Risk Management in Sharia Financing: Credit Risk Analysis in Murabahah Financing in Islamic Banking in Surabaya

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ABSTRACT

Understanding of risks and risk concepts related to Sharia financing is widely known in the financial industry using profit-and-loss sharing (PLS). However, the risk in a murabahah financing contract is the counterparty's inability to complete its obligations within the agreed time period. Therefore, it is called credit risk or default risk. Credit risk occurs when customers fail to make payments on time after the bank completes the transfer of assets. Therefore, this has an impact on bank growth because the banking business is not well-positioned to cover these risks. Therefore, the bank may impose a penalty on the outstanding balance. The aim of this research is to highlight the determinants of credit risk and issues surrounding Islamic banks in Surabaya in terms of Murabahah financing and how to manage them using appropriate techniques. Finally, explore the concept of credit risk management, which might be able to solve the problems that arise. The research results found that credit risk can be managed well by increasing the use of a comprehensive business partner reference checklist regarding their character and past performance as well as their comprehensive database.

Keywords*: Credit risk, Murabahah financing, Sharia bank*

ABSTRAK

Pemahaman tentang risiko dan konsep risiko yang terjadi terkait dengan pembiayaan syariah sudah dikenal luas di industri keuangan dengan menggunakan profit-and-loss sharing (PLS). Namun adanya risiko dalam akad pembiayaan murabahah adalah kemampuan pihak lawan untuk tidak mampu menyelesaikan kewajibannya sesuai dengan jangka waktu yang telah disepakati. Oleh karena itu, ini disebut risiko kredit atau risiko gagal bayar. Risiko kredit terjadi ketika nasabah gagal melakukan pembayaran tepat waktu setelah bank melakukan penyerahan aset secara lengkap. Oleh karena itu, hal ini berdampak pada pertumbuhan bank karena bisnis perbankan tidak mempunyai posisi yang tepat untuk menutupi risiko tersebut. Oleh karena itu, bank dapat mengenakan denda atas saldo terutang. Tujuan penelitian ini untuk menyoroti faktor penentu risiko kredit dan isu-isu seputar bank syariah di Surabaya dalam hal pembiayaan Murabahah dan bagaimana mengelolanya dengan menggunakan teknik yang tepat. Terakhir, mengeksplorasi konsep manajemen risiko kredit yang mungkin dapat memecahkan permasalahan yang timbul. Hasil penelitian menemukan bahwa risiko kredit dapat dikelola dengan baik melalui peningkatan penggunaan checklist referensi mitra bisnis yang komprehensif mengenai karakter dan kinerja masa lalu mereka serta database komprehensif mereka.

Kata kunci*: risiko kredit, pembiayaan murabahah, Bank syariah*

INTRODUCTION

Islamic banking business practices are fundamentally based on the idea that the concept and understanding of it are underpinned by strong social responsibility and accountability. Murabahah is the most popular product, accounting for about 80% of Islamic bank transactions. This implies that the product is an important asset of Islamic

banks, and the quality of such assets affects financial performance, particularly bank profitability (Ahmed, 2010). Murabahah financing practices have evolved as an alternative to the conventional banking system as its financing achieves sustainability compared to other types of financing offered. Murabahah financing has been widely used for a long time and contributes maximally to the total Islamic business such as financing consumer goods, real estate, machinery and equipment. By implementing Murabahah financial transactions, Islamic banks also face credit risk. Credit risk in Murabahah Islamic banking products stems from the inability of a customer (buyer) to repay his debt when the goods are delivered or when he fails to complete the agreed installment payments with the bank (Boumediene, 2011). Another credit risk that arises in Murabahah financing is when the buyer refuses to accept delivery of the purchased product after the bank may have paid for the supply of the goods. This usually happens in non-binding Murabahah when the customer feels that the goods cannot meet his specifications (Iqbal & Mirakhor, 2011).

