Qard Hasan* loan must not be contractually stipulated, borrowers are permitted to offer a voluntary excess payment as a token of gratitude. This gesture must arise solely from the borrower's initiative, without any implicit or explicit expectation. For instance, the Akhuwat Microfinance Institution in Pakistan incorporates this principle into its operational model, emphasizing voluntary generosity over enforced returns (Akhuwat, 2018; IsDB, 2021; S. Khan et al., 2021).

The practical efficacy of *Qard Hasan* has been well-documented through empirical research across various socio-economic contexts. Studies conducted in Indonesia (Ashany & Febianto, 2012), Malaysia (Mansori et al., 2015), and Iran (Mojtahed & Hassanzadeh, 2009) have demonstrated its applicability and acceptance as a viable financial instrument. Parallel findings in developed economies–such as Australia (Sain et al., 2013)–further highlight its potential to address financial exclusion and contribute to socio-economic development, particularly among vulnerable populations.

In practice, the *Qard Hasan* financing process is governed by a structured and transparent procedure that ensures *Shari'ah* compliance and accountability (Citaningati et al., 2022; Harahap et al., 2023; IsDB, 2021; S. Khan et al., 2021). It typically begins with the submission of an application and project proposal by the prospective client, often supported by the Islamic Microfinance Institution (IsMFI). Following this, the financing committee evaluates the request and, upon preliminary approval, forwards it to the relevant office for final authorization. Once approved, a formal loan agreement is executed, stipulating terms and repayment conditions. Clients are generally required to provide

supporting documentation such as receipts or invoices to verify fund utilization. In the event of default, legal proceedings may be initiated, and borrowers may be liable for recovery-related costs (IsDB, 2021; IslamWeb, 2019). Upon successful repayment of the principal and any legitimate fees, a No Demand Certificate is issued, signifying the closure of the loan (IsDB, 2021).

Despite its social and spiritual value, *Qard Hasan* is not without operational challenges. These include the risk of borrower default, suboptimal fund utilization, limited institutional revenue streams, and exposure to inflationary pressures–all of which may affect its long-term viability (Aderemi & Ishak, 2023).

Likewise, The expansion of Islamic microfinance institutions (IsMFIs) has prompted a growing need to reconcile the social mission of poverty alleviation with the financial realities of operating sustainable institutions (Ahmad et al., 2020; Begum et al., 2019). Without charging interest or service fees, IsMFIs that offer *Qard Hasan* face difficulties covering administrative costs, mitigating credit risk, and achieving scale. Models that rely exclusively on donor support or zakat-based subsidies have proven fragile and limited in scope (Jaafar, 2018). Consequently, there is a pressing need for Islamic financial engineering that can support *Qard Hasan* within a financially robust framework–without compromising its ethical integrity.

While classical Islamic jurisprudence prohibits *Riba* (interest) in all forms, it does not prohibit recognizing the economic impact of time on the value of money when used for financial planning or investment structuring–so long as it is not charged to the borrower (M. A. Khan, 2020; Siddique & Rahim, 2015). El-Gamal (2006) highlights a consensus among Islamic jurists, stating that "time has a share in the price" (p. 50). This acknowledgment affirms the legitimacy of the time value of money (TVM) as a principle in investment appraisal, insofar as it is not employed to justify predetermined returns on loans. This opens a space for TVM-based benchmarks to be used in institutional decision-making without violating *Shari'ah*.

Izadyar and Ragnath (2014a, 2014b) argue that the growth of *Qard Hasan* within formal financial markets has been significantly constrained by limited capital access and a general lack of enthusiasm among institutional investors. This hesitancy is largely rooted in the widespread perception that *Qard Hasan*, as a benevolent and interest-free loan, lacks the economic viability to generate returns. To address this challenge and reframe *Qard Hasan* as a financially sustainable model, the authors propose the introduction of an optimal upfront payment mechanism known as the "*Mesbah Point*."

The *Mesbah Point* concept integrates amortization principles with the time value of money. Under this model, the borrower makes a predetermined upfront payment–termed the Upfront Payment (UFP)–in exchange for receiving the loan principal at zero interest. The borrower then repays only the principal in equal installments over the loan term. For instance, if a borrower requires $10,000, they would receive 70% of that amount directly, while the remaining 30% is treated as the UFP. This upfront amount is invested by the financial institution to recover operational costs and generate returns comparable to conventional financing.

The *Mesbah Point* represents the point at which the present value (PV) of total interest payments in a conventional loan structure is equivalent to the optimal UFP in a *Qard Hasan* arrangement. Izadyar and Ragnath calculate this by comparing interest obligations across various conventional loan scenarios–ranging from 1% to 30% interest over terms of 5, 10, 15, 20, and 30 years. Their analysis reveals a parabolic relationship between interest rates and required UFPs: as interest rates rise, the UFP initially increases, reaches a peak (the *Mesbah Point*), and then declines. To operationalize this model, Izadyar and Ragnath suggest that both the UFP and subsequent monthly principal repayments be pooled into a fund managed by a Special Purpose Vehicle (SPV). The SPV would invest these funds in *Shari'ah*-compliant financial instruments–particularly Sukuk, including zero-coupon variants–designed to produce

cash flows mirroring those of conventional loans. This approach would not only cover administrative costs but could also offer competitive returns, enhancing the attractiveness of *Qard Hasan* from an institutional investment perspective.

Fundamentally, Izadyar and Ragnath conceptualize *Qard Hasan* as functionally analogous to a conventional declining balance loan with equal monthly payments. The UFP, when strategically calculated and invested alongside periodic repayments, is intended to generate a return equivalent to that of a conventional interest-bearing loan. While their proposal presents a novel solution to enhance the viability of benevolent lending, it leaves open the theoretical question of why the UFP reaches its peak at a particular interest rate and subsequently declines. This study attempts to provide an explanation for this behavior by offering a mathematical explanation and a practical formula for identifying the *Mesbah Point*.

Understanding the *Mesbah Point* is crucial for two reasons. First, it offers a quantifiable measure of the "lost opportunity" that arises when interest is foregone–information essential for calculating required returns from permissible investment vehicles (e.g., *Sukuk*) or charitable buffers (e.g., waqf). Second, it provides clarity for institutional planning: by identifying the point of maximum PV, institutions can develop funding strategies that are financially efficient yet ethically sound.

This study critically examines the *Mesbah Point* using analytical modeling, partial derivatives, and numerical simulation, and proposes–the Investment *Mesbah Point*s Portfolio (IMPP)–which enables IsMFIs to internalize the Mesbah logic without burdening borrowers or violating *Shari'ah* principles. In doing so, the paper offers a novel contribution to the discourse on Islamic sustainable finance by integrating financial reasoning with ethical imperatives.

