AZKA-PPZ
AKADEMI ZAKAT
AZJAF
AZKA INTERNATIONAL JOURNAL OF ZAKAT & SOCIAL FINANCE ISSN : 2735-1890 e-ISSN : 2716-6643
Vol. 7 No. 3 (Special Issue 2026)
azka.zakat.com.my

DOI: 10.51377/azjaf.vol7no3.313

THE ROLE OF ISLAMIC AGRICULTURAL FINANCE IN ADDRESSING FINANCIAL CONSTRAINTS: A CASE STUDY OF AGRO BANK'S APLS MODEL IN MALAYSIA

SITI AISHAH ABD AZIZ
Arshad Ayub Graduate Business School, Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia.
Email: 2026962115@student.uitm.edu.my

SHALIZA ALWI
(Corresponding Author)
Arshad Ayub Graduate Business School, Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia
Email: shalizaalwi@uitm.edu.my

NURUL NADRATUL NAIM MOHD NIZAM
Arshad Ayub Graduate Business School, Universiti Teknologi MARA,
40450 Shah Alam, Selangor, Malaysia
Email: 2026811968@student.edu.my

A PEER-REVIEWED ARTICLE
(**RECEIVED** – 3RD JUL. 2026: **REVISED** – 20TH AUG. 2026: **ACCEPTED** – 7TH SEPT. 2026)

ABSTRACT

The provision of suitable financing to smallholder farmers and agro entrepreneurs is a longstanding issue in Malaysia. In the agricultural sector, cash flow is not predictable, the risk of climatic and market fluctuations is present, and collateral is limited, which makes it difficult for conventional financing for many agricultural operators, especially small-scale operators. Islamic agricultural financing provides an alternative solution with the principles of risk sharing, fairness, ethical investment and prevention of riba in accordance with Islamic rules. Agro Bank's Agricultural Profit and Loss Sharing (aPLS) is one of the potentially relevant financing models to address the unique financial nature of agricultural activities. This study analyzed the financial constraints faced by agropreneurs in Malaysia and the perception level of the effectiveness of the aPLS model as well as the barriers to its widespread implementation. There was a qualitative study with case study approach using ten participants such as farmers, agro-entrepreneurs, respondents from the Department of Agriculture Malaysia,

and Agro Bank officers. Thematic analysis of the interview data aimed to reveal patterns of experiences and perceptions that occur across participants. The results indicate that agropreneurs still face tremendous financial problems such as irregular cash flow; failure in getting start-up capital; strict repayment conditions; rejection of financing proposals; and poor bookkeeping. Even though the participants showed interest in financing alternatives based on Shariah and financing with sharing, there are a number of factors that hinder the effectiveness of the aPLS model, such as low awareness, insufficient promotion and material, strict eligibility and documentation, limited information flows, and less knowledge about the product. The study reveals there is a considerable disparity between the theoretical suitability of Islamic risk sharing finance for agriculture and accessibility of the same to the small farmers. It emphasizes the importance of enhanced institutional outreach, more streamlined financing process, financial literacy and more farm-centric financing mechanisms. The results add to the empirical field of Islamic agricultural finance and have practical implications for financial institutions and policymakers to foster financial inclusion and sustainable agricultural development in Malaysia.

Keywords: Islamic agricultural finance, aPLS, agropreneurs, profit and loss sharing, financial inclusion, Malaysia, Agro Bank.

INTRODUCTION

Malaysia's food security, rural livelihoods and economic development continue to be reliant on agriculture. Yet smallholder farmers and agropreneurs are still being affected by financial constraints that hinder sustainable production, investment in agricultural inputs and technology, and growth of their farming businesses. Farm operations involve high up-front investment, but little income is realized and is subject to the production risk, and to risks associated with weather and market conditions and has lower predictability. These characteristics make them very different in terms of financing needs compared to businesses that have stable and predictable cash flows.

Such formal financing can be even harder for small scale agropreneurs. The limited collateral, incomplete financial records, irregular income and fixed repayment requirements may limit their access to appropriate financing (Abdullah & Latiff, 2019). Further, if financing is not in line with the planting and harvesting calendar, it can make the situation worse if agricultural production or the market conditions worsen. Making capital available, therefore,

is not the only problem, but whether financing structures available are consistent with the economic and risk dimensions of agricultural production.

Islamic finance offers a different way, that is by abolishing riba and emphasizing on asset-backed financing and risk-sharing. Financial instruments such as Mudarabah and Musharakah provide financial relationships and tie risks and returns more tightly with the economic activity in which they are involved. (Ayub, 2007; Iqbal & Mirakhor, 2011) This might be applicable in agriculture where there is uncertainty of income and uncertainty of output and rigid repayments may be difficult for the smallholders. In Malaysia, the model that applies these principles is known as Agricultural Profit and Loss sharing (aPLS), which is Agro Bank's application of the principles to the financing of agriculture. The model would be designed to create a partnership-type relationship with financial results linked to farm performance and may offer better financial contracts with farmers. This risk sharing attitude also matches with the overall objectives of Islamic finance which include fairness, financial inclusion and protection of productive wealth amongst other things.

