

Designing a Modified *Salam* Contract Model for the *Halal* Industry: Insights from Delphi-ANP Analysis

Atika Rukminastiti Masrifah,^{1&2*} Sri Herianingrum,² Abdul Ghafar Ismail³

¹Department of Islamic Economics, Faculty of Economics and Management,
University of Darussalam Gontor, Indonesia

²Department of Islamic Economics, Faculty of Economics and Business,
Airlangga University, Indonesia

³Faculty of Economics and Management, Universiti Kebangsaan Malaysia, Malaysia

Email: atikamasrifah@gmail.com;^{1*} sri.herianingrum@feb.unair.ac.id;² agibab@ukm.edu.my³

Abstract

This study addresses a gap in the Islamic supply chain finance literature: while factoring and reverse factoring models for conventional supply chains are well documented, no prior study has designed a Sharia-compliant financing business model that addresses the cash-to-cash cycle problem specific to the halal value chain. This is the first study to combine the Delphi and Analytic Network Process (Delphi-ANP) methods to design and validate a modified salam contract model for this purpose, drawing on three respondent groups: Sharia banking practitioners, regulators, and suppliers/fintech practitioners across four rounds of focus group discussion and in-depth interviews. The results show that differentiation of the Islamic bank's business model was ranked as the most important objective (weight 0.221), ahead of halal value chain development (0.204) and MSME development (0.194), while value proposition emerged as the most influential model criterion (weight 0.217). Based on these findings, the study proposes a Fund Distribution Product Scheme that uses salam contracts, in which Islamic banks finance suppliers who hold an underlying contract with a standby buyer. Theoretically, this study contributes a validated ANP-based decision structure for Islamic supply chain financing that can be extended to other value chains facing cash-to-cash cycle constraints. Practically, it offers Islamic financial institutions (IFIs) a ranked, evidence-based set of priorities for target market, distribution channel, and value proposition for implementing salam-based financing in the halal value chain industry.

Keywords: Delphi-ANP, halal value chain industry, Islamic finance, model development, problem-solving analysis

Introduction

Currently, governments' concern for the *halal* industry is growing rapidly, reflected in its position as a main pillar of Indonesia's Sharia Economic Master Plan on reinforcing the *halal* value chain.¹ Indonesia retained fourth position in the overall GIEI ranking, with total investment transaction value reaching US\$ 31.5 billion, ranked 1st in the world in the Modest Fashion category, the 4th largest pharmaceutical consumer market (US\$ 6.5 billion), the 3rd largest cosmetics market (US\$ 5.9 billion) among OIC member countries, and the world's largest *halal* food consumer market with total spending reaching US\$ 165.4 billion.² This value chain can only function as an integrated ecosystem if its main actors raw material suppliers, distribution channels, and retailers and supporting components technology, regulation, R&D, and human resources are connected from upstream to downstream. Among these supporting components, the availability of financing is a critical bottleneck; unlike the upstream and downstream

¹ Widya Sartika Hasibuan and Irsad Lubis, "Halal Value Chain Integration in Food Court Establishment through Cash Waqf Linked Sukuk: Evidence from Indonesia," *Cogent Business & Management*, Vol. 11, No. 1 (2024), 2385075.

² SGIER, "State of the Global Islamic Economy Report 2025/26," *Dinar Standard Growth Strategy Research & Advisory*, 2025.

operational linkages, the financing layer of the *halal* value chain remains underdeveloped, particularly within Sharia banking.

This financing gap manifests most directly in the cash-to-cash cycle (CCC) faced by halal industry suppliers.³ Currently, most *halal* industry players rely on conventional banking for financing, as Sharia banking's capacity to meet the sector's full financing needs remains limited. Indonesian Islamic banks hold only around 5.6% of total national banking assets, despite Indonesia being home to the world's largest Muslim population.⁴ Working capital financing is typically used to shorten this cash-to-cash cycle, converting cash invested in operations back into cash returns as efficiently as possible.

One conventional solution to a long CCC is factoring, in which a company sells its receivables to accelerate its cash cycle. Prior international research has examined factoring extensively from a supply chain finance (SCM) perspective. Kouvelis et al.⁵ found that factoring is preferred when the supplier's credit rating is relatively high, whereas non-recourse factoring is preferred in an intermediate rating range. In line with that, Wuttke et al.⁶ built a theoretical foundation for financial supply chain management (FSCM) to strengthen managerial decision-making regarding financial flows in the supply chain. Based on transaction cost economics, Wuttke analyzed how this increase comes from risk reduction, which is more effective if the company is integrated internally and externally.

Meanwhile, Marchi et al.⁷ stated that establishing reverse factoring agreements in the supply chain improves economic performance and affects operational decisions. Furthermore, Van der Vliet et al.⁸ found that the extent of the payment-term extension the supplier can accommodate depends on demand uncertainty and the supplier's cost structure. Meanwhile, Randall and Farris,⁹ stated that coordinating financial management across the supply chain is a potential tool for aligning and improving the financial performance of collaborating companies. During economic downturns and times of tight credit, proactively managing finances throughout the supply chain may be the only way some suppliers stay afloat.

These supply chain finance studies, however, are grounded in conventional, interest-based financing mechanisms and do not address the Sharia-compliance constraints that *halal* value chain suppliers must meet. This raises the central problem this study addresses: existing factoring and reverse-factoring models cannot simply be transplanted into the *halal* value chain, because they are not Sharia-compliant. Islamic banking therefore needs its own financing mechanism one that solves the same CCC problem factoring solves, but through a Sharia-compliant contract. This is where a modified *salam* contract becomes relevant.

³ Nurul Indarti, Andy Susilo Lukito-Budi, and Azmi Muhammad Islam, "A Systematic Review of Halal Supply Chain Research: To Where Shall We Go?," *Journal of Islamic Marketing*, Vol. 12, No. 9 (2021), 1930–49.

⁴ Agus Widarjono and Abdur Rafik, "Do Islamic Banks Have Their Benchmarks for Financing Rates in the Dual-Banking System?," *Cogent Economics & Finance*, Vol. 11, No. 1 (2023), 2209954.

⁵ Panos Kouvelis and Fasheng Xu, "A Supply Chain Theory of Factoring and Reverse Factoring," *SSRN Electronic Journal*, September 17, 2018.

⁶ David A. Wuttke, Constantin Blome, and Michael Henke, "Focusing the Financial Flow of Supply Chains: An Empirical Investigation of Financial Supply Chain Management," *International Journal of Production Economics*, Vol. 145, No. 2 (2013), 773–89.

⁷ Beatrice Marchi, Simone Zanoni, and Mohamad Y. Jaber, "Improving Supply Chain Profit through Reverse Factoring: A New Multi-Suppliers Single-Vendor Joint Economic Lot Size Model," *International Journal of Financial Studies*, Vol. 8, No. 2 (2020), 23.

⁸ Kasper Van Der Vliet, Matthew J. Reindorp, and Jan C. Fransoo, "The Price of Reverse Factoring: Financing Rates vs. Payment Delays," *European Journal of Operational Research*, Vol. 242, No. 3 (2015), 842–53.

⁹ Wesley S. Randall and M. Theodore Farris, "Supply Chain Financing: Using Cash-to-cash Variables to Strengthen the Supply Chain," *International Journal of Physical Distribution & Logistics Management*, Vol. 39, No. 8 (2009), 669–89.

In line with the direction of future development of Islamic banking, Islamic banking must be able to optimize its existing products so that they can meet the needs of the community and can provide added value; one way is to optimize its role in the development of government priority sectors such as *halal* value chain industry.¹⁰

To optimize the opportunities of Islamic banking in financing the value chain of the *halal* industry, a suitable Islamic banking financing model is required to address cash turnover issues and remain consistent with applicable sharia provisions and principles. Therefore, a comprehensive study is needed to guide Islamic banking in optimizing its products for the *halal* industry value chain.

Regarding the background of the study, some research questions are formulated as follows: What Islamic financing business model, based on a modified *salam* contract, is suitable for overcoming the cash-to-cash cycle problem in the *halal* value chain industry?, Who are the key stakeholders in this financing model, and what factors do suppliers and Islamic banks each consider in its implementation? What opportunities and challenges may Islamic banking face in implementing this financing business model?