Given these conceptual developments, the central focus of this study is twofold:

1. To derive and simulate the *Mesbah Point* as an ethical-financial benchmark for *Qard Hasan* sustainability;
2. To propose and evaluate an institutional mechanism–the Investment *Mesbah Point*s Portfolio (IMPP)–that allows IsMFIs to apply this concept without burdening borrowers or breaching *Shari'ah* compliance.

RESEARCH METHODS

This study employs an analytical-mathematical approach combined with simulation techniques to derive and operationalize the concept of the *Mesbah Point* within the context of *Qard Hasan* microfinance. The methodology unfolds in three stages: (i) formal mathematical modeling of the present value (PV) of interest payments under conventional amortization, (ii) identification of the turning point through differential calculus, and (iii) simulation of results using realistic microfinance parameters.

The PV–Discount Rate–FV Relationship

The present value (PV) of a future amount (FV), discounted over n periods at an interest rate r, is expressed as:

$$PV = \frac{FV}{(1 + r)^n}$$

To examine how PV responds to changes in the future value and the discount rate, we utilize partial derivatives.

1. Partial Derivative of PV with Respect to FV

$$\frac{\partial PV}{\partial FV} = \frac{1}{(1 + r)^n}$$

This derivative is strictly positive, indicating a direct and linear relationship between PV and FV when r and n are held constant. As FV increases, PV rises proportionally.

2. Partial Derivative of PV with Respect to r

Rewriting the original PV equation in exponential form facilitates differentiation:

$$PV = FV\,(1 + r)^{-n}$$

Differentiating with respect to r:

$$\frac{\partial PV}{\partial r} = FV.\frac{\partial}{\partial r}((1 + r)^{-n})$$

The power rule of differentiation:

$$\frac{\partial}{\partial X}(X^n) = nX^{n-1}$$

So,

$$\frac{\partial}{\partial r}((1 + r)^{-n}) = -n(1 + r)^{-n-1}$$

This mean:

$$\frac{\partial PV}{\partial r} = FV.(-n(1 + r)^{-n-1}) = -n.FV\,(1 + r)^{-n-1}$$

$$\frac{\partial PV}{\partial r} = -n.\frac{FV}{(1 + r)^{n+1}}$$

This negative derivative confirms that PV diminishes as the discount rate r increases, assuming FV and n remain constant.

3. Combined Effects of FV and r

When both FV and r vary simultaneously, the relationship becomes nonlinear. Initially, an increase in FV may lead to a higher PV. However, as r continues to rise, the exponential growth of the discounting factor eventually surpasses the linear increase in FV, causing PV to decline.

This tipping point is known as the turning point, where the marginal increase in FV is outweighed by the growing discounting effect of $(1 + r)^n$. The turning point is essentially where the exponential discounting starts to overpower the linear increase in the future value, leading to a net decrease in the present value. This non-linear relationship explains the non-monotonic behavior of PV and underpins the theoretical foundation of the *Mesbah Point*.

Analytical Framework and Core Assumptions

The foundation of the *Mesbah Point* model lies in comparing a hypothetical interest-based loan structure with a *Shari'ah*-compliant interest-free *Qard Hasan*. Although Islamic finance prohibits the actual application of interest, this modeling assumes a conventional loan equivalent to the *Qard Hasan* in size and duration, purely to assess its financial opportunity cost. This counterfactual allows institutions to estimate the value of forgone interest-based revenue and guide institutional planning.

The analysis assumes:

- A fixed principal P;
- A constant monthly interest rate r_m;
- A total loan term of n_m monthly periods;
- Equal monthly payments under a conventional loan model (i.e., annuity-style amortization);

- Discounting based on standard time value of money (TVM) logic, applied only for internal estimation, not pricing.

Present Value Function of Interest Payments

Mesbah Point represents the Present value PV of the sum of the interest for a decreasing interest loan with an annual interest rate r, with equal monthly payments.

In a decreasing interest loan, the interest amount decreases over time because the loan balance is reducing (Refer to Table 1). The future value FV in this context is the sum of all interest payments over the term of the loan.

Table 1. Amortization of a $3,000 loan with a 10% annual interest rate

n	Principal Outstanding (Beginning Balance)	Interest	Principal Repayment	EMI	Principal Outstanding (Ending Balance)
1	$3,000.00	$25.00	$238.75	$263.75	$2,761.25
2	$2,761.25	$23.01	$240.74	$263.75	$2,520.52
3	$2,520.52	$21.00	$242.74	$263.75	$2,277.77
4	$2,277.77	$18.98	$244.77	$263.75	$2,033.01
5	$2,033.01	$16.94	$246.81	$263.75	$1,786.20
6	$1,786.20	$14.88	$248.86	$263.75	$1,537.34
7	$1,537.34	$12.81	$250.94	$263.75	$1,286.40
8	$1,286.40	$10.72	$253.03	$263.75	$1,033.37
9	$1,033.37	$8.61	$255.14	$263.75	$778.24
10	$778.24	$6.49	$257.26	$263.75	$520.97
11	$520.97	$4.34	$259.41	$263.75	$261.57
12	$261.57	$2.18	$261.57	$263.75	$0.00
	Total	**$164.97**	**$3,000.00**	**$3,164.97**	

Equated Monthly Installment (EMI) for a loan with principal P, monthly interest rate r_m, and total number of payments 12n is given by:

$$Equated\ Monthly\ Installment\ (EMI) = P \times \frac{r_m(1+r)^{n_m}}{(1+r_m)^{n_m}-1}$$

Where:

- The annual interest rate r thus the monthly interest rate $r_m = \frac{r}{12}$
- The loan term is nm years, which equals $12n$ months.
- The principal amount of the loan is P

Therefore, Total Payments = n_m × EMI, thus:

The Sum of Interest Payments = n_m × EMI – P
Thus:

$$FV = n_m \times EMI - P$$

Substituting EMI into this equation:

$$FV = n_m \times \left(P \times \frac{r_m \times (1+r_m)^{n_m}}{(1+r_m)^{n_m}-1}\right) - P = P \times \left(n_m \times \frac{r_m \times (1+r_m)^{n_m}}{(1+r_m)^{n_m}-1} - 1\right)$$

The formula for the present value (PV) of a future amount (FV) discounted at a rate r over n periods is given by:

$$PV = \frac{FV}{(1 + r_m)^{n_m}}$$

Where: $r_m = \frac{r}{12}$, $n_m = 12n$

Thus:

$$PV = \frac{P \times \left(n_m \times \frac{r_m \times (1 + r_m)^{n_m}}{(1 + r_m)^{n_m} - 1} - 1\right)}{(1 + r_m)^{n_m}}$$

$$PV = \frac{P \times n_m \times r_m \times (1 + r_m)^{n_m} - P \times ((1 + r_m)^{n_m} - 1)}{(1 + r_m)^{n_m} ((1 + r_m)^{n_m} - 1)}$$

$$PV = \frac{P \times n_m \times r_m}{(1 + r_m)^{n_m} - 1} - \frac{P}{(1 + r_m)^{n_m}}$$

$$PV = P \times \left(\frac{n_m \times r_m}{(1 + r_m)^{n_m} - 1} - \frac{1}{(1 + r_m)^{n_m}}\right)$$

The present value (PV) signifies the current value of sum that, when invested at an interest rate r_m for a duration n_m, will accumulate to an amount at the end of period n_m that is equivalent to the interest paid by the borrower for a loan principal P at the interest rate r_m and term n_m.