However, Shariah friendly financing mechanism doesn't always trigger the positive financial inclusion. However, due to lack of awareness, financial literacy, complicated documentation, eligibility criteria, or just lack of outreach from the institutions, farmers may still not be able or willing to use such financing. Financial institutions are also struggling in measuring agricultural risk, monitoring activities financed and supporting geographically spread farming communities. This can lead to a disconnect since the Islamic finance risk-sharing model may not be readily available to the agropreneurs it is designed to serve.

This implementation gap is still significant in the context of literature on Islamic Agriculture Finance. While there is hitherto significant conceptual justification for risk sharing and Shariah-compliant agricultural financing, there is not a significant number of empirical works that discusses the actual practice of specialised profit-and-loss sharing arrangements from both the agropreneurs and financing institutions in Malaysia. This is crucial because if a financing mechanism is shariah compliant through a contract but cannot be accessed, understood by the beneficiaries, or solve their barriers, then it is not really shariah compliant.

For this reason, this study focuses on Islamic agriculture finance to overcome financing challenges faced by agropreneurs in Malaysia by analyzing the aPLS model of Agro Bank. It aims at specifically: (1) understanding challenges faced by the agropreneurs to access adequate financial resources; (2) understanding the perceived effectiveness of aPLS in addressing challenges to

agricultural financing; and (3) exploring barriers affecting the adoption of aPLS. The study integrates the views of agricultural actors and Agro Bank officers thus bridging between principles and practice of Islamic risk sharing in agriculture.

The study's contribution to the literature is that it shows that the developmental characteristic of Islamic agricultural finance is not only determined by the sharia-compliant design of products but also in the accessibility of products that has a substance. It focuses on the question as to whether the potential benefits of risk sharing finance can be achieved by small scale agropreneurs due to institutional procedures, awareness and financial literacy and communication. This viewpoint goes beyond just contract compliance to the institutional requirements that allow Islamic finance to enhance financial inclusion, the sustainability of agricultural activity and the development of the rural economy.

LITERATURE REVIEW

Agricultural Financing Constraints and Islamic Finance

One of the major problems faced by smallholders is accessing suitable finance as farming is not like any regular business which generates cash flows. Farmers have to pay out significant production costs before they have any returns, and the returns that do come in depend on weather, yield, the cost of production and market prices. Thus, traditional financing mechanisms that rely exclusively on collateral and standardized financial documentation and repayment plans may not be suitable for the financial nature of small-scale farming (Abdullah & Latiff, 2019; Azmi et al., 2020). Access to financing can then be a factor that limits farmers' purchasing power on inputs, applying technology and increasing their productivity and farm size.

An alternative approach would be Islamic finance which focuses on what is considered as Shariah compliant financing, productive economic activity, and equitable distribution of risks and returns. The terms Mudarabah, Musharakah and Salam are especially relevant in the agriculture sector as they allow for elements of partnership and risk sharing, and the agricultural production cycles, instead of just conventional debt relations (Ayub, 2007). Thus, the significance of the Islamic agricultural finance is not just restricted to preventing riba; rather, it is about the development of financing methods that are more aligned with the productive activities of farmers as well as their risk bearing capability.

This approach is relevant, as earlier Malaysian research articulates. For instance, Shafiai and Moi (2015) revealed that farmers may face financing problems on the next rounds of cultivation despite being part of agricultural support programmes. In their study they suggested that Islamic agricultural financing such as Agricultural Product and Loss Sharing (aPLS) could be a solution to overcome the financial constraints of farmers. This gives a good starting point to consider the role and potential of the introduction of risk-sharing instruments to enhance the relation between the formal financial and agricultural sector.

Profit-and-Loss Sharing and the a PLS Model

The contractual structure should not be relied upon as a single indicator of the appropriateness of Islamic finance. Agricultural financial inclusion is also contingent on the ease of understanding of financial products, their approachability, and their specificity to the farmers situation. This distinction is relevant as smallholders may not be able to access or effectively utilize an instrument that is in theory relevant for agriculture. The aPLS model and profit-and-loss sharing will be discussed. There are several manifestations of the risk-sharing principle of Islamic finance, such as profit and loss sharing (PLS). The difference between fixed and financial debt obligations is that PLS structures tie financial returns a bit more directly to the business activity itself. Mudarabah and Musharakah are the examples of this approach, in both these contracting arrangements, the capital, entrepreneurial activities and risks involved in the business are shared according to the agreed terms of the contract (Iqbal & Mirakhor, 2011).

This implies that in agriculture, which is an inherently risky sector, the principle is especially important. There can be wide fluctuations in output and income between production cycles, with fixed repayment requirements being a problem during poor cycles. Risk-sharing arrangements can in theory offer more flexibility as they share financial risk between the entrepreneur and financier and not just on the farmer. The aPLS model extends this to agriculture finance, to connect partnership-based Islamic finance to farming activities. Its conceptual underpinning aims to share agricultural risks and outcomes in a more equitable way amongst the relevant stakeholders. Previous research on aPLS has highlighted the possibility of using Islamic agricultural partnership contracts to solve farmer's financing problems and agricultural land development (Shafiai & Moi, 2015). Later studies on Islamic agricultural value-chain financing at Agrobank also show that there has been sustained interest in the development of Islamic financing models in the Malaysian agriculture industry, which

incorporates the Islamic values and the requirements of agricultural institutions and operations.