Credit risk is defined as the probability of loss triggered by debtor default (Hertrich, 2015). Credit risk is the result of three risk subgroups: exposure risk, recovery risk, and default risk (Bessis, 1999). Credit risk is one of the most significant factors affecting the banking system's health (Baral, 2005). This risk depends on asset quality, which depends on the bank's long-term claims, health and profitability of the bank's loan recipients (Dowd & Fong Shi, 1991). Credit risk is periodic and depends on structural characteristics. Therefore, by formulating certain policies to improve financial stability and efficiency, banking policymakers can reduce output variation (Da Silva & Divino, 2013). Ismal (2009) explains the occurrence of price risk when entrepreneurs take advantage to gain profits by pretending to default. Based on this statement, he assumes that moral hazard and triggering conditions as well as the possibility that they take the risk of pretending to default because the bank charges them additional fees or penalties. Other researchers argue that the effectiveness of risk management depends on how big the bank is and how well it identifies the key factors that affect credit risk in terms of total asset size, risk-weighted assets, and efficiency in management. This study shows that since hedging, some policy implications have not been possible in Islamic financing operations (Ahmad, 2004). The study also suggests reducing adverse selection and strengthening internal controls to enhance risk mitigation activities, particularly in the area of lending in Islamic banks.

There are several reasons for the high level of credit risk associated with Islamic banking transactions, including lending challenges characterized by the lack of securities that can serve as collateral for bank loans, the absence of good title to property, the lack of sound business plans in many cases, and the lack of proper financial documentation (Awosanya & Elena, 2019). Business financing that exhibits these characteristics has resulted in defaults in some Islamic banks. The provision of financing to risky sectors of the economy is another factor responsible for the high credit risk of Islamic banks. After Murabahah financing, risk sector financing is the second largest contributor to high credit risk. Therefore, it is clear that high credit risk is associated with Islamic banking. The main source of risk is Murabahah financing, which accounts for the largest portion of Islamic banking financing transactions. The effect of credit risk on the financial performance of Islamic banks is not expected to be in the same direction as conventional banks. This is mainly due to the nature of Islamic banking in general and the nature of Murabaha financing in particular (Awosanya & Elena, 2019).

Islamic banking has spread throughout the world and is widely accepted not only by Muslims but also by non-Muslims (Iqbal & Molyneux, 2005). Islamic banks perform the same essential functions as conventional banks, except that transactions follow Islamic rules and principles (Henry & Wilson, 2004). Islamic banking is a dynamic segment in the banking industry (Abou-Youssef et al., 2015). Based on the background description, the development of the times has made people fulfill their needs and desires by shopping. Through problems and previous research, this study aims to analyze credit risk in murabahah financing in Islamic banking in Surabaya.

LITERATURE REVIEW

Risk in Financial Sector

Various risks to banking institutions, especially Islamic banking, have an influence on the world's financial landscape. It should be noted that the main risk that most affect the survival of banking institutions is the credit risk due to the 1997 financial crisis. To date, many researchers have discussed credit risk in Islamic financial institutions and the most prominent study was conducted by Sarker (2009), who found that bad debts appear in practice in Islamic financial institutions that provide Islamic financial products. Further, it was found that there is no full understanding of the risks that exist in the current Islamic banking business, and they mentioned it in the views of the bankers. The determining factor of credit risk is the practice of Murabahah financing, which is exposed to counterparties included in the agreed contract (Khan & Ahmed, 2001). Kayed & Mohammed (2009) studied the existence of risk in Islamic finance mode in the banking products offered, and they argued about the different types of risk existing in Islamic banking operations.

A review of empirical studies reveals that while Asian studies report a positive impact of credit risk on financial performance and are consistent with the trade-off theory between profit and risk, African studies show an adverse impact in line with the poor management hypothesis. Given the position of Murabahah financing and the uniqueness of Islamic banking operations (such as asset-based financing), it is not unreasonable to think that the relationship between credit risk and financial performance is expected to be positive. Some African studies did not consider non-performing Murabahah transactions specifically in measuring credit risk. This may have affected their results and conclusions regarding the relationship between credit risk and financial performance. This study includes this important variable in its empirical investigation.