Derivation of the Mesbah Point Condition

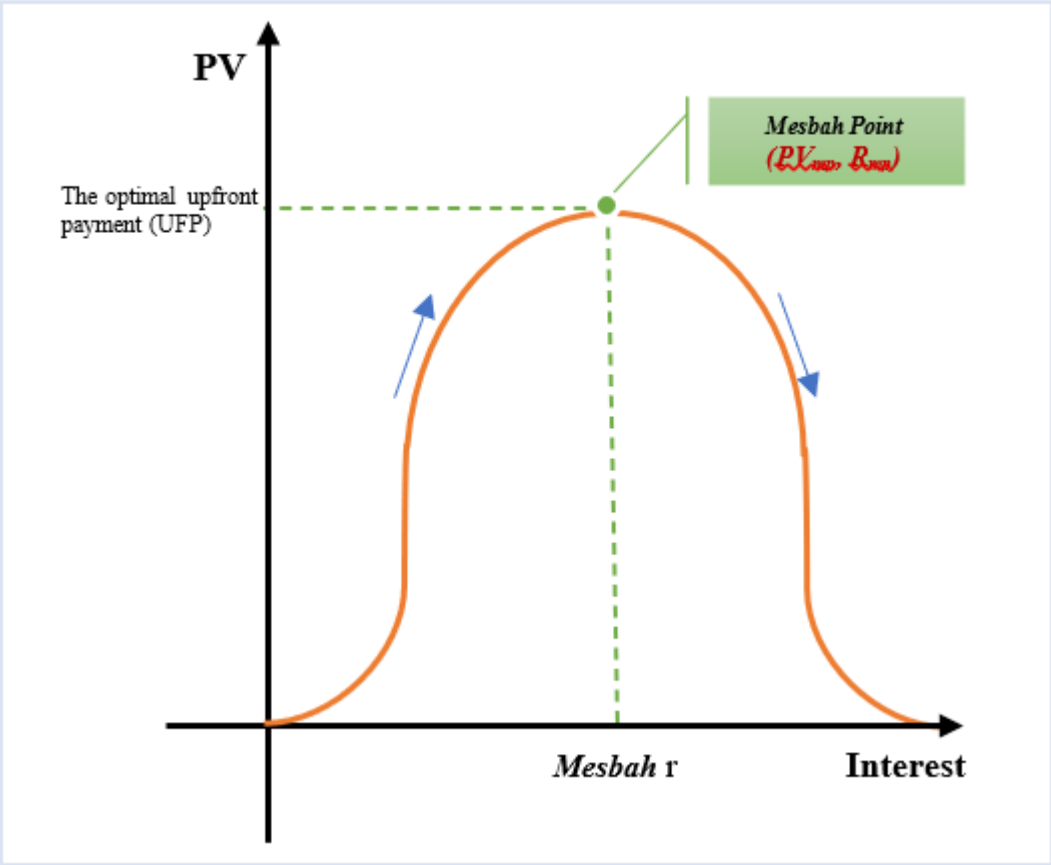

Figure 3: Mesbah Point

To identify the *Mesbah Point*–the rate r_m where PV reaches its maximum–the first derivative of the PV function with respect to r_m is computed:

The PV function: $PV = P \times \left(\frac{n_m \times r_m}{(1+r_m)^{n_m}-1} - \frac{1}{(1+r_m)^{n_m}}\right)$

Here, P and nm are constants, and rm is the interest rate per period.

To differentiate this expression with respect to rm, we need to differentiate each term separately using the quotient rule. Let's break down the process:

1. Differentiate the first term: $\frac{n_m \times r_m}{(1+r_m)^{n_m}-1}$
2. Differentiate the second term: $-\frac{1}{(1+r_m)^{n_m}}$

- Differentiate the first term:

Let's use the quotient rule:

$$\frac{\partial}{\partial r_m}\left(\frac{u}{v}\right) = \frac{u'v - uv'}{v^2} \quad \text{.....(1)}$$

$$u = n_m \times r_m$$

$$u' = n_m$$

$$v = (1 + r_m)^{n_m} - 1$$

$$v' = \frac{\partial}{\partial r_m}((1 + r_m)^{n_m} - 1) = n_m(1 + r_m)^{n_m - 1}$$

Substitute u, v, u' and v' in (1)

$$\frac{\partial}{\partial r_m}\left(\frac{n_m \times r_m}{(1 + r_m)^{n_m} - 1}\right) = \frac{n_m \times ((1 + r_m)^{n_m} - 1) - n_m \times r_m \times n_m(1 + r_m)^{n_m - 1}}{((1 + r_m)^{n_m} - 1)^2}$$

Simplify the result:

$$\frac{\partial}{\partial r_m}\left(\frac{n_m \times r_m}{(1 + r_m)^{n_m} - 1}\right) = \frac{n_m \times (1 + r_m)^{n_m} - n_m - {n_m}^2 \times r_m \times (1 + r_m)^{n_m - 1}}{((1 + r_m)^{n_m} - 1)^2}$$

Differentiate the second term:

$$-\frac{1}{(1+r_m)^{n_m}} = -(1 + r_m)^{-n_m}$$

$$\frac{\partial}{\partial r_m}(-(1 + r_m)^{-n_m}) = -(-n_m(1 + r_m)^{-n_m - 1} = \frac{n_m}{(1 + r_m)^{n_m + 1}}$$

Therefore:

$$\frac{\partial PV}{\partial r_m} = P \times \left(\frac{n_m \times (1 + r_m)^{n_m} - n_m - {n_m}^2 \times r_m \times (1 + r_m)^{n_m - 1}}{((1 + r_m)^{n_m} - 1)^2} + \frac{n_m}{(1 + r_m)^{n_m + 1}}\right)$$

$$\frac{\partial PV}{\partial r_m} = P \times n_m \times \left(\frac{(1 + r_m)^{n_m} - 1 - n_m \times r_m \times (1 + r_m)^{n_m - 1}}{((1 + r_m)^{n_m} - 1)^2} + \frac{1}{(1 + r_m)^{n_m + 1}}\right)$$

This is the partial derivative of PV with respect to r_m

To find the Saddle Point Or "*Mesbah Point*" where the present value PV stops increasing and begins to decrease, we need to set the derivative to zero. This process helps us identify the point at which the function changes direction, indicating a maximum.