However, there are substantial implementation issues associated with PLS arrangements. The financial institutions are obliged to evaluate the projects for viability and to monitor the performance of the business and obtain reliable information on the financial outcomes. This can make real risk-sharing more complex to operate than financing schemes that feature ex post payment schemes (Obaidullah, 2015). Thus, the operational/practical aspects, including the suitability of any aPLS mechanism to address the practical financing conditions faced by smallholders, should also be considered when assessing the effectiveness of any aPLS.

Adoption and Accessibility of Islamic Agricultural Finance

According to the literature, factor on the side of farmers as well as institutional factors affects the adoption of Islamic agriculture finance. The awareness and financial literacy of the farmers is particularly important. While in principle agropreneurs can be supportive to Shariah compliant finance, they are not interested in participating when it comes to contractual forms, profit sharing, or financial obligations are not transparent. Ahmad and Baharudin (2019) state that one of the factors of financial inclusion among rural farmers is financial literacy as adjustment alone to the products offered is not sufficient for the adoption of financial inclusion.

Accessibility of institutions also is crucial. Smallholder farmers can have low formal financial records, poor collateral and/or challenges with documentation and eligibility. Rural communities might face greater challenges due to geographical separation from financial institutions and growing reliance on digital application channels. Formal availability of financing can at times be a key difference from its de facto accessibility. Communication within the institution has an impact on adoption. It is important for farmers to have a good understanding of what risk sharing dynamics are, what obligations apply to each of the parties and what outcomes of various farming situations can mean. In those areas where communication and outreach are also less, the unfamiliarity can be a barrier to participation, and lead to perceived complexity. Most of the research on Islamic agricultural finance, therefore, must be interpreted as an interplay of product attributes and farmer's capability and institutional delivery and not simply based on the preference for religion or the compliance with the Shariah.

This is especially important in terms of aPLS. Designing a risk sharing product to respond to financial constraints of smallholder may only generate limited financial-inclusion outcomes if the product is not communicated to the target group or if the target group is unable to meet the administrative necessities to use the product. It is therefore important to analyse accessibility to the assessment of the practical effect of Islamic agricultural finance.

Theoretical Foundation

There are three complementary theories applied to this study: stakeholder theory, development finance theory and Maqasid al-shariah. Each of the three frameworks explains a different perspective to aPLS implementation and should not be regarded as an alternative explanation.

Stakeholder Theory puts an emphasis on the relationships and responsibilities of an organization to parties that are impacted by their work (Freeman, 1984). In case of agricultural finance, this is applicable to the linkage between Agro bank and agropreneurs; linkage between agricultural agencies and agropreneurs; linkage among all institutions. It serves as a foundation for assessing if the communication, engagement and financing processes meet the needs of the target groups.

Development Finance Theory offers a supplementary institutional alternative. Conventional financial markets may fail to serve the needs of agricultural enterprises due to the scarcity of collateral, and the production risk and irregularity of income. Special institutions for undertaking development work can cater to this demand by allocating funds to economically and socially sound areas. In this context, the success of aPLS hinges on aPLS' ability to reach out in a meaningful way to agropreneurs who may be suffering a lack of financial services.

The ethics of the analytical matrix are given by Maqasid al-Shariah. In Islamic finance it is concerned with contractual compliance as well as the objectives of justice, welfare and prevention of harm. Protection of wealth (hifz al-mal) is more specific as availability of suitable productive finance can facilitate farmers' livelihoods and economic resilience (Chapra, 2008). Thus, an important question arises here from a Maqasid perspective: how can the substantive welfare of a formally Shariah-compliant financing product be determined if the realization of its functional use to the intended beneficiaries is a limited one?

The three perspectives combine to create a multidimensional framework to assess aPLS. Stakeholder Theory involves the study of institutional relationships and engagement, while Development Finance Theory involves the

study of financial accessibility and developmental purpose, and Maqasid al-Shariah involves the study whether the financing arrangement is in the line of justice which supports socio-economic welfare. This integration helps the study to differentiate the formal availability of Islamic financing and its ability to create inclusive developmental outcomes.

Table 1: Theoretical Framework Applied in the Study

Theoretical perspective	Main focus	Application to aPLS
Stakeholder Theory	Relationships, engagement and institutional responsibility	Examines communication and engagement between Agro Bank, agropreneurs and agricultural stakeholders
Development Finance Theory	Financial inclusion and addressing market financing gaps	Evaluates whether aPLS improves access to financing for underserved agropreneurs
Maqasid al-Shariah	Justice, welfare and protection of wealth (*hifẓ al-mal*)	Assesses whether aPLS contributes to fairness, economic welfare and meaningful financial inclusion

Research Gap

Conceptual justification of Islamic risk sharing in agriculture has been observed from the existing studies and Islamic agricultural finance is one possible solution to overcome the financial problems of farmers. Agricultural financing structures such as aPLS have also been taken into consideration in the previous Malaysian studies. Yet there is a key empirical vacuum regarding the mechanisms as they are experienced from the users' point of view and as they are practiced by the institutions providing them.

In particular, the theoretical appropriateness of risk sharing does not imply that agropreneurs know of aPLS, know its structure, can meet its criteria or see it as a available solution to their financing challenges. Likewise, there have been only few empirical studies on how the barriers at the farmer-level are complemented by the institutions' implementation approach in a specialised agricultural financial institution. This work fills that void by focusing on the aPLS from two perspectives: that of the lender and borrower. The study

explores the lived experiences of agropreneurs and the views of Agro Bank officers, to see if the theory of sharing risk through Islam can be realized in financial terms. In doing so, it refocusses the analytical point of view from the conceptual Islamic-financial compliance of aPLS and its agricultural appropriateness to how aPLS can lead to meaningful financial inclusion and developmental results.