This research rests on the theory of poor management and the principle of trade-off between risk and returns embedded in portfolio theory. The poor management hypothesis states that low performance in terms of bank profitability and efficiency is due to poor management decisions reflected in poor credit management (Berger & DeYoung, 1997). According to this hypothesis, poor credit monitoring and poor borrower screening by bank management tend to increase the number of non-performing loans, leading to low profitability. When explaining the poor management theory, it is argued that poor performance is associated with an increase in non-performing loans or financing, and this may be related to poor management practices in the areas of proposal and collateral assessment, as well as monitoring of borrowers to ensure repayment as agreed (Podpiera & Weill, 2008). Therefore, the theory can be used to explain the effect of credit risk on bank performance in terms of profitability. This is because high-risk exposures that are not managed properly reflect poor managerial skills that can increase operating costs and reduce bank profitability. However, the study report of Asian Islamic banks contradicts the theoretical hypothesis of Berger & DeYoung (1997). The reason put forward is that the way Islamic banks work is very different from conventional banks, and the high credit risk exposure allows banks to add higher mark-ups, resulting in higher profitability. As a result, this study considers the risk-return trade-off theory of Markowitz (1968) & Sharpe (1964).

The application of trade-off theory can be extended to the relationship between credit risk and the financial performance of Islamic banks. This theory states that there is a trade-off between risk and return. That is, the higher the risk that an investor (lender) is willing to accept, subject to the availability of a higher expected rate of return. This principle is embedded in the traditional economic model of portfolio theory that higher returns are expected from riskier investments. The theory states that risky assets must promise high average returns for risk-averse investors to be motivated to take up such investments. Therefore, there is expected a positive relationship between risk and credit risk associated with Islamic banking products, especially Murabahah (Markowitz, 1968; Sharpe, 1964).

In such transactions, the theory explains the trade-off between the risk that Murabahah financing will end in default on the part of the customer (buyer) with consequent losses for the bank and the reward that the bank will charge and receive for the transaction in the form of profit (mark-up). The theory states that the risk-return trade-off analysis is a hallmark of all risky investment decisions, which must consider expected credit losses. Therefore, if the bank's exposure (default risk) in Murabahah financing is high, then the profit element, i.e. the return on investment to the bank, should be increased proportionally.

Credit risk

Credit risk generally means the risk of losses incurred on financial obligations and the likelihood of default. Hence, it is the level of potential loss (Golin, 2001). Traditionally, banks have emphasized relationships with their customers. However, nowadays, they need to be able to assume and predict to consider their customers' behaviour in terms of payment obligations. Therefore, in the presence of multiple borrowers, banks must apply sophisticated methodologies and model application techniques to improve their credit risk management system, especially in the case of Murabahah financing contracts. Credit risk has four indicators: 1) character, which is the borrower's moral standards, such as personality, education, lifestyle, family background and social relationships; 2) capacity, which is the company's profitability, sales and marketing potential, and business development ability; 3) capital, which is the debt repayment and investment ability of the borrower; 4) collateral, which is the most basic protection for creditors, such as securities, movable property and real estate (Lamminmaki & Guilding, 2004).

Murabahah Financing

Murabahah is one of the most popular sales financing used for the purchase of commodities and other products on credit. The parties involved in a Murabahah contract are the bank, the customer (buyer) and the seller. In this contract, which is known as a sale and purchase contract based on an agreed profit. As mentioned earlier, the Murabahah financing contract contains sales on a deferred payment basis and concerns the amount to be paid including the profit margin to be paid to the seller based on mutual agreement stated in the contract.