$$\frac{\partial PV}{\partial r_m} = 0$$

Thus: $$P \times n_m \times \left(\frac{(1+r_m)^{n_m} - 1 - n_m \times r_m \times (1+r_m)^{n_m - 1}}{((1+r_m)^{n_m} - 1)^2} + \frac{1}{(1+r_m)^{n_m+1}}\right) = 0$$

$$\frac{(1 + r_m)^{n_m} - 1 - n_m \times r_m \times (1 + r_m)^{n_m - 1}}{((1 + r_m)^{n_m} - 1)^2} + \frac{1}{(1 + r_m)^{n_m + 1}} = 0$$

Since $P \neq 0$ and $n_m \neq 0$

$$\frac{(1+r_m)^{n_m} - 1 - n_m \times r_m \times (1+r_m)^{n_m-1}}{((1+r_m)^{n_m} - 1)^2} = -\frac{1}{(1+r_m)^{n_m+1}}$$

$$(1+r_m)^{n_m} - 1 - n_m \times r_m \times (1+r_m)^{n_m-1} = -\frac{((1+r_m)^{n_m} - 1)^2}{(1+r_m)^{n_m+1}}$$

$$\frac{((1+r_m)^{n_m} - 1)^2}{(1+r_m)^{n_m+1}} + (1+r_m)^{n_m} - n_m \times r_m \times (1+r_m)^{n_m-1} = 1$$

To determine the interest rate r_m associated with the *Mesbah Point*, we solve this equation numerically (e.g., via Python root-finding method) and subsequently substitute it into PV formula to calculate the optimal upfront payment that the borrower should make.

Simulations were conducted to operationalize the *Mesbah Point*, . The interest rate r_m was varied systematically over a realistic range (e.g., 0.1% to 50%) while fixing loan parameters such as principal amount P=3,000 and 100,000 and loan term n_m=30 and 60 months.

Importantly, this model does not propose charging interest or setting any financial burden on borrowers. The *Mesbah Point* is used exclusively as an internal benchmark to calculate how much institutional revenue must be generated from halal investments (e.g., *Sukuk, Profit-Sharing Mudarabah*) to sustain *Qard Hasan* portfolios.

RESULTS AND DISCUSSION

This section outlines the analytical outcomes derived from the *Mesbah Point* model and explores its practical relevance for Islamic microfinance institutions (IsMFIs). The analysis not only examines the model's mathematical characteristics but also considers its institutional implications, offering insights into how the *Mesbah Point* may enhance financial sustainability within a *Shari'ah*-compliant framework. In addition, the discussion addresses potential operational constraints associated with implementing the model at the borrower level, highlighting both its strengths and limitations in real-world applications.

I. Mesbah Point & Micro Qard Hasan

From the previous discussion, for *Mesbah Point*, we have:

$$PV = P \times \left(\frac{n_m \times r_m}{(1+r_m)^{n_m} - 1} - \frac{1}{(1+r_m)^{n_m}}\right) \quad \text{(A)}$$

$$\frac{((1+r_m)^{n_m} - 1)^2}{(1+r_m)^{n_m+1}} + (1+r_m)^{n_m} - n_m \times r_m \times (1+r_m)^{n_m-1} = 1 \quad \text{(B)}$$

It can be seen that *Mesbah Point* (PV_{mp}, r_{mp}), where PV starts to decrease at a specified interest rate, is influenced by several factors:

1. Loan Amount (P): The principal balance of the loan.
2. Interest Rate (r): The rate at which interest is calculated.
3. Loan Term (n): The duration of the loan.
4. Payment Frequency: Monthly, quarterly, or annual payments.

For larger loans, the future value, which encompasses the total interest paid, is generally more responsive to fluctuations in interest rates. This is because the interest payments constitute a substantial part of the loan balance, thereby magnifying the influence of interest rate variations on the future value. Conversely, for smaller loans or microloans, the absolute interest payments are relatively minimal. Consequently, changes in interest rates might not considerably affect the future value or the critical interest rate (turning point) at which significant impacts are observed, as the total interest paid is comparatively lower. This implies that the turning point for smaller loans may occur at a higher interest rate due to the principal's reduced sensitivity to rate increases. As a result, the present value may either remain relatively constant or exhibit a less pronounced decline as interest rates rise, attributed to the lower overall interest payments (Refer to Figure 4 & Figure 5).

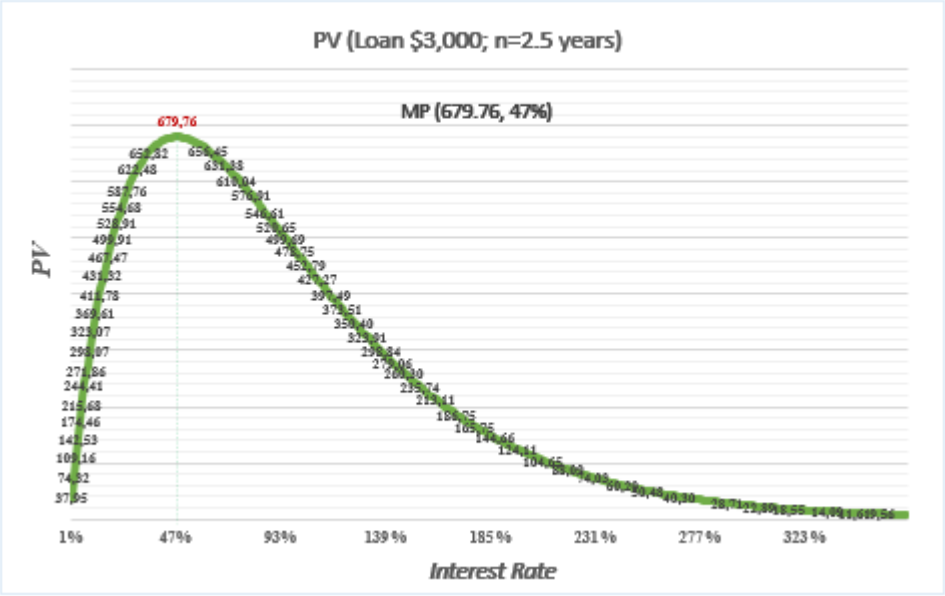

Figure 4: Mesbah Point (PV_{mp}, r_{mp}) for a principal loan amount of $3,000 over terms of 2.5 years