METHODOLOGY

Research Design

This was qualitative research and a case study to investigate the role of Islamic farm financing in solving the problem of financial constraints of agropreneurs in Malaysia particularly focusing on the agricultural profit and loss sharing (aPLS) system of Agro Bank. The study aimed to gain understanding of participants' experiences, perceptions and interpretations of agricultural financing; therefore, a qualitative approach was appropriate as this did not aim to quantify relationships between predetermined variables (Creswell, 2014). The case study design additionally allowed the aPLS model to be explored in its institutional and agricultural setting (Yin 2018).

Both sides of the financing relationship have been considered. Agropreneurs shared their perceptions and experience on financial constraints and financing, as well as on the Shariah-compliant agricultural financing, while Agro Bank officers shared their institutional perspectives on agricultural financing and aPLS implementation. This method allowed for comparison of the financing mechanism's intended purpose and the experiences of the beneficiaries.

Participants and Sampling

A total of ten participants (8 agricultural stakeholders and 2 Agro Bank officers) participated in the study. The agricultural participants were comprised of the smallholder farmers and agropreneurs who have hands-on experience in farming, and the Agro Bank participants had views from the financing institution. These two groups of participants were vital to incorporate as the study aimed to gain both demand-side financing constraints and supply-side institutional considerations.

Purposive sampling was used to select participants with experience and knowledge that were related to the goals of the study. The selection of participants has been done considering agricultural activity and/or agricultural

financing. Additional respondents were then found using snowball sampling to ensure that any who met the study criteria were included in the survey. Such non-probability sampling techniques were suitable due to the nature of the study being exploratory, qualitative and information-rich participants rather than representing a larger group of farmers.

The sample, being focused on the case study, was designed to give detailed contextual evidence and not generalisation for the population. Thus, the results should be discussed in the light of the context of the aPLS and Malaysian agricultural financing.

Data Collection

Data was obtained by using semi structured interviews which were based on the three research objectives. The interview questions were related to experiences in accessing agricultural financing, perceptions about the existing financing arrangements, awareness and understanding about Islamic agricultural finance and aPLS, perceived advantages and limitations of risk sharing financing, and barriers that were faced in the adoption. To ensure that the interviews were consistent with each other, as well as being "semi-structured", participants were provided the opportunity to expand on the issues that came up in their own experience. Interviews were held via either face-to-face or online depending on participants' schedules and availability. Three of the interviews took place online and the other interviews were conducted face-to-face.

With participants' consent, interviews were audio-recorded and subsequently transcribed for analysis. The participants were told the object of the experiment, and it was voluntary. Transcripts were de-identified and the identification of participants was safeguarded in the reporting of findings.

Data Analysis

Thematic Analysis was used to analyse the interview data, as outlined by Braun and Clarke (2006). The study started by repeatedly reading the transcripts of interviews to get to know the data. According to the meanings and the relationship with the research objectives, statements were then coded as relevant. To the greatest extent possible, coding was inductive, with recurrent patterns being developed from what the participants themselves said.

The interview material was organised using NVivo software and the coding was supported with NVivo software. Then the codes related to each other were clustered together into bigger groups and examined for coherent themes. The themes were developed to be explicit, through a process of

comparison between patterns within the data of participants, together with the relevance of the theme to the research questions. A total of three main thematic areas were identified through this process: (1) financial constraints to agropreneurs; (2) perception of effectiveness of aPLS; and (3) barriers to aPLS adoption. Quotes from the participants were kept and showing how they link with the evidence of each theme.

After the initial inductive analysis, the results were interpreted based on the theories used in this study. The following theories were used to analyze the relationship and communication between Agro Bank and its agricultural stakeholders: Stakeholder Theory; Development Finance Theory as a basis for observing Agro Bank in meeting the gap in financing; and the implementation of Maqasid al-Shariah in considering the implication of accessibility, fairness and protection of wealth.

Research Rigour and Ethical Considerations

To support the rigour of the research, systematic documentation of the procedures for data collection and analysis was carried out, and there was a clear relationship between participant evidence, coding and the themes reported in the findings. Additionally, the involvement of both the agricultural and institutional actors in the financing relationship allowed for the study to include both sides' views regarding implementation of aPLS. Ethical aspects were taken throughout the research process. Participants were told about the purpose of the study prior to participation, a consent was agreed upon for conducting the interviews and recording, and maintaining confidentiality involved deleting any identifying information. It was a voluntary participation and research carried out according to the institutional research requirements.

FINDINGS AND DISCUSSION

Three interrelated areas related to the research objectives were identified through the thematic analysis: (1) agropreneurs' financial constraints, (2) perceived effectiveness of Agro Bank's Agricultural Profit and Loss Sharing (aPLS) model, and (3) barriers of adoption of aPLS. In all the themes, the results show a common problem, where small farmers find Islamic financial instruments for risk sharing hard to access as they are theoretically suitable for farming.