A qualitative method is used in this research to analyze the proposal for the financing business model within the *halal* industry value chain, including surveys, in-depth discussions, and/or focus group discussions. This research uses Delphi-Analytic Network Process approach which is mapping the financing business model with a *salam* contract to overcome the cash-to-cash cycle. Besides, this method is used to evaluate the financing business model development in *halal* value chain industry from the stakeholders' point of view, to identify what factors to consider by Islamic banking practitioners, regulators, suppliers and fin-tech practitioners in applying the financing business model development in *halal* value chain industry, as well as to analyze the opportunities and challenges that may be faced by Islamic banking during the implementation of financing business model in *halal* value chain industry.

Literature Review

Taken together, this body of literature reveals a conceptual chain that has not yet been explicitly connected in prior research. The *Halal* Value Chain literature establishes that an integrated, Sharia-compliant ecosystem depends on adequate financing as a supporting component.¹¹ In many OIC countries,¹² government support through fiscal incentives, national industrial parks, and regulatory frameworks is a vital supply-side driver that facilitates the integration of these technological and human capital resources, yet research on working capital financing shows that Islamic financial institutions still operate primarily through informal or cooperative-based instruments rather than structured supply-chain products.¹³ Islamic financial services serve as the backbone of the *halal* economy by providing the necessary financing,¹⁴ to support production

¹⁰ MA Uddin and AUF Ahmad, "Conventional Futures: Derivatives in Islamic Law of Contract," *International Journal of Law and Management*, Vol. 62, No. 4 (2020), 315–37.

¹¹ Tri Wahyudi, et. al., "Islamic Finance and Investment in the Halal Industry: A Systematic Literature Review," *International Journal of Halal Industry*, Vol. 2, No. 1 (2026), 57–76.

¹² Organization of Islamic Cooperation (OIC), "Halal Industry In Oic Member Countries: Challenges and Prospects," 2021.

¹³ Z Ahmed, et. al., "Islamic Finance Involvement in Supply Chain of Financed Assets A Library Research and Systematic Literature Review," *Turkish Journal of Islamic Economics*, Vol. 8, No. 2 (2021), 1–24.

¹⁴ Muhammad Alfian Rumasukun and Alivia Maharani, "The Effect of Islamic Financial Inclusion and Literacy on the Productivity of MSMEs: Case Study in Probolinggo," *Islamic Economics Journal*, Vol. 10, No. 01 (2024), 88–102.

and operational activities across various sectors.¹⁵ The cash-to-cash cycle framework then supplies the diagnostic tool for why this financing gap matters operationally it identifies where suppliers experience liquidity constraints between paying for inputs and collecting receivables.¹⁶ Conventional supply chain finance has already addressed an equivalent problem through factoring and reverse factoring, but these instruments are structurally incompatible with Sharia principles because they rely on the sale of debt at a discount, which resembles *riba*. *Salam* financing therefore emerges as the Sharia-compliant functional equivalent to factoring.¹⁷ It addresses the same upstream liquidity problem enabling suppliers to receive capital before delivering goods but through a sale contract rather than a debt instrument. This positions the present study's contribution precisely at the intersection of these five literatures: designing a *salam*-based financing model that performs the same cash-to-cash cycle function as factoring while remaining Sharia-compliant.

The Value Chain of Halal Industry

The *Halal* Value Chain (HVC) is a comprehensive economic system that integrates ethical and spiritual principles into every stage of production, distribution, and consumption.¹⁸ Unlike conventional value chains, HVC requires strict adherence to Sharia principles across all phases, from upstream activities such as the procurement of certified raw materials to core production in specialized facilities, and downstream activities such as distribution and marketing.¹⁹ This concept has evolved from a focus on individual *halal* products to a holistic "farm-to-fork" approach that encompasses diverse sectors, including food and beverages, Islamic finance,²⁰ pharmaceuticals,²¹ cosmetics, tourism, and lifestyle industries.²² The primary objective of this framework is to maintain *halal an-toyibban* integrity, ensuring that products are not only permissible under Islamic law but also meet high standards of safety, quality, and hygiene.²³

The structure of the global HVC relies on a multi-tiered verification system where solid coordination among stakeholders, including farmers, suppliers, producers, and certification bodies, is essential to prevent cross-contamination.²⁴ Technological innovations such as blockchain and the Internet of Things (IoT) have become critical enablers for strengthening HVC competitiveness by ensuring end-to-end traceability and transparency (Budi). Furthermore, Porter's value chain analysis integrated with the Diamond Model reveals that specialized human resources, adequate infrastructure like cold chain facilities, and credible, internationally recognized certifications are key

¹⁵ SGIER, "State of the Global Islamic Economy Report 2025/26."

¹⁶ Binod Guragai, Paul D. Hutchison, and M. Theodore Farris, "Cash-to-Cash (C2C) Length: Insights on Present and Future Profitability and Liquidity," *Advances in Management Accounting*, No. 31 (2019), 133–51.

¹⁷ Rifaldi Majid, "Designing Salam-Muzara'ah Linked Waqf to Financing Agricultural Sector," *Journal of Islamic Monetary Economics and Finance*, Vol. 7, No. 3 (2021), 503–26.

¹⁸ YA Budi, "Competitiveness Analysis of the Halal Value Chain in the Global Market," *Journal Corner of Education, Linguistics, and Literature*, Vol. 5, No. 1 (2025), 317–26.

¹⁹ K Kholilah, et. al., "Halal Value Chain in the Holding Business: The Experience of Islamic-Based School (Pesantren) in Indonesia," *Shirkah: Journal of Economics and Business*, Vol. 7, No. 3 (2025), 318–34.

²⁰ R Yanti, MA Febrianti, and J Sulistio, "Halal Blockchain: Bibliometric Analysis for Mapping Research," *Asian Journal of Islamic Management (AJIM)*, No. 1 (2022), 72–85.

²¹ RA Kasri, et. al., "Opportunities and Challenges for Developing Halal Pharmaceuticals Industry in Indonesia," *International Journal of Halal Research*, Vol. 5, No. 1 (2023), 1–12.

²² A Mahbubi, "Sustainable Value Chain Innovation for Strengthening the Indonesian Halal Beef Industry," *Muslim Business and Economics Review*, Vol. 2, No. 1 (2023), 79–103.

²³ R Efendi, et. al., "Halal Ecosystem Micro Small and Medium Enterprises Through The Integration of Value Chain and Green Strategies," *Istithmar*, Vol. 8, No. 2 (2024), 89–101.

²⁴ D Rizki, et. al., "Best Practice Halal Integrity Management in the Logistic Chain Scheme: Analysis of Opportunities and Challenges," *Journal of Islamic Economic Laws*, 2023, 13–29.

determinants of success in the global market.²⁵ In many OIC countries, government support through fiscal incentives, national industrial parks, and regulatory frameworks is a vital supply-side driver that facilitates the integration of these technological and human capital resources.²⁶

Despite its significant market potential, the *halal* industry faces systemic challenges, most notably the fragmentation of international standards and the high costs of compliance, which can burden small and medium enterprises (SMEs).²⁷ Variations in Sharia interpretations and certification procedures across jurisdictions create subtle trade barriers that hinder the cross-border movement of *halal* goods. To overcome these obstacles, strategies such as harmonizing international standards and developing integrated *halal* ecosystems are being pursued.²⁸ In Indonesia, the use of Islamic boarding schools (Pesantren) as hubs for “One Pesantren One Product” (OPOP) initiatives demonstrates how local social capital and holding business models can drive socio-economic transformation.²⁹ By aligning *halal* practices with green economy principles and Islamic sustainable banking, the HVC can foster inclusive growth while meeting the increasing global demand for ethical and sustainable products.³⁰

Working Capital Financing

Islamic financial services serve as the backbone of the *halal* economy by providing the necessary financing to support production and operational activities across various sectors.³¹ Within the *halal* value chain, financing is often channeled through Sharia-compliant contracts such as *mudharabah* and *mudharabah mutlaqah*,³² which are utilized by institutions like Baitul Maal wa Tamwil (BMT) and Sharia cooperatives to meet the specific funding needs of SMEs³³. These institutions act as intermediaries, collecting deposits from members and redistributing them as financing to business units, which is essential for maintaining operations, including paying salaries, suppliers, and procuring raw materials.³⁴ Furthermore, established banks such as Bank Syariah Indonesia (BSI) play a strategic role in providing financing assistance and management consultancy to ensure the sustainability of *halal* integrity throughout the supply chain.³⁵

The accessibility of working capital is further enhanced through integrated *halal* ecosystems and government-led Sharia financial inclusion initiatives.³⁶ In Indonesia,

²⁵ Budi, “Competitiveness Analysis of the Halal Value Chain in the Global Market.”