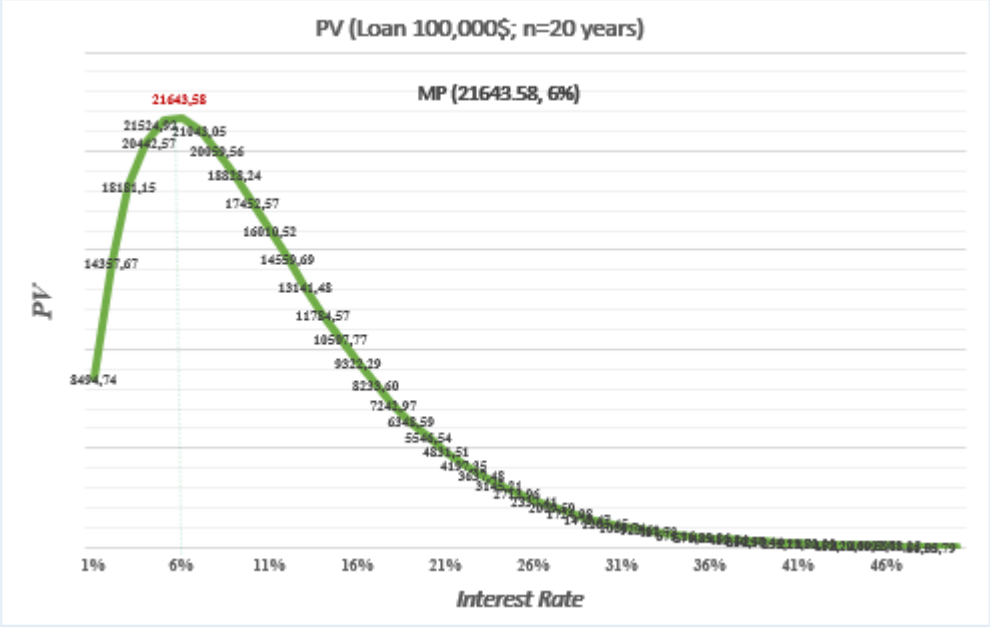

Figure 5: Mesbah Point (PV_{mp}, r_{mp}) for a principal loan amount of $100,000 over terms of 20 years

In addition, longer loan durations mean more interest payments over time. This increases the future value significantly as interest compounds over many periods. The turning point in a long-term loan occurs at a lower interest rate because the compounded effect of the interest rate over time significantly impacts the present value. While in Short-term loans have fewer interest payments, leading to a lower future value. The impact of the interest rate on the present value is less pronounced because the compounding effect is limited to a few periods. Therefore, short-term loans tend to have a turning point at a higher interest rate. This is because the shorter duration reduces the compounding effect of interest, making the present value less sensitive to changes in interest rates. The present value decreases more slowly as the interest rate increases, compared to long-term loans (Refer To Figure 4 & Figure 5). Moreover, examining Equation (B), it is evident that the interest rate corresponding to the *Mesbah Point* is influenced solely by the loan term (n). Consequently, when the loan term (n) remains constant, the loan amount does not impact this rate (Refer to Figure 6 & Figure 7).

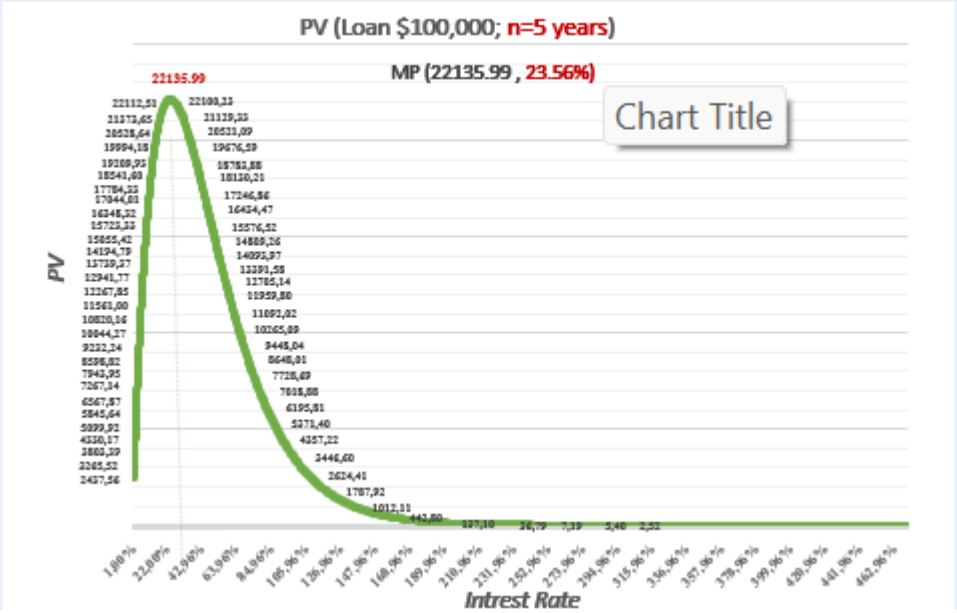

Figure 6: Mesbah Point (PV_{mp}, r_{mp}) for a principal loan amount of $100,000 over terms of (5 years)

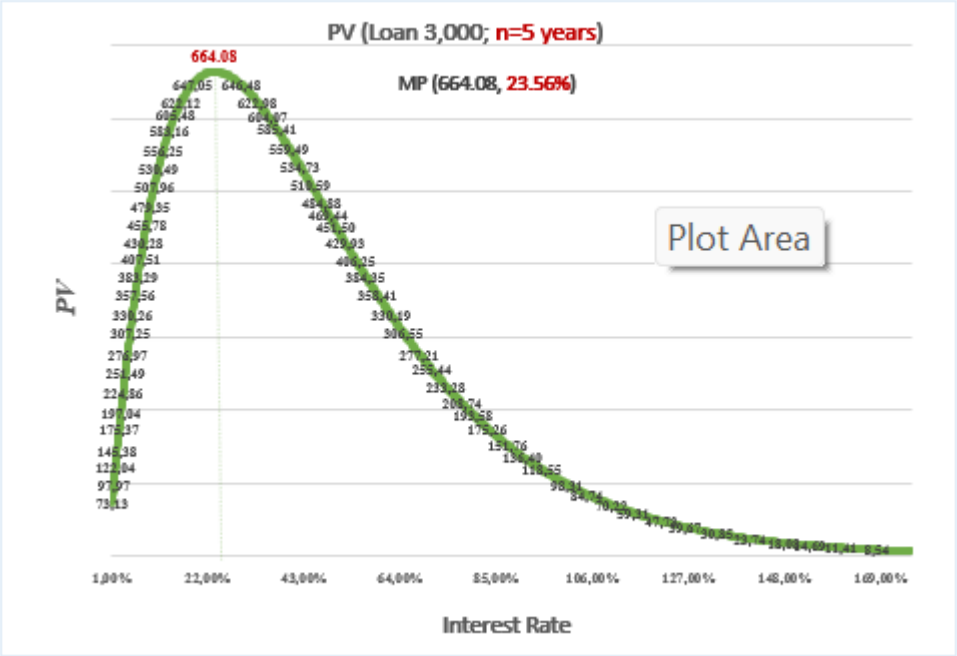

Figure 7: Mesbah Point (PV_{mp}, r_{mp}) for a principal loan amount of $3,000 over terms of (5 years)