Table 2: Summary of Themes and Key Findings

Main theme	Key findings	Interpretation
Financial constraints among agropreneurs	Seasonal cash-flow shortages; limited working capital; difficulty accessing formal financing; delayed assistance	Agricultural financing structures may not adequately correspond with production and income cycles
Perceived effectiveness of aPLS	Risk-sharing and partnership viewed positively; flexibility potentially suited to agricultural uncertainty	aPLS demonstrates conceptual suitability, but effectiveness depends on implementation and accessibility
Awareness and financial literacy	Limited knowledge of aPLS and PLS arrangements; uncertainty regarding contractual responsibilities	Shariah preference alone does not ensure adoption
Institutional outreach and accessibility	Limited product visibility; weak communication; geographical and digital accessibility concerns	Formal product availability does not necessarily result in practical accessibility
Documentation and institutional requirements	Extensive paperwork and formal financial requirements can burden smallholders	Risk assessment should be proportionate to the characteristics of small-scale agricultural operations

Financial Constraints Among Agropreneurs

Limited finances was an ongoing problem for the agricultural respondents. The key challenges were related to problematic cashflows, low start-up and working capital, access to formal finance and financial processes that did not consider the nature of small-scale agricultural operations. Production is done before receiving revenues. In the case of farmers, they must pay for the seeds, fertilisers, pesticides, labour, etc. throughout the period of production, and the returns will come only after the harvest and its sale. This results in a permanent liquidity shortfall, especially for the small farmers who do not have much savings and/or have no other working capital. One participant explained:

"Kami sentiasa bergelut pada awal setiap musim. Kadang-kadang kami terpaksa meminjam daripada keluarga atau rakan. Memohon pinjaman rasmi adalah terlalu rumit, dan kami tidak pasti sama ada kami akan mendapat kelulusan."

(English translation: "We always struggle at the beginning of each season. Sometimes we have to borrow from family or friends. Applying for formal financing is too complicated, and we are not sure whether we will be approved.")

The use of family and friends is a demonstration of the fact that agropreneurs have difficulties accessing formal financing and thus seek out informal financing options. While this kind of financing can help meet short-term liquidity demands, it may not be enough to afford major purchases like equipment, technological upgrades or business expansion. This is consistent with Abdullah and Latiff (2019), who find that financial exclusion among smallholders in Malaysia has related to Malaysian smallholders having irregular income, less collateral, and less financial documentation.

Participants also raised concerns regarding delays in accessing financial assistance. As one participant noted:

"Saya cuba memohon bantuan kerajaan sekali. Saya menyerahkan semua dokumen kepada Jabatan Pertanian. Sehingga kini, tiada maklum balas. Kami memerlukan wang segera, bukan selepas enam bulan."

(English translation: "I tried applying for government assistance once. I submitted all the documents to the Department of Agriculture. Until now, there has been no response. We need the money immediately, not after six months.")

This discovery is a major factor of timeliness, especially in agriculture. Funds may be much less economically valuable if the application is successful and received after the planting or production period the funds relate to. Therefore, the availability of financing should not be the only measurement used for agricultural financial inclusion measurement, but it should also be measured whether the financing is accessible at a time that matches the production cycle.

Development Finance Theory can use these findings to show the financing gap for which specialised financial institutions can be expected to cater. There are some agricultural enterprises that can be commercially viable,

but simply due to their income and risk profile, they will be under-serviced by traditional credit evaluation systems. It is therefore Agro Bank's developmental role to be very significant in the design of financing mechanisms that address these sector specific constraints.

The results also have implications regarding the maqasid al-shariah. Financial exclusion could limit agropreneurs in sustaining productive assets and sustainable livelihoods, which could have an impact on the safeguarding of wealth (hifz al-mal). Hence, the effectiveness of Islamic agricultural finance should not only be judged based on the contractual conformity with the Shariah, but also if it facilitates productive economic engagement by financially weak farmers.

Perceived Effectiveness of the aPLS Model

The second theme is about the perceived effectiveness of aPLS as an alternative financing mechanism for agriculture. The results indicate that the risk sharing properties of the model could be compatible with farm activities, as perceived by the participants. But its effectiveness is hampered by both lack of awareness and implementation difficulties.

One of the most important features of aPLS is its partnership-based organisation. Profit-and-loss sharing is a type of financing which does not rely on any set interest-bearing liability to the financier but aligns financial results closer to the results of the financed activity. This feature is pertinent to agriculture, as there can be significant variations in farm income from one production cycle to another.

One agropreneur explained:

> "Sejujurnya, saya tidak pernah mendengar tentang aPLS ini. Saya fikir Agro Bank hanya menawarkan pinjaman biasa. Jika saya tahu ada sesuatu tanpa bayaran bulanan tetap, saya akan mencubanya."
>
> *(English translation: "Honestly, I had never heard about aPLS. I thought Agro Bank only offered normal financing. If I had known there was something without fixed monthly payments, I would have tried it.")*

It is an important contradiction that is revealed in this response. The participant had a positive perception of the financing features of aPLS after the features were explained but had not been aware of aPLS prior to the explanation.

Thus, the restriction was not only because of the aversion to Islamic financing mechanisms like risk-sharing but due to information and product visibility.

This highlights the different aspects of the suitability and accessibility of products. A financing mechanism could in theory match the cash flows of farmers very well and still have little impact on development if those wanted to use it are not even aware of the fact that it exists. The effectiveness of aPLS must therefore be defined in relation to its financing and institutional strategies for reaching agropreneurs.