²⁶ Organization of Islamic Cooperation (Oic), “Halal Industry In Oic Member Countries: Challenges And Prospects.”

²⁷ Budi, “Competitiveness Analysis of the Halal Value Chain in the Global Market.”

²⁸ Organization of Islamic Cooperation (OIC), “Halal Industry In Oic Member Countries: Challenges And Prospects.”

²⁹ Kholilah, et. al., “Halal Value Chain in the Holding Business: The Experience of Islamic-Based School (Pesantren) in Indonesia.”

³⁰ Adnan Hasan, Achmad Abubakar, and Muhammad Irham, “Integrating Maqasid Al-Shariah into Islamic Sustainable Banking: A Systematic Review of Halal Industry Practices and Green Economy Alignment (2020–2024),” *BANCO: Jurnal Manajemen dan Perbankan Syariah*, Vol. 8, No. 1 (March 4, 2026), 230–45.

³¹ Organization of Islamic Cooperation (OIC), “Halal Industry in OIC Member Countries: Challenges And Prospects.”

³² NR Ni'mah and Asmuni, “The Implementation of Fiqh Principle in Islamic Financial Products: A Systematic Literature Review,” *Islamic Economics Journal*, Vol. 10, No. 02 (2024), 194.

³³ Kholilah, et. al., “Halal Value Chain in the Holding Business: The Experience of Islamic-Based School (Pesantren) in Indonesia.”

³⁴ I Qizam, I Berakon, and H Ali, “The Role of Halal Value Chain, Sharia Financial Inclusion, and Digital Economy in Socio-Economic Transformation: A Study of Islamic Boarding Schools in Indonesia,” *Journal of Islamic Marketing*, Vol. 16, No. 3 (2025), 810–40.

³⁵ Efendi, et. al., “Halal Ecosystem Micro Small and Medium Enterprises Through The Integration of Value Chain and Green Strategies.”

³⁶ Budi, “Competitiveness Analysis of the Halal Value Chain in the Global Market.”

Islamic boarding schools (Pesantrens) have emerged as significant centers where financial inclusion facilitates access to business capital, thereby driving socio-economic transformation and community empowerment.³⁷ These ecosystems often utilize innovative funding models, such as cash *waqf*-linked deposits and social-institutional financing, to provide affordable capital for *halal* enterprises.³⁸ Additionally, government support through subsidies and fiscal incentives, such as tax holidays and allowances, helps reduce the financial burden on enterprises, enabling them to focus their resources on maintaining high-quality production standards and expanding their market reach.³⁹

Working Capital Management: Cash-to-Cash Cycle

Companies consistently require cash to conduct their business operations, encompassing both cash inflows and outflows. Cash receipts and disbursements persist throughout the entire corporate life cycle. Cash is the most liquid component of a company's assets, comprising physical currency (paper and coin), checks, and other transactional instruments accepted as a means of payment within the economy.⁴⁰

The primary objective of every company is to generate profit or financial returns. In conducting its operational activities, a company frequently requires external assistance in the form of borrowing to augment its working capital. Consequently, the company is obligated to repay such liabilities while simultaneously striving to achieve its organizational objectives. Furthermore, goods ordered for delivery to buyers are commonly subject to a purchase order system, whereby payment is made after the goods are transferred, thereby requiring the company to allocate funds in advance to fulfill such orders.⁴¹ In circumstances such as those described above, a company must maintain an adequate cash reserve; that is, cash holdings should neither be excessive nor insufficient to meet its financial obligations while achieving the desired level of profitability.⁴² Cash plays a critical role in fulfilling financial obligations, particularly those of a short-term nature. Therefore, companies must maintain sufficient cash reserves to sustain liquidity and prevent cash shortfalls. The cash-to-cash cycle (CCC) describes the rate at which a company is able to convert cash invested in operational activities back into cash returns.⁴³

Ideally, the number of days in the cash-to-cash cycle should approach zero or yield a negative value.⁴⁴ A lower CCC day count is generally considered more favorable. In practice, however, numerous companies continue to experience short-term liquidity constraints, arising from the obligation to remit payments to suppliers while simultaneously awaiting receivables from buyers.⁴⁵ The cash-to-cash cycle is commonly experienced by companies through a sequence of activities, including the procurement

³⁷ Qizam, Berakon, and Ali, "The Role of Halal Value Chain, Sharia Financial Inclusion, and Digital Economy in Socio-Economic Transformation: A Study of Islamic Boarding Schools in Indonesia."

³⁸ Hasan, Abubakar, and Irahman, "Integrating Maqasid Al-Shariah into Islamic Sustainable Banking: A Systematic Review of Halal Industry Practices and Green Economy Alignment (2020–2024)."

³⁹ Efendi, et. al., "Halal Ecosystem Micro Small and Medium Enterprises Through The Integration of Value Chain and Green Strategies."

⁴⁰ Gangshu Cai, "Working Capital Management," *Supply Chain Finance*, 2024, 77–102.

⁴¹ Daud Fahmi Adhim and Nur Budi Mulyono, "Supply Chain Financing System Factors, Solutions, and Benefits: A Systematic Literature Review," *Operations and Supply Chain Management: An International Journal*, Vol. 16, No. 2 (2023), 242–53.

⁴² Kadek A Wanda Pangesti, et. al., "Cach to Cash (C2C): Insights Into Working Capital Turnover and Profitability," *Tec Empresarial*, Vol. 18, No. 2 (2023), 160–76.

⁴³ E Hofmann and H Kotzab, "A Supply Chain-oriented Approach of Working Capital Management," *Journal of Business Logistics*, Vol. 31, No. 2 (2010), 305–30.

⁴⁴ Randall and Farris, "Supply Chain Financing: Using Cash-to-cash Variables to Strengthen the Supply Chain."

⁴⁵ Cai, "Working Capital Management."

of inventory, the sale of manufactured goods whether on a cash or non-cash basis and the subsequent collection of accounts receivable.⁴⁶ Accordingly, the strategic objective of a company should be to shorten the cash conversion cycle as expeditiously as possible without disrupting ongoing operations. This approach enhances profitability, as an accelerated cash conversion cycle reduces the dependency on external financing and minimizes the associated costs.⁴⁷

The calculation of CCC is derived by integrating three distinct time periods, as follows: (1) days of inventory, which represents the average time required to convert raw materials into finished goods and subsequently sell them; (2) days of receivables, which denotes the time granted to buyers to remit payment following a completed sale; and (3) days of payables, which refers to the average elapsed time between the procurement of raw materials and labor and the corresponding cash payment. This period reflects the duration of credit extended by suppliers to the company for the settlement of its purchases.⁴⁸

$$\text{Days of Inventory} = \frac{\text{Inventory (Rp)}}{\text{Cost of Good Sold (Rp)}} \times 365 \quad (1)$$

$$\text{Days of Receivables} = \frac{\text{Account Receivables (Rp)}}{\text{Net Sales (Rp)}} \times 365 \quad (2)$$

$$\text{Days of Payables} = \frac{\text{Account Payable (Rp)}}{\text{Cost of Good Sold (Rp)}} \times 365 \quad (3)$$

Cash-to-cash cycle is then calculated using these three variables:

$$\text{Cash} - \text{to} - \text{cash cycle} = \text{Inventory} + \text{Receivables} - \text{Payables} \quad (4)$$

The days of inventory period is calculated by dividing total inventory by the quantity of daily sales. In this context, it is essential to account for the inventory period to determine the time required for a company to deplete its inventory for production purposes. This consideration is particularly significant, as a longer inventory period correspondingly increases the maintenance costs the company must incur to preserve the quality of goods held in the warehouse. Therefore, a shorter inventory period is preferable, as it minimizes costs associated with excess inventory and, consequently, prevents the erosion of profitability.⁴⁹

The days of receivables period is calculated by dividing total accounts receivable by the average daily credit sales. Accounts receivable arise at the point of sale; however, the company has yet to receive the corresponding cash payment. The use of accounts receivable is expected to stimulate sales growth and enhance profitability; however, it also increases receivable-related costs. Such costs include opportunity costs, given that capital is tied up in receivable investments, as well as costs attributable to outstanding unpaid receivables. Consequently, an extended accounts receivable payback period impedes the company's ability to generate timely returns, thereby reducing current-period earnings.⁵⁰

The days payable period represents the average time elapsed between the procurement of raw materials and labor and the subsequent settlement of wages

⁴⁶ Wanda Pangesti, et. al., "Cach to Cash (C2C): Insights Into Working Capital Turnover and Profitability."