II.Determinants of Mesbah Point in Qard Hasan

As previously explained, the "*Mesbah Point*" is a financial mechanism that integrates the principles of amortization and the time value of money, as proposed by Izadyar & Ragnath. The borrower makes an upfront payment (UFP), after which the lender provides financing at zero percent interest. Over the loan term, the borrower repays only the principal amount. For instance, in a *Qard Hasan* loan of $10,000, the borrower receives 70% of the loan amount while the remaining 30% is treated as the *Mesbah Point*, paid upfront by the borrower. The borrower then makes monthly payments on the 70% principal, and the financial institution invests the 30% *Mesbah Point* to cover operational costs and achieve returns comparable to conventional methods (Izadyar & Ragnath, 2014b, 2014a). However, it is essential to clarify that while the *Mesbah Point* incorporates the time value of money, it does so in a manner distinct from traditional finance. The *Mesbah Point* leverages the time value of money by focusing on upfront payments that are used to generate returns through investment, rather than through interest accumulation on the principal over time, which is the traditional approach.

Likewise, in Islamic finance, a *Qard Hasan* is a charitable loan intended to provide financial assistance without profit (S. Khan et al., 2021). According to Islamic jurisprudence, any profit derived from such loans is prohibited. Nevertheless, *Shari'ah* jurists agree that lenders can impose fees to cover actual administrative expenses, provided these fees do not exceed the real costs incurred (IsDB, 2021). Consequently, the introduction of the *Mesbah Point* in *Qard Hasan* loans raises a fundamental question regarding its alignment with the principles of Islamic finance. While the upfront payment should be intended to cover operational costs and mitigate default risks, care must be taken to ensure that these payments do not constitute a hidden profit mechanism, which would contravene the ethical foundations of *Qard Hasan*.

Furthermore, Microfinance typically targets clients from marginalized and low-income groups who are in dire need of financial assistance. These individuals often cannot afford significant upfront payments (UFPs), which could reduce the effective loan amount available to meet their needs. Deducting

the UFP directly from the loan amount may leave borrowers with insufficient funds to address their financial requirements, thus potentially exacerbating their financial challenges. Moreover, achieving a comparable return on *Sukuk* (as in Izadyar & Ragnath's assumption) through microfinance is challenging. For instance, the yield on *Sukuk* in Indonesia ranges from 6.7% to 8% (Rachmawaty et al., 2021).

To address this issue, the study proposes a new approach to the *Mesbah Point* concept. Instead of requiring upfront payments from the borrowers, Islamic microfinance institutions can establish an Investment *Mesbah Point*s Portfolio. When offering a *Qard Hasan* loan, the institution assesses the ideal *Mesbah Point* for the loan and allocates an equivalent amount to this portfolio. The portfolio serves as a reserve that can be invested to generate returns, which can then be used to cover the risks of non-payment or any other risks associated with the *Qard Hasan* loans. This approach not only protects the institution from financial losses but also enhances the quality and sustainability of Islamic lending practices.

III. Institutional Solution: The Investment Mesbah Points Portfolio (IMPP)

To reconcile theoretical viability with practical and ethical constraints, this study proposes the Investment *Mesbah Point*s Portfolio (IMPP)–an institutional mechanism through which IsMFIs allocate funds equivalent to the *Mesbah Point* into halal investments.

Rather than charging the borrower, the IsMFI sets aside a portfolio equivalent to the calculated *Mesbah Point* value and invests it in *Shari'ah*-compliant instruments such as Government-Issued *Sukuk* or Profit-Sharing Mudarabah accounts. The returns from these investments are then used to cover operational expenses, credit risk buffers, and administrative costs associated with *Qard Hasan* disbursement.

Using conservative estimates (e.g., average annual *Sukuk* returns between 6.5% and 8%), simulations show that the IMPP is capable of generating sufficient income to offset the cost of delivering *Qard Hasan* loans.

Illustrative example:

Table 2. Investment Mesbah Points Portfolio (IMPP)

Item	Calculation	Value (USD)
Qard Hasan portfolio	100 borrowers × 3,000	300,000
Average *Mesbah Point* (per loan)	–	1,000
Total Reserve for IMPP	100 × 1,000	100,000
Annual Return from *Sukuk*	100,000 × 7%	7,000

These returns can help to cover staff salaries, credit administration, default provisions, and outreach costs–thus preserving the *Qard Hasan* model while ensuring financial sustainability.

The IMPP avoids burdening the borrower and remains compliant with classical jurisprudence. The use of the *Mesbah Point* in this framework does not imply pricing or profit expectation from the borrower, but instead serves as a planning metric for the institution. As such, it enables IsMFIs to fulfill their dual mission: delivering interest-free credit to underserved populations while ensuring their own operational viability.

CONCLUSION

This study contributes to the discourse on Islamic financial sustainability by critiquing and operationalizing the concept of the *Mesbah Point*–a mathematical and ethically neutral benchmark derived from conventional loan structures. Defined as the rate at which the present value (PV) of total interest payments reaches its maximum, the *Mesbah Point* allows Islamic microfinance institutions (IsMFIs) to internally quantify the economic value they forgo by offering *Qard Hasan*, or interest-free benevolent loans. Using simulations, the analysis shows that the PV of forgone interest follows a predictable parabolic curve: increasing with the interest rate until a critical point–the *Mesbah Point*–after which it declines due to exponential discounting. The analysis confirms that this turning point is both analytically sound and institutionally useful, providing a strategic reference for financial planning without transgressing *Shari'ah* boundaries.

The findings carry several implications for policymakers, regulators, and Islamic financial institutions:

- Strategic Benchmarking for IsMFIs: The *Mesbah Point* provides a quantifiable upper bound for the economic value of *Qard Hasan* loans, which can guide institutional funding and sustainability strategies.
- Ethical Capital Planning: By applying the *Mesbah Point* through internal investment mechanisms like the IMPP, institutions can maintain their ethical integrity while ensuring financial resilience.
- Promotion of Non-*Riba*-Based Innovation: This model encourages a shift away from conventional interest-based risk mitigation strategies, enabling new forms of Islamic financial engineering that are both ethical and effective.
- Institutionalization of Social Finance: The *Mesbah Point* can serve as a tool for standardizing sustainability assessments across Islamic financial institutions offering *Qard Hasan*, contributing to a broader institutionalization of Islamic social finance.

However, the study acknowledges the practical limitations of applying the *Mesbah Point* as a pricing mechanism or requiring upfront borrower contributions. Such measures would violate both the spirit and letter of Islamic finance, undermining its core values of equity, accessibility, and non-exploitation. To address this, the paper proposes the Investment *Mesbah Point*s Portfolio (IMPP)–an institutional strategy in which IsMFIs allocate reserves equivalent to the *Mesbah Point* into *Shari'ah*-compliant investments such as *Sukuk*. The returns from these investments can offset operational costs, mitigate credit risk, and support the scale-up of *Qard Hasan* operations without burdening the borrower.