The institutional perspective further demonstrates the potential advantages of a partnership-based arrangement. An Agro Bank officer explained:

> "Kami bukan sahaja meminjamkan wang. Kami juga memantau prestasi mereka, menawarkan nasihat dan berkongsi hasil mereka. Ia membina kepercayaan dan mengurangkan risiko."
>
> *(English translation: "We do not only provide financing. We also monitor their performance, provide advice and share in their outcomes. It builds trust and reduces risk.")*

It implies that aPLS can enable a financing relationship with more than just the capital. Monitoring and advisory services could have the potential of enhancing the business performance and simultaneously helping the financial institution in managing its information needs as part of risk-sharing.

Through a lens of Stakeholder Theory, this will help agropreneurs to be seen as active stakeholders, not just borrowers. The sustainability of the financing arrangement requires interaction, information sharing and mutual accountability between the financial institution and agricultural enterprise. This is especially important in a profit-and-loss sharing since the results of both the parties are closer.

The findings are also in line with the concept of maqasid al-syariah that is based on the notion of fairness and protection of assets/wealth. The sharing of agricultural risks may be able to stop poor performance being borne solely by the farmers. However, agricultural uncertainty cannot be eliminated through risk sharing. Farmers continue to be vulnerable to crop failure, natural hazards and market shocks, and financial institutions face issues like managing the cost of monitoring and information asymmetry. The challenges of monitoring and operational complexity are also mentioned in previous literature in the context of the implementation of PLS mechanisms that are PLS mechanisms (Obaidullah,

2015). Accordingly, the evidence should not be interpreted as demonstrating the objective financial superiority of aPLS. Rather, participants perceived characteristics of the model as potentially appropriate for agriculture. Its actual effectiveness depends on awareness, institutional capability, risk management and accessibility.

Therefore, it is not to be interpreted that the evidence shows objective financial superiority of aPLS. Instead, the participants thought the model to have qualities that could be suitable for agriculture. The true impact is related to awareness, institutional capacity, risk management, and accessibility.

Barriers to aPLS Adoption

Despite its potential benefits, there are several interrelated barriers to the adoption of aPLS. These involve low awareness, low awareness about money, lack of institutional outreach and administrative requirements which could be difficult for small scale agropreneurs to meet.

Awareness and Financial Literacy

One of the key challenges identified was the lack of Islamic financial arrangement knowledge. The general impression among some participants was that they were positive towards Shariah-compliant finance yet had limited knowledge of the workings of profit and loss sharing. One participant stated:

> "Kewangan Islam memang bagus, tetapi saya tidak begitu faham bagaimana ia berfungsi. Saya takut untuk menandatangani sesuatu yang saya tidak faham."
>
> *(English translation: "Islamic finance is good, but I do not really understand how it works. I am afraid to sign something that I do not understand.")*

This result reveals that positive attitudes do not necessarily lead to the adoption of Islamic finance. The practical implications of the contract must be explained to potential users, such as the sharing of profits and what happens to losses or how they are handled, and what happens to the participants when agricultural performance is poor.

The finding is corroborated by Ahmad and Baharudin (2019) which considers financial literacy as one of the significant factors in the context of Islamic financial inclusion among rural farmers. Again, importantly, the current results show that financial literacy is not only the lack of the farmer side. How

institutions tell consumers about complex financial products can also be a deciding factor in whether they can make an informed decision.

This means a part of the responsibility moves from the agropreneur to the financing institution. The communication should be about aPLS in terms of farmers' practical issues of payment commitments, crop performance, losses, responsibilities, and anticipated returns rather than much about the technical aspects of the concepts of Mudarabah and Musharakah.

Institutional Outreach and Accessibility

Limited institutional outreach was another prominent barrier. Some participants had existing relationships with Agro Bank yet remained unaware that aPLS was available. One participant explained:

> "Saya telah menjadi pelanggan Agro Bank selama bertahun-tahun tetapi tidak pernah tahu ini adalah pilihan yang lebih baik untuk petani."
>
> *(English translation: "I have been an Agro Bank customer for years but never knew this was an alternative option for farmers.")*

This discovery presents a gap address in between the product supply and customer awareness. Outreach is thus no longer a marketing activity for a development-oriented financial institution but is an integral part of financial inclusion.

Geographical and digital accessibility were also highlighted as concerns by participants. As more applications are becoming digital, this facilitates efficiency but can present a challenge for those farmers who have poor internet or don't have the same level of digital ability.

As a result, digitalisation should not replace direct involvement with the agricultural communities. This problem can be addressed by Stakeholder Theory. Communication between Agro Bank and the communities that it has a mandate to serve has to be effective for the financing to be effective. But weak engagement could mean that farmers are not aware of the opportunities for financing, and that the institution is not aware of what farmers' needs are.

Documentation and Institutional Requirements

Another major challenge was administrative and documentation needs. Small-scale agropreneurs can have a viable farm without having sufficient formal

financial documentation as would be typical for those being assessed for conventional financing. One participant observed:

> "Bank memerlukan terlalu banyak kertas. Saya tidak menjalankan perniagaan besar. Saya hanya mahu membantu menanam tanaman saya."
>
> *(English translation: "The bank requires too much paperwork. I do not run a large business. I just need assistance to grow my crops.")*

The resulting institutional dilemma poses a challenge to FTL. PLS financing demands credible information, as the financial institution shares in the business results and needs to see how the business is doing. A dash of paperwork and evaluation therefore is inevitable. But, if such demands are overly burdensome, the small farmers who are the intended beneficiaries of development-oriented agricultural finance can be pushed away.