⁴⁷ Adhim and Mulyono, "Supply Chain Financing System Factors, Solutions, and Benefits: A Systematic Literature Review."

⁴⁸ Leonardo Marques, et. al., "Governance Modes in Supply Chains and Financial Performance at Buyer, Supplier and Dyadic Levels: The Positive Impact of Power Balance," *Benchmarking: An International Journal*, Vol. 29, No. 1 (2022), 255–84.

⁴⁹ Randall and Farris, "Supply Chain Financing: Using Cash-to-cash Variables to Strengthen the Supply Chain."

⁵⁰ Randall and Farris.

and related payments. Trade payables can serve as a source of additional working capital. When the repayment period of trade payables is extended, the supplementary capital thereby retained may be channeled into investment activities. Through such investments, companies are able to conduct production activities with greater efficiency and effectiveness.⁵¹

Business Model Mapping to Address the Cash-to-Cash Cycle: Factoring and Reverse Factoring

Factoring, referred to in Indonesian as *anjak piutang*, is formally defined under Article 1, Clause (e) of the Minister of Finance Regulation Number 84/PMK.012/2006 as a financing activity in the form of the purchase of a company's short-term trade receivables, along with the administration and management of those receivables.

A factoring company may further be defined as an entity engaged in the collection, purchase, takeover, or management of a company's accounts receivable and payable, in exchange for a specified fee or remuneration from the client company. The operational activities of factoring companies in Indonesia are governed by the Decree of the Minister of Finance Number 1251/KMK/.013/1988, which encompasses the following: (1) the collection of corporate credit obligations in exchange for a specified fee; (2) the purchase of corporate receivables at a price negotiated within commercial transactions; and (3) the management of corporate credit sales activities, whereby the factoring company may administer and oversee the client company's credit management operations in accordance with mutually agreed terms.

Among the key benefits of factoring are: the reduction of production costs attributable to accelerated payment cycles, the enhancement of business competitiveness, expedited access to cash liquidity, and improved accounts receivable control. As such, factoring serves as a viable short-term financing alternative or working capital financing instrument, while simultaneously offering suppliers a more effective means of managing invoice administration and credit sales operations.⁵²

Salam Financing

According to Financial Services Authority Circular Letter (SEOJK) Number 36/SEOJK.03/2015 on Products and Activities of Islamic Rural Banks (Bank Pembiayaan Rakyat Syariah), *salam* financing is defined as the provision of funds or equivalent claims for the sale and purchase of ordered goods with deferred delivery by the seller, whereby payment is made by the buyer at the time the contract is agreed upon, subject to specified conditions and terms.

Salam is also known as *salaf* (advance payment), used in the context of a sales contract in which no immediate commodity transaction occurs. Under this arrangement, goods that are difficult to deliver on a cash basis are transacted in advance. The bank acts as the buyer, while the supplier customer assumes the role of the seller. The bank purchases an ordered product under certain specified conditions from the customer and makes advance payment, subsequently reselling the goods to another party or to a customer requiring the product within a predetermined delivery period.⁵³

⁵¹ Marques, et. al., "Governance Modes in Supply Chains and Financial Performance at Buyer, Supplier and Dyadic Levels: The Positive Impact of Power Balance."

⁵² Adhim and Mulyono, "Supply Chain Financing System Factors, Solutions, and Benefits: A Systematic Literature Review."

⁵³ Ratna Mulyany, Mirna Indriani, and Indayani, "Salam Financing: From Common Local Issues to a Potential International Framework," *International Journal of Islamic and Middle Eastern Finance and Management*, Vol. 15, No.

The purchasing party is referred to as *al-muslam* (the party that submits payment), the selling party is referred to as *al-muslam alaih* (the party entrusted with delivery), the goods being sold are designated as *al-muslam fih* (the goods to be delivered), and the price of the goods is termed *ra'su maal salam* (the capital of the *salam* contract).⁵⁴

Salam is commonly used to finance farmers (agribusiness) for relatively short periods, typically two to six months.⁵⁵ It may also be applied to the financing of manufactured goods, such as garments, provided that the goods' specifications are determined in advance. In this context, the bank serves as the buyer, while the farmer or garment manufacturer acts as the seller. The bank does not retain the agribusiness or garment products purchased from customers as inventory, as such activities fall outside the core business of banking. Consequently, in Islamic banking practice, the concept of parallel *salam* has become widely recognized, wherein the bank typically enters into a second *salam* contract with a secondary buyer, such as a wholesaler, the National Logistics Agency (Bulog), or similar entities.⁵⁶

An Islamic bank may assume the role of either buyer or seller in a *salam* transaction. When an Islamic bank acts as the seller and subsequently engages another party to fulfill the ordered goods under a *salam* arrangement, this is referred to as parallel *salam*. The governing conditions of parallel *salam* are as follows: the contract between the Islamic bank (as buyer) and the producer (as seller) must be entirely separate from the contract between the Islamic bank (as seller) and the end buyer; furthermore, the two contracts must not be mutually contingent (*ta'alluq*).⁵⁷

The buyer and seller agree on the specifications and price of the goods to be ordered at the outset of the contract. Once the contract is in force, the agreed price of the ordered goods may not be altered. When acting as the buyer, the Islamic bank may require the seller to provide collateral as a risk mitigation measure. The characteristics of the ordered goods must be universally identifiable, encompassing type, specification, quality, and quantity. The delivered goods must conform to the characteristics agreed upon by both parties. In the event that the ordered goods are delivered incorrectly or found to be defective, the seller shall bear full responsibility for such negligence.

Pursuant to Fatwa DSN Number 05/DSN-MUI/IV/2000 on *Salam* Sale and Purchase, several provisions govern the contract. On payment, the means of payment must be clearly specified in quantity and form, whether money, goods, or benefits, and must be rendered in full at the time the contract is agreed, rather than through debt forgiveness or offset. On the subject matter, the goods must be clearly defined, recognizable as a debt obligation, and specified in a way that allows delivery to be deferred to a mutually agreed future date and place; the buyer may not resell the goods before taking possession, and substitution is permitted only with goods of the same type. Upon delivery, the seller must deliver in the agreed quality and quantity; delivering superior-quality goods does not entitle the seller to additional payment, and a buyer who accepts inferior-quality goods may not demand a price reduction. Early delivery is permitted without additional payment, provided quality and quantity are met. If goods are unavailable or substandard at the delivery date and the buyer declines to accept them, the buyer

1 (2022), 17.

⁵⁴ Mulyany, Indriani, and Indayani.

⁵⁵ Widya Fitriana, "Farmer Satisfaction with Financing Services at Sharia Microfinance Institutions Agribusiness (Sharia MFI-A)," *Islamic Economics Journal*, Vol. 10, No. 01 (2024), 34–44.

⁵⁶ Sifa and Wiryono, "How Does Salam Financing Affect Farmers' Income? A System Dynamics Approach."

⁵⁷ Imam Kamaluddin, et. al., "Partnership Cooperation Models in Fiqh Muamalah: A Case Study of Kencana Mulia Sejahtera Cooperative in Ngawi," *Islamic Economics Journal*, Vol. 11, No. 01 (2025), 77–94.

⁵⁸ Majid, "Designing Salam-Muzara'ah Linked Waqf to Financing Agricultural Sector."

may either cancel the contract and claim a full refund, or wait until the goods become available. Finally, cancellation of the contract is permissible in principle, provided it does not prejudice either party.