Besides, this research is primarily theoretical and simulation-based. Future research should include empirical validation using data from operational IsMFIs across different jurisdictions. Moreover, while the IMPP is conceptually robust, its practical implementation may require regulatory flexibility, especially in jurisdictions where reserve investment rules are rigid. Comparative studies across different *Shari'ah* interpretations may also enrich the framework.

Further research could explore how the *Mesbah Point* interacts with waqf-linked financing, Islamic social impact bonds, or hybrid models that blend *Qard Hasan* with profit-sharing instruments.

Finally, the *Mesbah Point* does not aim to reintroduce interest through the backdoor. Rather, it offers a transparent, mathematically grounded, and ethically permissible framework for ensuring that *Qard Hasan*–Islam's most compassionate financial instrument–can thrive in a financially demanding world. By aligning institutional sustainability with Islamic ethics, the model strengthens the capacity of Islamic finance to fulfill its dual mission: economic justice and inclusive growth.

BIBLIOGRAPHY

AAOIFI. (2024). Shari'ah Standard No. (19) Loan (Qard). *The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)* . https://aaoifi.com/ss-19-loan-qard/?lang=en

Abdullah, M. (2015). Analysing the moral aspect of qard: a shariah perspective. *International Journal of Islamic and Middle Eastern Finance and Management*, *8*(2), 171–184. https://doi.org/10.1108/IMEFM-11-2013-0116

Abidin, A. Z., Alwi, N. M., & Ariffin, N. M. (2013). A Case Study on the Implementation of Qardhul Hasan Concept as a Financing Product in Islamic Banks in Malaysia. *International Journal of Economics, Management and Accounting*, *19*(3). https://doi.org/10.31436/ijema.v19i3.201

Aderemi, A. M. R., & Ishak, M. S. I. (2023). Qard Hasan as a feasible Islamic financial instrument for crowdfunding: its potential and possible application for financing micro-enterprises in Malaysia. *Qualitative Research in Financial Markets*, *15*(1), 58–76. https://doi.org/10.1108/QRFM-08-2021-0145

Adnan, N. I. M. (2017). Mikro Kredit Daripada Dana Zakat Di Baitulmal Aceh. In *Menelusuri Isu-isu Kontemporari Zakat* (Vol. 147). https://azka.zakat.com.my/wp-content/uploads/2021/12/Menelusuri_Isu_Isu_Kontemporari_Zakat.pdf#page=164

Ahmad, S., Lensink, R., & Mueller, A. (2020). The double bottom line of microfinance: A global comparison between conventional and Islamic microfinance. *World Development*, *136*, 105130. https://doi.org/https://doi.org/10.1016/j.worlddev.2020.105130

Akhter, A., Javed, M. Y., & Akhter, J. (2025). Research trends in the field of Islamic social finance: a bibliometric analysis from 1914 to 2022. *International Journal of Ethics and Systems*, *41*(2), 455–483. https://doi.org/10.1108/IJOES-03-2023-0044

Akhuwat. (2018). *Interest Free Microfinance And Impact On Poverty Alleviation*. Akhuwat. https://akhuwat.org.pk/interest-free-microfinance-and-impact-on-poverty-alleviation

Alam, N., Gupta, L., & Shanmugam, B. (2017). Islamic Contracts. In *Islamic Finance: A Practical Perspective* (pp. 55–78). Springer International Publishing. https://doi.org/10.1007/978-3-319-66559-7_4

Ashany, A. M., & Febianto, I. (2012). The Impact of Qardhul Hasan Financing Using Zakah Funds on Economic Empowerment (Case Study of Dompet Dhuafa, West Java, Indonesia). *Asian Business Review*, *1*(1), 15–20. https://doi.org/10.17613/cw8g-na19

Ayub, M. (2009). *Understanding islamic finance*. John Wiley & Sons. https://doi.org/10.1002/9781119209096

Begum, H., Alam, A. S. A. F., Mia, M. A., Bhuiyan, F., & Ghani, A. B. A. (2019). Development of Islamic microfinance: a sustainable poverty reduction approach. *Journal of Economic and Administrative Sciences*, *35*(3), 143–157. https://doi.org/10.1108/JEAS-01-2018-0007

Citaningati, P. R., Kamaluddin, K., & Haeba, I. D. (2022). Implementation of the Qardhul Hasan Agreement at Indonesian Islamic Financial Institutions. *FITRAH: Jurnal Kajian Ilmu-Ilmu Keislaman*, *8*(2), 237–256. https://doi.org/10.24952/fitrah.v8i2.5903

El-Gamal, M. A. (2006). *Islamic finance: Law, economics, and practice*. Cambridge University Press. https://www.cambridge.org/us/universitypress/subjects/economics/finance/islamic-finance-law-economics-and-practice?format=HB&isbn=9780521864145

Fianto, B. A., Gan, C., & Hu, B. (2019). Financing from Islamic microfinance institutions: evidence from Indonesia. *Agricultural Finance Review*, *79*(5), 633–645. https://doi.org/10.1108/AFR-10-2018-0091

Firmansyah, E. (2016). Islamic Banks Concern with the Poor and Micro Businesses: An Evaluation on their Al Qard Hasan (Beautiful Loan). *Proceedings of the International Conference, Integrated Microfinance Management for Sustainable Community Development (IMM 2016)*, 181–187. https://doi.org/10.2991/imm-16.2016.28

Franzoni, S., & Ait Allali, A. (2018). Principles of Islamic Finance and Principles of Corporate Social Responsibility: What Convergence? *Sustainability*, *10*(3). https://doi.org/10.3390/su10030637

Gutiérrez-Nieto, B., Serrano-Cinca, C., Cuéllar-Fernández, B., & Fuertes-Callén, Y. (2017). The Poverty Penalty and Microcredit. *Social Indicators Research*, *133*(2), 455–475. https://doi.org/10.1007/s11205-016-1368-4

Haider Syed, M., Khan, S., Raza Rabbani, M., & Thalassinos, Y. E. (2020). An artificial intelligence and NLP based Islamic FinTech model combining zakat and Qardh-Al-Hasan for countering the adverse impact of COVID 19 on SMEs and individuals. *Eleftherios Thalassinos*, *8*(2), 351–364. https://www.um.edu.mt/library/oar/handle/123456789/55858

Harahap, R. D., Arifin, Z., & Soemitra, A. (2023). Qard Al-Hasan Revitalization as a Financing Alternative for Micro, Small, and Medium Enterprises: An Analytic Network Process Approach. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(8), 28. https://dialnet.unirioja.es/servlet/articulo?codigo=9059389