This discovery is significant from a Development Finance point of view. Specialist agricultural finance can exacerbate rather than overcome financial exclusion if the requirements are too similar to those of a normal commercial loan. Policy challenge is thus not to abandon risk assessment, but rather to establish proportionate mechanisms of assessment suited to the size, flow and nature of the smallholder farms.

Integrated Interpretation of the Findings

The results collectively indicate that the difficulty with aPLS is not so much its conceptual viability as Islamic risk sharing in agriculture, but the concept's ability to be translated into accessible institutional practice.

There are three stages of implementation that can be distinguished. At the farmer level, it is the instability of cash flow and lack of financial literacy, together with poor financial records, that makes it difficult for farmers to get formal loans. Second, at the institutional level, documentation requirements, communication, outreach and risk assessment affect aPLS's ability to reach its target groups. Third, at the moral and developmental level, the extent to which aPLS brings in financial inclusion will influence its overarching Islamic and developmental goals.

This implementation gap is at the core of the three theoretical perspectives. Stakeholder Theory shows that there is a need to have a stronger relationship between Agro Bank and agropreneurs for an effective aPLS

implementation. According to Development Finance Theory, the financing problems on the less-served agricultural businesses should be dealt by a special institution instead of reproducing it. Maqasid al-Shariah takes the analysis further by showing that even if formal shariah compliance is achieved, yet if the intended beneficiaries are unable to reap the economic benefits from the financing mechanism, then it is still not considered to comply of the shariah.

So, the main findings based on the central contribution of the findings can be formulated as a dichotomy between formal Shariah-compliant availability and substantive financial inclusion. aPLS can present an Islamic risk-sharing model conceptually appropriate in addressing agricultural uncertainties, but to achieve development potential, farmers need to know about and understand the product, meet the proportional requirements, and avail financing within agriculturally meaningful time.

This discovery broadens the scope of the discussion of Islamic agricultural finance to go beyond contractual design. It implies that the success of an Islamic agricultural financing mechanism should be judged based on the extent of the implementation of Islamic financial concepts to the practical level, which is measured by the extent of the practical availability of financing, whether the allocation of financial risks is equitable and whether there is a source of sustainable economic opportunity for those who are intended as beneficiaries of the financing.

Table 3: Integration of Empirical Findings and Theoretical Perspectives

Analytical level	Key empirical issue	Theoretical perspective	Interpretation
Agropreneur level	Cash-flow instability, financial literacy and limited financial records	Development Finance Theory	Agropreneurs may remain underserved when financing structures do not accommodate agricultural characteristics
Institutional level	Outreach, communication, documentation and accessibility	Stakeholder Theory	Effective aPLS implementation requires stronger engagement between Agro Bank and intended beneficiaries
Ethical/ developmental level	Accessibility, fairness and distribution of financial risk	*Maqasid al-Shariah*	Formal Shariah compliance should translate into substantive welfare and protection of wealth

Integrated outcome	Gap between availability and accessibility of aPLS	Combined theoretical framework	The developmental potential of aPLS depends on converting Shariah-compliant product design into meaningful financial inclusion

CONCLUSION AND POLICY IMPLICATIONS

Conclusion

This study explored how Islamic agriculture finance can play a part in solving financial problems faced by agropreneurs in Malaysia by studying the case of Agro Bank's Agricultural Profit and Loss Sharing (aPLS). The findings reveal that small scale agropreneurs are still facing problems about seasonality in cash flows, low working capital, financing process and inadequate timely formal financial assistance. This reinforces the importance of financing schemes matching more closely the special income cycles and risk features of farming activities.

The results show that aPLS has features that participants felt may be relevant to financing for agriculture, especially the partnership and risk sharing. But it does have restrictions in terms of awareness, financial literacy, institutional outreach, documentation required and accessibility. It is thus no longer a question of whether there is a Shariah-compliant agricultural financing product or not, but to whether targeted beneficiaries can comprehend, access and make proper use of the product.

This is the study's main contribution. There is no proportional link between formal Shariah aligned product uptake and actual financial inclusion. In the light of the concept of Maqasid al-Shariah, the developmental effect of Islamic finance is determined by whether the principles of equity (adl), risk-sharing (shirkah) and the preservation of wealth (hifz al-mal) can create positive values for the intended beneficiaries. Likewise, Development Finance Theory indicates that gaps in financing needs between the financial institutions and the sectors need to be filled by specialised financial institutions, and Stakeholder Theory emphasizes the importance of engagement between financial institutions and agricultural communities. The results thus indicate that accessibility is an important variable that connects financial design in the Islamic finance with the larger Islamic finance development goals.

Policy and Practical Implications

The results have various policy implications for the authorities, Agro Bank and agricultural development institutions. Firstly, there is a need to engage more specifically Islamic agricultural financing into programmes for the rural development and food security and agro entrepreneurship. Financial structures that smooth out the seasonality of agricultural income, production uncertainty and the requirement for simplified formal financial records that are frequently a feature of small-scale farming should be acknowledged in policy support for agricultural financing.