Research Methods

Data Collection

Primary data from a survey of expert respondents, consisting of Sharia banking practitioners, regulators, suppliers, and a Sharia Fin-tech practitioners group, is required to build the modified model using the Delphi-ANP method. The ANP requires the most knowledgeable respondents in their field. The respondents in this survey are Sharia banking practitioners from several Sharia banks, including Bank Tabungan Pensiunan Nasional Syariah (Sharia BTPN), Bank Permata's Sharia Business Unit (UUS), and UUS Bank Jatim. Meanwhile, the regulatory respondents in this study are Sharia banking regulators and Sharia Economics experts, including regulators from Bank Indonesia, the National Committee for Sharia Economics and Finance (KNEKS), and the Directorate of Sharia Financial Services at OJK. Furthermore, the next respondent is the Supplier category. Respondents to supplier practitioners selected in this survey include Katuju Indonesia from Sharia Creative Industry (IKRA), Elcorps (Elzatta, Dauky, Noore & Elfood), and PT Solusi Bangun Indonesia, Tbk. The last category is Sharia Fintech practitioners, namely the Indonesian Sharia Fintech Association (AFSI).

Table 1. Stages of Implementation of In-depth Interview and FGD

In-Depth Discussion & Focus Group Discussion (FGD)		Number of Resp.
1 st FGD	The first round discusses the framework of the model with the nature of an open-ended questionnaire that can provide a reference to the issue and its scope, where each panel participant (expert) can provide his views	8
2 nd FGD	The researcher conveyed the results of the first FGD and a structured questionnaire to the panel participants to give a rating on each issue that had been collected in the structured questionnaire	16
3 rd FGD	The respondents in this FGD are in the Supplier category, namely Sharia Creative Industry (IKRA)	3
4 th FGD	The researcher presented the results of the survey and asked for final validation of the results of all FGDs in the form of a list of issues that have been ranked with a broader agreement. From this round, it can usually be recommended as the final result	10

The ANP questionnaire must be completed by all respondents in the form of a pairwise comparison, which has been simplified to maintain the explanation of respondents' response. Because the goal of the survey is to gain knowledge from expert practitioners, the ANP does not require a minimum number of respondents. However, Dilshad and Latif⁵⁹ report that the number of respondents in one FGD ranged from 6 to 12. The number of respondents in each category ranges from 10 to 11 in this study. This amount is sufficient to meet the expert needs of respondents using the Analytic Network Process (ANP) method.

⁵⁹ RM Dilshad and MI Latif, "Focus Group Interview as a Tool for Qualitative Research: An Analysis," *Pakistan Journal of Social Sciences*, Vol. 33, No. 1 (2013), 191–98.

Data Analysis and Robustness Test

The Delphi method is a structured communication method that was originally established as a structured forecasting method that relies on an expert panel to solve the complex problems.⁶⁰ Delphi is not based on a statistical sample that is intended to be representative of any population. It is a collective decision-making procedure that requires competent experts with a deep understanding of the topics.⁶¹ The experts complete surveys in two or more rounds. After each round, a researcher delivers a summary of the experts' previous-round decisions and the reasoning they gave for them. As a result, experts are encouraged to update their previous comments in light of the responses of other members of their panel.⁶²

The Analytic Network Process (ANP) is well-known for solving structured decision-making or assessment problems and was proposed by Saaty.⁶³ ANP expands the problem modeling method by grouping criteria and alternatives into a network. The network's components can be linked in any feasible way; for example, a network can have feedback and interdependence links both within and between clusters. This allows for more accurate modeling of complex structures as well as dealing with the common condition of dependency among clusters used in sustainability assessment.⁶⁴

In this case, a combination of ANP and Delphi is suggested. However, the delphi process is only used to reach the best criteria during the ANP model construction. Stakeholders are asked to comprehend and debate the model's criteria. After Delphi, stakeholders have a better understanding of the model's criteria. However, by combining Delphi and ANP, the not-so-well-solved problem of ANP's sensitivity analysis is avoided. One of the most significant weaknesses of ANP is the difficulty of conducting sensitivity analysis of its results, which this study proposes to overcome using the Delphi method. Finally, the proposed methodology aims to assist the authors by laying the groundwork for a fair, rational, and efficient debate, as well as to reach agreements on model development for financing business models in the *halal* value chain industry.

This research consists of 6 (six) steps. Starting with a literature review, FGD, and in-depth interviews to gather the necessary knowledge. Delphi method was used to conceptualize the model's criteria. The results are then used to build the ANP model, quantify it by polling expert respondents, and synthesize it in order to obtain the weights for the modified *salam* contract.⁶⁵

Research Framework and Hypotheses

From the literature review conducted along with expert practitioners and regulators, the model development of the identification of criteria, sub-criteria (clusters) and sub-criteria (elements) are as follows: The Objective criteria have several sub-criteria elements, they are: 1) The Differentiation of Islamic Bank Business Models; 2) The Development

⁶⁰ Norman Dalkey and Olaf Helmer, "An Experimental Application of the DELPHI Method to the Use of Experts," *Management Science*, Vol. 9, No. 3 (1963), 458–67.

⁶¹ Chitu Okoli and Suanne D. Pawlowski, "The Delphi Method as a Research Tool: An Example, Design Considerations and Applications," *Information & Management*, Vol. 42, No. 1 (2004), 15–29.

⁶² Mónica García-Melón, Tomás Gómez-Navarro, and Silvia Acuña-Dutra, "A Combined ANP-Delphi Approach to Evaluate Sustainable Tourism," *Environmental Impact Assessment Review*, No. 34 (2012), 41–50.

⁶³ TL Saaty and LG Vargas, *Decision Making with the Analytic Network Process* (Berlin, Germany: Springer Science+ Business Media, LLC, 2006).

⁶⁴ K. M. Neaupane and M. Piantanakulchai, "Analytic Network Process Model for Landslide Hazard Zonation," *Engineering Geology*, Vol. 85, No. 3–4 (2006), 281–94.

⁶⁵ A. Ascarya and Atika R. Masrifah, "Challenges In Applying Standard Methodology For Research In Islamic Economics And Finance And The Way Forward," *Teaching and Research Methods for Islamic Economics and Finance*, (January 1, 2021), 327–48.

of *Halal* Value Chain; 3) The Development of Micro Small and Medium Enterprises; 4) The Fulfilling Working Capital Needs of the Value Chain Industry; 5) The Increasing Market Share of Islamic Banks.

The criteria of the financing business model in the *halal* value chain industry include six sub-criteria offered to the customer segments to be served; they are: 1) Target Markets; 2) Distribution Channels; 3) Key Activities; 4) Business Sectors; 5) Key Partnerships; and 6) Value Propositions. Each business model sub-criterion has several sub-criterion elements.

The target market comprises 5 sub-criteria: Individuals, Groups, MSMEs, Corporations, and Government Institutions. The distribution channel has 5 sub-criteria: Bank Branches, Cooperatives/*Baitul Maal wa Tamwil*, Mentors, Mobile/Digital Banking, and Sharia Fintech. Key activities have 4 sub-criteria: Cooperation with Ministries/Agencies, Regular review of locations/prospects by the Account Officer, Identification of business prospects according to the business model, and Matching suppliers with buyers.

Meanwhile, the business sector has 4 sub-criteria, including Agriculture (Plantation, Livestock, and Fisheries), Convection (Textile Industry), Trading, and Manufacturing (Processing Industry). Key partnerships have 5 sub-criteria, including Ministries/Institutions, Marketplace, Kadin (Chamber of Commerce and Industry), Indonesian Bureau of Logistics, and Islamic Boarding Schools. The value proposition has 5 sub-criteria elements, including: In accordance with sharia principles, Suppliers get working capital early, Repayment by handing over goods, Buyers can pay cashless, and Different Allowance for Earning Assets (PPAP) treatment.

In the third criterion, the opportunities and challenges of the financing business model in the *halal* value chain industry are divided into three clusters: 1) Risk Management; 2) Operations and IT; 3) Market. An explanation of the operational definition of each criterion, sub-criteria, and element is discussed in sub-chapter 3.2. The overall network of the financing business model framework within the *halal* value chain industry is shown in the following figure.