Hasan, R., Hassan, M. K., & Rashid, M. (2021). Qard Hasan (Interest-Free Loan) as a Tool for Sustainable Development—Global Evidence. In M. and K. A. Hassan M. Kabir and Saraç (Ed.), *Islamic Finance and Sustainable Development : A Sustainable Economic Framework for Muslim and Non-Muslim Countries* (pp. 307–330). Springer International Publishing. https://doi.org/10.1007/978-3-030-76016-8_13

Iqbal, Z., Shafiq, B., & others. (2015). Islamic finance and the role of Qard-al-Hassan (Benevolent Loans) in enhancing inclusion: a case study of AKHUWAT. *ACRN Oxford Journal of Finance and Risk Perspectives*, *4*(4), 23–40. https://media.qardalhasan.ir/d/references/EA20150002.pdf

IsDB. (2021). *Islamic Financial Product Implementation Toolkit*. https://www.isdb.org/economic-empowerment/publications/islamic-financial-product-implementation-toolkit

IslamWeb. (2019). *Fatwa (409390): Altarhib Min Takhir Alwajid Sadad Alqard (Arabic)*. IslamWeb. https://www.islamweb.org/ar/fatwa/409390/#

Izadyar, A. B., & Ragnath, F. (2014a). A New Perspective of Benevolent Loan, QARD Al-Hassan, Using Upfront Payment 'Mesbah Point.' *International Journal of Economics*, *2*(3), 65–78. https://doi.org/https://doi.org/10.18533/jefs.v2i02.72

Izadyar, A. B., & Ragnath, F. (2014b). Establishing an Interest-Free Lending Platform Applying Optimum Premium,'Mesbah Point,'in Amortization and Time Value of Money. *IJBSR*, *4*(1), 1–18. https://ssrn.com/abstract=2467917

Jaafar, A. Z. (2018). *An Inquiry into the Sources of Funding for Qard Hasan Based MFIs: A Case Study of Akhuwat* [University of Pennsylvania]. https://repository.upenn.edu/server/api/core/bitstreams/350041c5-47ec-41de-a290-b69b1380e546/content

Junaidi, J., Lutfiah, Z., & Adnan, M. (2017). The Effectiveness Of Interest-Free Loan Financing (Qardhul Hasan) As The Social Implementer Of Islamic Bank To Reduce Poverty In Surakarta. *Yustisia*, *6*(2), 421–431. https://doi.org/10.20961/yustisia.v6i2.12390

Khan, M. A. (2020). Riba in Islamic finance Some fresh insights. *Journal of Economic and Social Thought*, *7*(1), 25–40. https://doi.org/10.1453/jest.v7i1.2037

Khan, S., Hassan, M. K., Rabbani, M. R., & Atif, M. (2021). An artificial intelligence-based Islamic FinTech model on Qardh-Al-Hasan for COVID 19 affected SMEs. *Islamic Perspective for Sustainable Financial System*, 234–249. https://doi.org/doi.org/10.26650/B/SS10.2020.017.10

Mansori, S., Kim, C. S., & Safari, M. (2015). A Shariah perspective review on islamic microfinance. *Asian Social Science*, *11*(9), 273 – 280. https://doi.org/10.5539/ass.v11n9p273

Mojtahed, A., & Hassanzadeh, A. (2009). The Evaluation of Qard-al-Hasan as a Microfinance Approach in Poverty Alleviation Programs. *Journal of Money and Economy*, *5*(2), 1–32. https://jme.mbri.ac.ir/files/site1/user_files_10c681/admin_t-A-10-25-15-aa2b223.pdf

Muneer, F., & Khan, F. (2019). Qard-Al-Hassan As A Tool For Poverty Alleviation: A Case Study Of The Fael Khair Waqf Program In Bangladesh. *Journal of Islamic Monetary Economics and Finance*, *5*(4), 829–848. https://doi.org/10.21098/jimf.v5i4.1100

Rachmawaty, R., Zaerofi, A., & Jati, W. (2021). Implementation model of qard al hasan for Indonesian Islamic banking. *Al-Infaq: Jurnal Ekonomi Islam*, *12*(2), 199–211. https://doi.org/doi.org/10.32507/ajei.v12i2.898

Sain, M. R. M., Rahman, M. M., & Khanam, R. (2013). Financial exclusion in Australia: An exploratory case study of the Muslim community. *Proceedings of the 3rd Malaysian Postgraduate Colloquium (MPC 2013)*. https://research.usq.edu.au/item/q1zz7/financial-exclusion-in-australia-an-exploratory-case-study-of-the-muslim-community

Saleem, A., Daragmeh, A., Zahid, R. M. A., & Sági, J. (2024). Financial intermediation through risk sharing vs non-risk sharing contracts, role of credit risk, and sustainable production: evidence from leading countries in Islamic finance. *Environment, Development and Sustainability*, *26*(5), 11311–11341. https://doi.org/10.1007/s10668-023-03298-7

saqib, L., Zafar, M. A., Khan, K., Roberts, K. W., & Zafar, A. M. (2015). Local agricultural financing and Islamic banks: is Qard-al-Hassan a possible solution? *Journal of Islamic Accounting and Business Research*, *6*(1), 122–147. https://doi.org/10.1108/JIABR-04-2012-0018

Selim, M. (2019). The effectiveness of Qard-al-Hasan (interest free loan) as a tool of monetary policy. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(1), 130–151. https://doi.org/10.1108/IMEFM-07-2017-0187

Shaikh, I. M., Amin, H., & Ashiqin, N. (2024). Millennials' acceptance towards Qard al-hasan: extending Islamic theory of consumer behaviour. *Journal of Islamic Accounting and Business Research*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/JIABR-04-2023-0126

Siddique, M. A., & Rahim, M. (2015). The concepts of discounting and time value of money in Islamic capital budgeting framework: A theoretical study. *Journal of Islamic Banking and Finance, Pakistan*, *32*(1), 23–29. https://ssrn.com/abstract=2791955

Tamanni Luqyan and Liu, F. H. (2017). What is Islamic Microfinance? In Y. and H. W. and S. B. Cumming Douglas and Dong (Ed.), *Microfinance for Entrepreneurial Development: Sustainability and Inclusion in Emerging Markets* (pp. 169–195). Springer International Publishing. https://doi.org/10.1007/978-3-319-62111-1_9

Uddin, M. H., Akter, S., Mahi, M. Al, & Mollah, S. (2024). Why do microfinance institutions charge higher interest rates than banks? The role of operating costs. *Finance Research Letters*, *70*. https://doi.org/10.1016/j.frl.2024.106319

Ülev, S., Savaşan, F., & Özdemir, M. (2023). Do Islamic microfinance institutions affect the socio-economic development of the beneficiaries? The evidence from Turkey. *International Journal of Ethics and Systems*, *39*(2), 286–311. https://doi.org/10.1108/IJOES-09-2021-0179