Therefore, there is an agreed profit between the parties involved in Murabahah financing on the maturity date. The risk in this financing contract occurs when the client (buyer) is unable to fulfill its obligations so that it tends to default in making payments to the bank. Therefore, banks face risks to manage them properly. Murabahah is the most popular product, accounting for about 80% of Islamic bank transactions. This implies that it is an important asset of Islamic banks, and the quality of such assets affects financial performance, particularly bank profitability (Ahmed, 2010). Another study examined the utility of Murabahah Commodities, and found that Murabahah is clearly the Islamic treasury funding product of choice, as it is flexible enough to facilitate many structures for financing, hedging, and currency exchange (Alsayyed, 2010). There are five steps in handling credit risk in Murabahah, namely the first is the identification of credit risk exposure, the second is the application of credit risk assessment models, credit risk assessment, the fourth is risk mitigation and the last is to validate the credit rating system (Akkizidis & Khandelwal, 2008).

METHODS

This research employed a qualitative approach in the form of a literature study with the aim of describing the problem under study. Qualitative research, which aimed to collect information in the field in the form of words and images through observation, interviews, and documentation, was conducted at Islamic Banks in Surabaya. The data sources used in this research were primary data obtained through observation and interview processes. Researchers conducted interviews with employees and customers of Islamic Banks, and the sample was drawn from ten individuals who were customers of

Islamic Banks in Surabaya. Additionally, this research utilized secondary data from observational studies obtained from various sources such as books, the internet, and research journals that had topics similar to those discussed by the researchers. The data analysis techniques employed by the researchers included data reduction, data exposure or display, and conclusion drawing. The method used for the data collection process in this study followed Moleong's qualitative research methodology, which involved a triangulation process, namely, interview, observation, and documentation.

Data collection in this study was carried out based on information obtained through both primary and secondary data. Primary data, the main source obtained from questionnaires, interviews, and observations reported by individuals to conduct research, was analyzed inductively. This involved starting from the field, going to the field, studying phenomena in the field, and using data analysis in the form of information collection through structured interviews with participants and documentation as support. Data analysis in qualitative research was conducted simultaneously with the data collection process, encompassing data collection, data reduction, data presentation, decision-making, and verification (Miles & Huberman, 1992). The researchers processed and analyzed the data using descriptive-qualitative analysis, aiming to provide a systematic, factual, and accurate description or depiction of the facts, characteristics, and relationships between the phenomena being investigated.

RESULTS

The findings on the provision for impairment of Murabahah financing indicate that with a high track record of non-performing Murabahah financing, the provision will also be made in a high amount. This high impairment allowance indicates high credit risk exposure, so the bank charges a higher profit to cover the risk.

Based on research of Saunders (1999), risk analysts must consider the understanding and implementation of the methodology used. There are three models to assess credit risk: qualitative methods, known as expert systems; quantitative models; and hybrid methods. Using the expert system method, banks assess the credibility of borrowers who agree to Islamic financial contracts based on qualitative methods. The method defines a system that is based on the judgment of experts involved in the credit approval process. The resulting expert system combines the analysis of the borrower's creditworthiness with the practical experience and observations of the experts applying the analysis. In addition, the expert system is driven by rules that incorporate the criteria used for expert judgment. The goal is to design and then combine expert rules by considering the client's behavioral experience. In addition, the rules should consider any information regarding the type of contract, market conditions, as well as other factors that affect the client's behavior.

By applying the Murabahah contract, bank 'experts' face the challenge of identifying the criteria to assess whether the financing buyer will fulfill the agreed payment obligations. To analyze credit exposure, there is a need to identify the relationship between counterparties, Islamic finance contracts and the collateral and guarantees used to cover a percentage of potential losses due to default. Individual parties are linked together and may be related to multiple contracts and different types of collateral and guarantees are used to cover the exposure of multiple contracts and counterparties in parallel. In Murabahah financing, the seller and the buyer are considered as parties to the contract, the counterparty may agree to the contract offer. Thus, the issue is that the collateral or guarantee may be linked to other collateral or guarantees that have different ratings. Any groups of similar contracts or relationships between them must also be identified. By providing Islamic financial products that are largely based on quantitative statistical-based models, there is a need to assess the credit risk incurred.