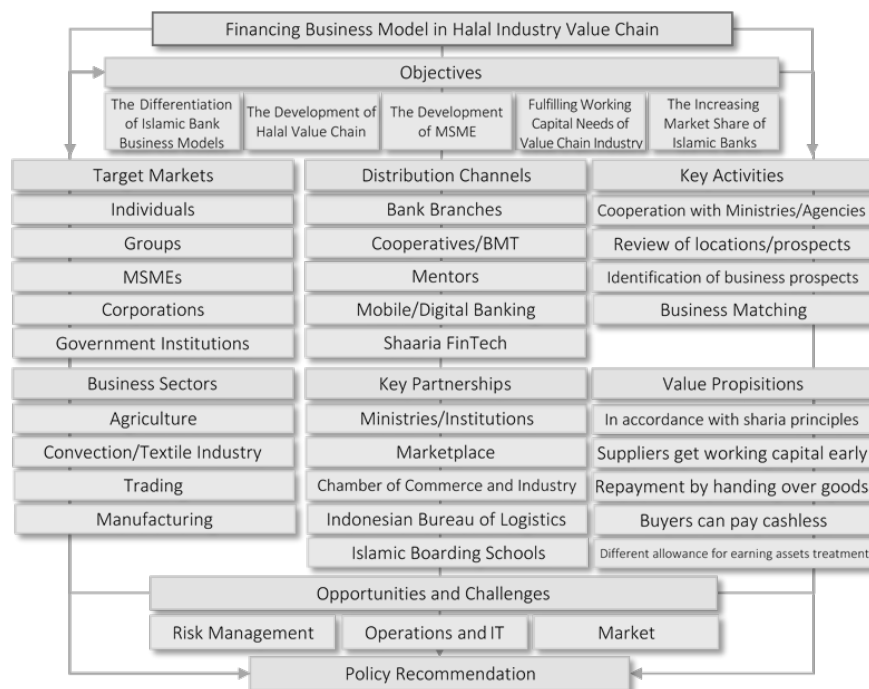


Figure 1. Model Development for Financing Business Models in *Halal* Value Chain Industry

Results and Discussion

Financing Business Model in Halal Value Chain Industry

This scheme is initiated by an underlying contract, specifically a cooperation agreement for goods procurement between suppliers or producers and standby buyers. This is a risk mitigation for banks in providing *salam* financing. Here, the suppliers propose the financing to a Sharia Bank with a *salam* agreement. This *salam* financing transaction works if the suppliers need production capital; meanwhile, the standby buyers usually pay off when the goods are handed over or when the goods produced by the suppliers are available.

In this case, banks can provide financing to suppliers, enabling them to start their production process. During the production process, the Bank may request a guarantee from the suppliers to avoid risk. Once the production process is complete, the suppliers will hand over the *salam* object to the Sharia Bank, the financier. Then the bank will hand over the *salam* object to standby buyers, and the payments happen between the standby buyers and the Sharia Bank. In this case, the buyers may choose to pay in cash or by installments.

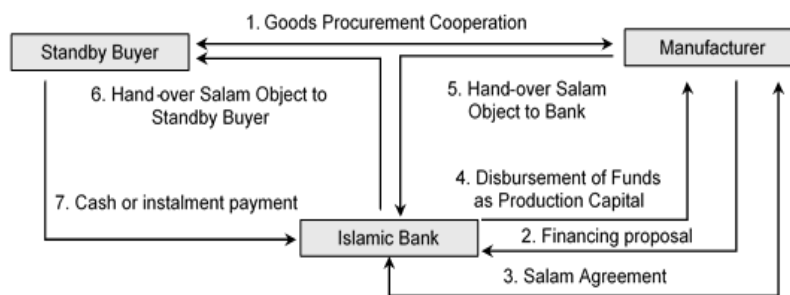


Figure 2. Modified *Salam* Contract in the *Halal* Value Chain Industry

In a product distribution scheme using a modified *salam* contract, there are several benefits that can be obtained by Islamic Banks, including: the bank is not subject to PPAP for any *salam* transaction, adds a variety of financing products, especially for the supply chain industry, increases revenue potential, and it is a Sharia-based product that cannot be done by any conventional banks. Meanwhile, the benefits that will be obtained by suppliers include: obtaining working capital early to carry out production and repayment of financing by handing over the goods to the Bank or Buyer; it is not a financial liability and is in accordance with Sharia principles. Furthermore, the benefits that will be obtained by buyers include: several payment options in cash or cashless, there is more flexibility for buyers to manage finances in the Supply Chain Management process, and of course, it is in accordance with Sharia principles.

Delphi-ANP Result

In this section, we first describe the results of the ANP method, followed by analysis. The ANP results showed that the most important objectives of developing a financing business model in *halal* value chain industry were the differentiation of Islamic Bank business model (22.1%), followed by the development of *halal* value chain (20.4%), the development of MSMEs and an increase in market share (19.4%) as well as meeting the needs working capital of *halal* value chain industry (18.8%). According to regulators and banking practitioners, the existence of the Islamic Bank financing business model provided an increasingly diverse spectrum of financing for the business world, especially

in the *halal* value chain industry (26.7% and 29%). Meanwhile, according to suppliers (24%) and fintech practitioners (20%), the characteristics inherent in the Islamic finance industry were implementation based on the relationship of each business to the real sector and an emphasis on the concept of sharing between fund owners and entrepreneurs. This advantage was an added value that should be able to open up opportunities to increase the financing network for the Islamic banking industry, especially the market share of Islamic banks.

Table 2. Delphi-ANP Result on Objectives of Model

Objectives of Financing Business Model Development	Bankers	Regulators	Suppliers	FinTech	Overall	Priority
Sharia Bank Model's Differentiation	0.2900	0.2670	0.1290	0.1976	0.2209	1
<i>Halal</i> Value Chain Development	0.2062	0.1619	0.2400	0.1877	0.2036	2
Development of SMEs	0.1494	0.2031	0.2400	0.1787	0.1939	3
Working Capital Requirements in the Value Chain Industry	0.1494	0.1650	0.2400	0.2190	0.1877	
Increasing Sharia Bank Market Share	0.2050	0.2031	0.1510	0.2170	0.1939	3
Consistency	0.001***	0.005***	0.002***	0.001***	0.001***	
Kendall's W	0.6750	0.7667	0.9556	0.8611	0.5562	
p-value	0.0355**	0.0398**	0.0221**	0.0333**	0.0650*	

Notes: ***Significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level

Meanwhile, the most important criteria in financing business model development in the *halal* value chain industry were the value proposition (21.7%), followed by key activities (17%), target market (15.6%), business sector (15.5%), key partnership (15.2%), and distribution channels (15%). The most important criteria according to Islamic banking practitioners and regulators, respectively, were the value proposition of this financing business model (24.6% and 22.7%). While the key activities (21.5%) were the most important criteria in the model according to the supplier, although the model tended to be uncomplicated and easy, whether or not this model run in the real sector was very dependent on what main activities were carried out in this financing business model so that it can generate value to support the *halal* industry in Indonesia.

Figure 3. Delphi-ANP Result on Criteria of Model

Criteria of Financing Business Model Development	Bankers	Regulators	Suppliers	FinTech	Overall	Priority
Target Market	0.2125	0.1914	0.0836	0.1667	0.1563	3
Distribution Channel	0.1149	0.1161	0.2123	0.1667	0.1498	
Key Activities	0.1501	0.1546	0.2146	0.1667	0.1697	2
Business Sector	0.1506	0.1913	0.1396	0.1667	0.1552	
Key Partnership	0.1264	0.1200	0.1576	0.1667	0.1521	
Value Proposition	0.2456	0.2266	0.1923	0.1667	0.2170	1
Consistency	0.000***	0.001***	0.003***	0.000***	0.000***	
Kendall's W	0.3950	0.5287	0.7147	0.6341	0.8139	
p-value	0.1680	0.0506*	0.0190**	0.0550*	0.0011**	

Notes: ***Significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level

The detailed results of Delphi-ANP showed that the financing business model development in *halal* value chain industry set corporations (4.57%) as the main target market. The synergy between fund owners and entrepreneurs through Islamic Banks in developing a *salam* contract-based financing business model, and the underlying contract, tended to be easy and uncomplicated, so that government institutions (4.45%)

and MSME actors (3.54%) became the next target market choice for developing this financing business model.