Secondly, the risk-sharing mechanisms need to be complemented by suitable agricultural risk-mitigation measures. While aPLS has the potential to share financial risk in different ways than traditional financing, farmers still face the possibility of crop losses or natural disasters and fluctuations in the market. Provided guarantees or complementary risk protection mechanisms are compatible with the principles of Shariah, they can help to enhance the resilience of agropreneurs and financial institutions participating in various mechanisms.

Increasing Awareness and financial education and direct engagement with farming communities should be emphasised on Agro Bank. Information about aPLS should be reported with a focus on practical aspects, such as profit distribution, loss treatment, responsibilities of the participants, financing required, etc., using terminology understandable to agropreneurs, not mostly by financial terms. Outreach could be enhanced by collaboration with agricultural agencies, farmers' cooperatives or farmers networks.

Application and assessment procedure must be proportionate to the characteristics of smallholder operations and still retain the necessary rigor to be effective in risk management. Alternative forms of proof of viability in agriculture can be valuable, especially if farmers do not have extensive formal business documentation. Although digital financing channels can make it more efficient, community-level engagement should not be neglected, and, in the context of rural connectivity and digital capability that is still not equal, digital platforms should be used in addition to, and not as a substitute for, community engagement.

Limitations and Future Research

Results of the study should be interpreted in the context of the study. The qualitative case study was a relatively small and context-specific sample, and the main study was on the aPLS model of Agro Bank. Thus, the results can be analysed and contextualised but cannot be used as an example for all

agropreneurs in Malaysia or Islamic financial institutions. Furthermore, since the study is about the experience and perceptions of the participants, the long-term financial test of aPLS's performance is not addressed. Future studies may be conducted using a larger quantities and mixed method design in various states in Malaysia to explore awareness, accessibility and adoption of Islamic agricultural financing. The barriers found in this study could be specific to aPLS or be an indication of challenges in general, so comparative research with other financial institutions and sharia compliant agricultural financing mechanisms would help to determine.

Longitudinal studies would also be useful to determine financing results over several agricultural production cycles. This research could focus whether risk-sharing arrangements directly drive improvements in income security, productivity, and financial resilience and business continuity.

In conclusion, aPLS illustrates some of the possibilities of Islamic risk sharing finance in addressing the special features of agricultural production. But making that potential a reality is not left to the product alone that has been designed according to Shariah but also must be accompanied by marketing efforts. Islamic agriculture finance should be easily comprehensible, accessible and responsive to the institutional needs of its intended beneficiaries. Building the link between Islamic financial concepts and farmers' real-life financial experiences is crucial to the aPLS potential in achieving financial inclusion and sustainable agricultural development in Malaysia. This version retains policy recommendations that are backed up by the study – ensuring greater policy support, Shariah-compliant risk protection, financial literacy, outreach and improved accessibility and eliminates repeated explanations of the study findings. These recommendations are included in the original conclusion and implications but are dealt with a much greater length.

ACKNOWLEDGEMENTS

The authors would like to express their appreciation to all agropreneurs, farmers and Agro Bank officers who participated in this study and shared their experiences and perspectives. Their contributions were valuable in providing practical insights into the challenges and opportunities associated with Islamic agricultural finance in Malaysia.

REFERENCES

Abdullah, R., & Latiff, A. R. A. (2019). Financial exclusion among smallholder farmers in Malaysia: Causes and solutions. *Journal of Islamic Finance, 8*(2), 45–60.

Ahmad, S., & Baharudin, N. (2019). Financial literacy and Islamic finance awareness among rural farmers. *International Journal of Economics and Management, 13*(1), 89–104.

Ayub, M. (2007). *Understanding Islamic finance*. John Wiley & Sons.

Azmi, N., Yusof, R., & Mohd Noor, M. (2020). Financial exclusion among Malaysian paddy farmers. *International Journal of Academic Research in Business and Social Sciences, 10*(3), 71–87.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Chapra, M. U. (2008). *The Islamic vision of development in the light of Maqasid al-Shariah*. The International Institute of Islamic Thought.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approach* (4th ed.). SAGE Publications.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman Publishing.

Harun, R., Mahmood, S., & Shamsudin, M. (2015). Financing of agriculture: Agrobank in Malaysia. *Journal of Agribusiness Marketing, 8*, 16–31.

Ibrahim, P., Wahab, N. A., & Fikri, A. (2019). Islamic financing accessibility among rural entrepreneurs: Issues and challenges. *International Journal of Academic Research in Business and Social Sciences, 9*(3), 510–524.

Iqbal, Z., & Mirakhor, A. (2011). *An introduction to Islamic finance: Theory and practice*. Wiley Finance.

Islamic Financial Services Board. (2023). *Islamic financial services industry stability report 2023*. IFSB.

Ismail, A. G., & Amin, R. M. (2020). The role of Islamic finance in agricultural development: Lessons from Malaysian experience. *Journal of Islamic Monetary Economics and Finance, 6*(1), 125–144.

Ismail, N. A., & Shafiai, M. H. M. (2021). Integration of takaful in Islamic agricultural financing: Lessons from Indonesia. *Journal of Islamic Finance, 10*(1), 1–10.

Ministry of Agriculture and Food Industries. (2021). *National Agrofood Policy 2021–2030 (NAP 2.0)*. Ministry of Agriculture and Food Industries.

Obaidullah, M. (2015). *Islamic microfinance: The way forward*. Islamic Development Bank, Islamic Research and Training Institute