There are two types of information data that financial institutions can consider to model the credit risk they face, namely data that refers to the past and current behavior of counterparties such as lenders and partners, and data that defines the loss of the associated risk. On the other hand, there are problems that arise in this model: in the Murabahah financing model, legal issues arise in the collection of critical borrower-related

information. In addition, there are constraints in data cleansing and unification. By using only empirical models in credit risk assessment, either qualitative or quantitative-based models, banks may tend to obtain poor results in terms of future projections. Both models are useful because they can utilize advanced fuzzy logic systems that use qualitative empirical systems expressed as linguistic rules and results from quantitative analysis.

Murabahah contracts carry additional credit risk through guarantees. This risk is mitigated by using collateral or guarantees provided by the level counterparty. There are certain rules in the application of guarantees, namely whether or not the use of certain collateral is allowed. Then, the amount of collateral is used to reduce the total exposure. Finally, there is a need for coverage allocation as this is a way to reduce the risk associated with various claims. Credit risk can be reduced by improving reference lists regarding past performance and the character of customers and maintaining a comprehensive database.

Credit risk analysis in murabaha financing occurs when banks experience a shortage of cash and may be unable to meet financial obligations and when borrowers repeatedly fail to pay their debts that are due within the agreed payment time. In another researcher's view on credit risk they assume that bankers perceive higher credit risk in Islamic financing products in terms of profit-sharing mode (Khan & Ahmed, 2001). Elgari (2003) outlines the existence of credit risk in Islamic banking and finance. He claims that the direct financing offered by banks does not depend on the existence of credit risk. In addition, problems arise in terms of acceptances and guarantees due to the inability of the creators of financial instruments owed by banks to fulfill their obligations, and this is faced by most of the Islamic banking financing capital they offer, especially in murabaha financing. This causes delays in payment.

CONCLUSION

The risk determinants of Murabahah financing in Islamic banks contain several risks that must be addressed and reduced by the banking industry. These risks include price, commodity, market, and credit risks. Therefore, the focus of this research paper is to examine the credit risk problems that exist in Islamic banks in terms of Murabahah financing and how to manage them using appropriate techniques, thus exploring the concept of credit risk management that might solve the problems that arise. This research provides an overview of credit risk identification analysis by identifying the influence of the relationship between counterparties, Murabahah financing contracts and guarantees and the collateral used to mitigate potential losses in the event of default. This research also discusses how Islamic banking mitigates or reduces credit risk by using collateral or guarantees provided by counterparties. It was found that credit risk can be minimized by improving reference checklists regarding the past performance of customers and their character and maintaining a comprehensive database. The credit rating system should be validated at predetermined intervals as well as whenever there are new or changed parameters due to market conditions. In addition, the paper reveals that there is a need to implement and practice Shariah guidelines. Their views and adherence to procedures based on Islamic principles will be a good instrument in managing risks that occur in the Islamic banking industry, especially in the case of Islamic financial institutions in Surabaya. It is hoped that there will be further research to discuss the problems arising on credit risk in the dual banking system in Surabaya and how to manage it appropriately.

REFERENCES

[1] Abou-youssef, M. M. H., Kortam, W., Abou-Aish, E., & El-Bassiouny, N. (2015). Effects of Religiosity on Consumer Attitudes Toward Islamic Banking in Egypt. *International Journal of Bank Marketing*, 33(6), 786-807.

[2] Ahmad, N. H. (2004). *Key Factors Influencing Credit Risk Management a Malaysian Case*. Faculty of Banking and Finance, Universiti Utara Malaysia (UUM).

[3] Ahmed, A. M. E. T. (2010). Islamic Banking: How to Manage Risk and Improve Profitability. 25(9), 7-48.

[4] Akkizidis, I., & Khandelwal, S. K. (2008). Financial Risk Management for Islamic Banking and Finance. *Palgrave Macmillan Finance and Capital Markets Series*, 8(6), 318-323.

[5] Alsayyed, N. (2010). *The Uses and Misuses of Commodity Murabaha: Islamic Economic Perspective*. Researcher Islamic Economics, The Global University In Islamic Finance (INCEIF), Malaysia.