The financing business model development prioritized distribution channels through banking branches (4.84%); therefore, value can be conveyed to customers and then distributed through cooperatives, BMT, and Sharia fintech (3.35%). Cooperatives and BMTs had customer segments spread across various regions and business sectors, namely the micro and small-business actors segment. Indonesia's micro and small business actors have always played an important role in the economy. Some data showed that micro and small enterprises contributed around 61% to GDP growth in 2024. This was slightly below the contribution of large companies to GDP. The micro and small business sector also absorbed around 97% of workers in 2024.

Meanwhile, the most important activity criteria for developing a financing business model in the *halal* value chain industry were business matching suppliers with buyers (5.43%), followed by identifying business prospects that matched the business model (4.86%) and collaborating with Ministries or Institutions (4.08%). Furthermore, the business sector for financing business model development in the *halal* industry value chain identified the agricultural sector (5.60%) as the mainstay sector for this model, alongside the manufacturing/processing sector (4.75%) and the trade sector (3.53%). Moreover, key partnership criteria or other parties that help to achieve the goal of financing business model development in the *halal* value chain industry included ministries or institutions (4.77%), Islamic boarding schools (3.46%), and marketplaces (3.06%).

The value proposition in this model was to stand on Sharia principles (4.93%) followed by the Supplier aspect who was able to get working capital early (4.05%), then the repayment of the supplier was marked by the handover of goods (3.20%), Different Allowance for Earning Assets (PPAP) in this proposed model with different treatment (2.37%) and the last value proposition was that standby buyers can pay cashless to Islamic banks (2.28%).

**Figure 4. The Criteria of Financing Business Model Development
in *Halal* Value Chain Industry**

Detailed Criteria of Financing Business Model Development	Bankers	Regulators	Suppliers	FinTech	Overall	Priority
Individual's Target Market	0.0112	0.0160	0.0136	0.0452	0.0147	
Group's Target Market	0.0283	0.0204	0.0232	0.0452	0.0260	
MSMEs Target Market	0.0332	0.0364	0.0390	0.0452	0.0354	3
Corporation's Target Market	0.0464	0.0473	0.0491	0.0156	0.0457	1
Government Institutions as Target Market	0.0490	0.0473	0.0391	0.0156	0.0445	2
Bank branches Channel	0.0404	0.0474	0.0429	0.0486	0.0484	1
Cooperative/BMT Channel	0.0185	0.0559	0.0345	0.0490	0.0335	2
Mentors Channel	0.0311	0.0244	0.0157	0.0250	0.0248	
Mobile/Digital Banking Channel	0.0346	0.0160	0.0345	0.0170	0.0259	
Sharia Fintech Channel	0.0403	0.0213	0.0405	0.0271	0.0335	2
Collaboration with Ministries/Institutions	0.0577	0.0284	0.0208	0.0585	0.0408	3
Review of Location/prospects	0.0215	0.0252	0.0392	0.0201	0.0231	
Business Prospect Identification	0.0398	0.0563	0.0541	0.0296	0.0486	2
Business Matching	0.0471	0.0563	0.0541	0.0584	0.0543	1
Agriculture Sector	0.0488	0.0744	0.0517	0.0172	0.0560	1
Convection/Textile Industry	0.0162	0.0374	0.0312	0.0498	0.0275	
Trading Sector	0.0580	0.0183	0.0516	0.0498	0.0353	3
Manufacturing Sector	0.0430	0.0374	0.0313	0.0498	0.0475	2

Detailed Criteria of Financing Business Model Development	Bankers	Regulators	Suppliers	FinTech	Overall	Priority
Ministries/Institutions's Partnership	0.0597	0.0222	0.0401	0.0650	0.0477	1
Marketplace's Partnership	0.0318	0.0404	0.0152	0.0326	0.0306	3
Chamber of Commerce & Industry	0.0245	0.0329	0.0401	0.0099	0.0241	
Indonesia Bureau of Logistics	0.0214	0.0393	0.0308	0.0296	0.0291	
Islamic Boarding School's Partnership	0.0279	0.0301	0.0401	0.0296	0.0346	2
Sharia Compliant	0.0529	0.0584	0.0360	0.0383	0.0493	1
Supplier Get Working Capital Early	0.0375	0.0434	0.0359	0.0383	0.0405	2
Repayment by handling overgoods	0.0315	0.0216	0.0359	0.0383	0.0320	3
Buyers can pay Cashless	0.0252	0.0207	0.0359	0.0133	0.0228	
Different Allowance for Earning Assets Treatment	0.0220	0.0244	0.0237	0.0383	0.0237	
Consistency	0.005***	0.001***	0.003***	0.007***	0.001***	
Kendall's W	0.5550	0.6817	0.5547	0.5399	0.6319	
p-value	0.0016***	0.0056***	0.0019***	0.0955*	0.0061***	
Notes: ***Significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level						

Discussion Analysis

The following discussion interprets the Delphi-ANP findings in light of prior empirical research on Islamic supply chain finance, *halal* value chain integration, and *salam* financing, and identifies the research gap that the proposed modified *salam* contract model addresses. It covers the Sharia financing scheme for the *halal* value chain, the model's stakeholders, supplier and bank considerations, and the opportunities and challenges of implementation.

The Scheme of Sharia Financing in the Halal Value Chain Industry

The steady growth of institutions and organizations supporting *halal* consumption, both domestically and internationally, reflects the community's own demand for *halal* integrity a trend consistent with prior research on *halal* ecosystem development,⁶⁶ and government-led financial inclusion initiatives.⁶⁷ To sustain this demand, government policy needs to actively support *halal* value chain financing rather than relying on organic market growth alone.

Certainty of financing is as important as trade policy in this regard.⁶⁸ Regulators and financial institutions are expected to strengthen oversight of financing distribution, since underlying-transaction requirements are the primary safeguard against side-streaming and moral hazard in Islamic contracts.⁶⁹

One solution to the cash-to-cash cycle problem faced by *halal* industry suppliers is to modify the funding product using a *salam* contract, enabling producers to access capital before production begins. This finding is consistent with Sifa and Wiryono's system dynamics analysis showing that *salam* financing improves farmers' income by providing upfront capital ahead of the production cycle,⁷⁰ though that study focuses

⁶⁶ Efendi, et. al., "Halal Ecosystem Micro Small and Medium Enterprises Through The Integration of Value Chain and Green Strategies."

⁶⁷ Budi, "Competitiveness Analysis of the Halal Value Chain in the Global Market."

⁶⁸ Zulqurnain Ali, Bi Gongbing, and Aqsa Mehreen, "Predicting Supply Chain Effectiveness through Supply Chain Finance: Evidence from Small and Medium Enterprises," *The International Journal of Logistics Management*, Vol. 30, No. 2 (2019), 488–505.

⁶⁹ Ascarya, Husman, and Tanjung, "Determining the Characteristics of Waqf-Based Islamic Financial Institution and Proposing Appropriate Models for Indonesia."

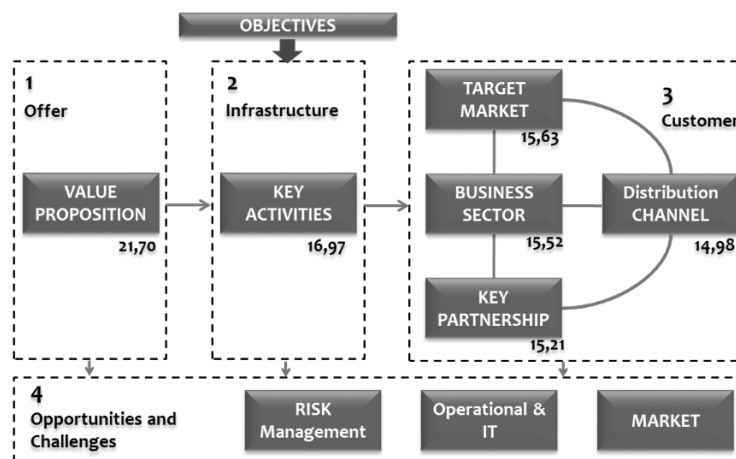
⁷⁰ Sifa and Wiryono, "How Does Salam Financing Affect Farmers' Income? A System Dynamics Approach."

on agricultural financing generally rather than the standby-buyer structure proposed here a distinction that represents this study's specific contribution.

One solution to overcome the cash-to-cash cycle problem in *halal* industry supplier companies is to modify the funding product with a *salam* contract, so it can help producers or suppliers who need early cash to start the production process. This finding is consistent with Sifa and Wiryo's system dynamics analysis, which found that the *salam* scheme provides higher income for farmers compared to conventional financing precisely because it supplies capital ahead of the production cycle rather than after.⁷¹ However, their study is limited to the farmer's perspective and does not examine the model from the financier's side; this study addresses this gap by designing the financing business model from the Islamic bank's perspective as well.

Sharia financing schemes in the *halal* value chain industry are evaluated against several criteria formulated in this study, including target market, distribution channels, business sector, main activities, cooperation, and value proposition. These criteria echo findings from prior research on *halal* value chain performance, which identified financing structure, alongside digital technology, R&D, and regulation, as a key antecedent of sustainable outcomes for MSMEs⁷² in the *halal* sector.⁷³

This financing business scheme must start with the ability to offer a Value Proposition to the customer segment. The Value Proposition that will be offered to customers (suppliers and buyers) is a solution for customer needs (increasing added value for customers). While Key Activities must be able to serve as an intermediate target in this model, Islamic banking serves as a means to achieve the main goal (objective). The customer segment that is the target of this financing scheme must follow the target market, business sector, and key partnerships, while efforts to maintain good relations with customers are carried out through good distribution channels a distribution challenge that Sharia fintech partnerships can help address, since fintech collaboration has been shown to expand financing access and distribution reach for *halal*-sector MSMEs.⁷⁴



⁷¹ Sifa and Wiryo.

⁷² MH Ashary and MR Irsyadillah, "Analysis of Determinants Affecting the Distribution of MSME Funds in Indonesia: A Study of the VECM Approach," *Islamic Economics Journal*, Vol. 11, No. 02 (2025), 260–64.

⁷³ Budi, "Competitiveness Analysis of the Halal Value Chain in the Global Market."

⁷⁴ Qizam, Berakon, and Ali, "The Role of Halal Value Chain, Sharia Financial Inclusion, and Digital Economy in Socio-Economic Transformation: A Study of Islamic Boarding Schools in Indonesia."

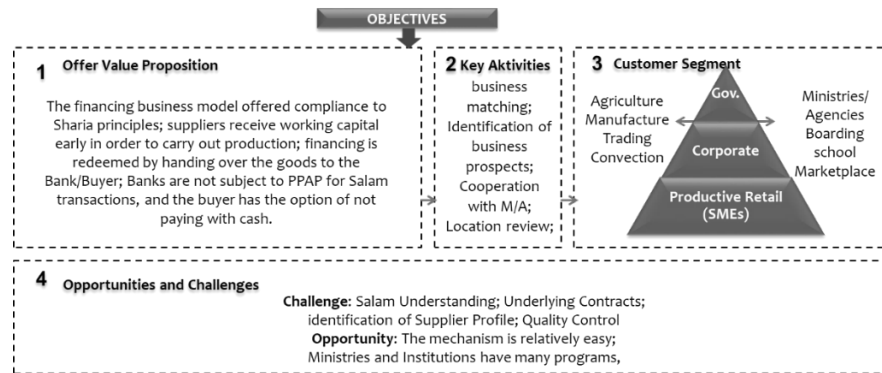


Figure 3. Sharia Financing Scheme to Overcome the Cash-to-Cash Cycle Value Chain of the Halal Industry

Opportunities and Challenges of Implementing Financing Business Models in Halal Value Chain Industry

Islamic banking, through the *salam* contract financing model, functions primarily as a connector between suppliers and buyers rather than an inventory-holding intermediary, a role consistent with the parallel *salam* structure documented in prior research.⁷⁵ This connector role generates several forward-looking opportunities: transaction mechanisms and recording under the proposed model are relatively straightforward; suppliers gain access to working capital ahead of production, with repayment structured through goods delivery rather than cash debt; and risk is mitigated through cooperation with Askrindo Syariah, a government institution that provides guarantees.⁷⁶

The growth of *halal* marketplaces and Sharia digital payment systems further supports this model's scalability,⁷⁷ while cooperation between Islamic banks and government ministries provides a channel to address MSME cash management constraints at scale.⁷⁸

Against these opportunities, several challenges remain. Public unfamiliarity with Islamic finance products, including *salam* contracts specifically, continues to limit adoption, compounded by limited promotional effort from Islamic banks themselves.⁷⁹ Risk mitigation also requires banks to rigorously verify that a supplier already holds an underlying contract with a standby buyer before extending financing, since production capital cannot be provided on a trust basis alone. Quality control coordination between buyer and supplier presents a further point of negotiation, and the model must compete with alternative financing products, including those offered by conventional banks and Islamic fintech providers.⁸⁰

⁷⁵ Mulyany, Indriani, and Indayani, "Salam Financing: From Common Local Issues to a Potential International Framework."

⁷⁶ Hofmann and Kotzab, "A Supply Chain-oriented Approach of Working Capital Management."

⁷⁷ Izra Berakon, Hendy Mustiko Aji, and Muhammad Riza Hafizi, "Impact of Digital Sharia Banking Systems on Cash-Waqf among Indonesian Muslim Youth," *Journal of Islamic Marketing*, Vol. 13, No. 7 (2022), 1551–73.

⁷⁸ D Apriliani and T Finaldin, "Public-Private Partnership In Sharia-Based Msmes Empowerment In Indonesia," in *Iqtishaduna: International Conference Proceeding*, 2024, 586–92.

⁷⁹ SN Ali, "Building Trust in Islamic Finance Products and Services," *Society and Business Review*, Vol. 12, No. 3 (2017), 356–72.

⁸⁰ R Yudaruddin, "Financial Technology and Performance in Islamic and Conventional Banks," *Journal of Islamic Accounting and Business Research*, Vol. 14, No. 1 (20223), 100–116.

Conclusion

The Islamic financing scheme most suitable for overcoming the cash-to-cash cycle problem in the *halal* value chain industry was the Fund Distribution Product Scheme, which uses *salam* contracts, in which Islamic banks finance suppliers who already hold an underlying contract with a standby buyer. The stakeholders involved in this model include regulators (BI, DSN, KNEKS), Sharia banking institutions (BUS, UUS, BPRS, microfinance), suppliers (IKRA and others), and fintech practitioners. Suppliers value this model chiefly for its Sharia compliance and its ability to provide working capital before production begins, while prioritizing collaboration with government ministries and access to national trade programs; banks, in turn, prioritize Sharia compliance, early working capital provision to suppliers, and a clear understanding of target markets and business sectors, delivered through branch and fintech distribution channels.

Opportunities for implementing this model include its relatively simple transaction mechanism, extensive support for ministry and agency programs, adequate IT infrastructure within Islamic banks, and a growing range of marketplace partnerships. Challenges include low public understanding of *salam* contracts, the need for rigorous supplier risk mitigation through underlying-contract verification, quality control coordination between buyers and suppliers, and competition from both conventional banks and Islamic fintech products. Addressing these challenges requires closer alignment of perceptions among regulators and stakeholders, including Islamic banking practitioners, academics, customers, suppliers, and government, regarding the benefits and value Islamic banks contribute to the *halal* economy, which would facilitate coordinated implementation of the *salam* financing model.

This study has several limitations. The Delphi-ANP method relies on a purposively selected panel of knowledgeable respondents rather than a statistically representative sample, so findings reflect expert consensus within the surveyed institutions rather than population-wide generalizability. [ADD: any specific limitation particular to your sample size, geographic scope, or respondent categories]. Future research could extend this model by empirically testing its financial performance once implemented, for example, measuring actual cash-to-cash cycle reduction among participating suppliers or by comparing the modified *salam* model against conventional factoring and reverse factoring on cost and risk dimensions. Further work could also explore how this model generalizes to other Sharia-compliant value chains beyond the *halal* industry, and examine the role of Sharia fintech platforms in scaling supplier access to *salam*-based financing.

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