[6] Awosanya, Y., & Elena, P. (2019). Credit Risk and the Financial Performance of Islamic Banks in Africa: A Critical Literature Review. *Sarajevo Islamic Finance Conferenc*, 20(6), 1-19.

[7] Baral, K. J. (2005). Health Check Up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal. *The Journal of Nepalese Business Studies*, 1(2), 231-241.

[8] Berger, A. N., & DeYoung, R (1997). Problem loans and cost efficiency in commercial banks. *Journal of Banking and Finance*, 21(6), 849-870.

[9] Bessis, J. (1999). Risk Management in Banking: Bank Portfolio Management under Credit Market Imperfections. *Journal of Mathematical Finance*, 9(3), 218-232.

[10] Boumediene, A. (2011). Is Credit Risk Really Higher in Islamic Banks. *Journal of Credit Risk*, 7(1), 97-129.

[11] Da Silva, M. S., & Divino, J. A. (2013). The Role of Banking Regulation in an Economy Under Credit Risk and Liquidity Shock. *North American Journal of Economics and Finance*, 26(1), 266-281.

[12] Dowd, N. P., & Fong, C. S. (1991). Family of Crack-Tip Fields Characterized by a Triaxiality Parameter. Structure of Field. *Journal of the Mechanics and Physics of Solids*, 39(8), 989- 1015.

[13] Elgari, M. A. (2003). Credit Risk in Islamic Banking and Finance. *Journal of Islamic Economic*, 10(3), 2.

[14] Golin, J. (2001). Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors. *Journal of Finance and Economics*, 4(3), 74-87.

[15] Henry, C. M., & Wilson, R. (2004). *The Politics of Islamic Finance. Edinburgh*: Edinburgh University Press.

[16] Hertrich, M. (2015). Does Credit Risk Impact Liquidity Risk? Evidence from Credit Default Swap Markets. *International Journal of Applied Economics*, 12(2), 1-46.

[17] Iqbal, M., & Molyneux, P. (2005). *Thirty Years of Islamic Banking: History, Performance and Prospects*. Palgrave Macmillan, New York.

[18] Iqbal, Z., & Mirakhor, A. (2011). *An Introduction to Islamic Finance: Theory and Practice*. John Wiley Sons Ltd, Singapore.

[19] Ismal, R. (2009). Assessing Moral Hazard Problem in Murabahah Financing. *Journal of Islamic Economics Banking and Finance*, 5(2), 101-112.

[20] Kayed, R. N., & Mohammed, K. M. (2009). Unique Risks of Islamic Modes of Finance: Systemic, Credit and Market Risks. *Journal of Islamic Economics and Finance, 5*(3), 9-24.

[21] Khan, T., & Ahmed, H. (2001). Risk Management, An Analysis Of Issues In Islamic Financial Industry. *Islamic Development Bank- Islamic Research And Training Institute, Occasional Paper*, 5.

[22] Lamminmaki, D., & Guilding, C. (2004). A study of Australian trade credit management outsourcing practices. *Australian Accounting Review*, 14(1), 53-62.

[23] Markowitz, H. (1968). Portfolio selection. *The Journal of Finance*, 7(1), 77-91.

[24] Miles, M. B., & Huberman, A. M. (1992). Analisis Data Kualitatif: Buku Sumber Tentang MetodeMetode Baru. Jakarta: Universitas Indonesia (UI-Press)

[25] Podpiera, J., & Weill, L. (2008). Bad luck or bad management? Emerging banking market experience. *Journal of Financial Stability*, 4(2), 135-148.

[26] Sarker, M. A. A. (2009). Islamic Banking in Bangladesh: Performance, problems and Prospects. *International Journal of Islamic Financial Services*, 1-3.

[27] Saunders, A. (1999). Credit Risk Measurement: Environmental Credit Risk Management in Banks and Financial Service Institutions. *Business Strategy and the Environment*, 21(4), 248-263.

[28] Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.

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