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https://doi.org/10.12928/ijiefb.v3i2.1943

# Risk Analysis of Islamic Rural Bank Financing Contracts: Evidence of Indonesia

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**Journal of Islamic Economics, Finance, and Banking**

Vol. 3, No. 1, Juni 2020, pp. 1-11, ISSN p:2622-4755 e:2622-4798

## Abstract

**Introduction**: Non-Performing Financing (NPF) is the main and biggest risk for Islamic banks, therefore the ability of Islamic banks to identify, measure, monitor and control financing and capital risk is very important. However, NPF is strongly influenced by internal and external factors of Islamic banks and the financing contracts (contracts) used.

**Purpose/Objective Study:** This study analyzes the level of financing risk based on the contract.

**Design/Methodology/Approach:** The population and sample are all Sharia Rural Banks in Indonesia with 167 secondary data in the form of publication of the 2011-2018 financial statements. Data analysis using quantitative descriptive method with survey approach. The data analyzed are NPF data based on an eight year financing contract.

**Findings:** The results of this study also show that low risk contracts are murabaha contracts, while contracts with medium risk are in mudarabah, musharaka, multi-service, qard and istisna and contracts with the highest risk are salam and ijarah contracts.

**Paper Type:** Research Article

**Keywords:** Risk Analysis, Islamic Rural Bank, Financing Contracts, Indonesia

## Introduction

The massive growth of the sharia financial industry in Indonesia has led to the birth of a commitment to manage risk well. Risk management is important not only because financial business generally contains a high level of risk but also because the sharia aspect is at stake ideological (Rustam, 2013).

The importance of risk management in Islamic Banks is also driven by the following reasons. *First*, the business activities of Islamic Banks

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contain a high level of risk due to the business of Islamic Banks as a mediator between *sahibul mal* and *mudarib*. *Second*, the characteristics of Islamic Banking products and services require the identification, monitoring, measurement and risk control functions. *Third*, every Islamic Bank's activities in order to mitigate risk must also pay attention to sharia aspects. *Fourth*, risk management of each Islamic Bank's activities must be carried out in an integrated and comprehensive manner (Khan dan Ahmed, 2013).

What is meant by risk in the Islamic Banking industry is the potential loss due to certain events, while the risk of loss is a loss that occurs as a direct or indirect consequence of the risk event (Preda, 2015). The loss can be in the form of financial or non-financial (PBI, 2011).

Therefore, the implementation of risk management in Islamic Banks is adjusted to the size and complexity of the business and capability of Islamic Banks (Rustam, 2013). The regulation regarding risk management in Islamic Banks is stipulated in Indonesian Bank regulation No. 13/23/PBI/2011. The PBI regulates the application of risk management for Islamic Banks which includes; active supervision from the board of commissioners, directors and the Sharia Supervisory Board, the adequacy of policies, procedures and application of risk management limits, the adequacy of the process of identification, measurement, monitoring and control of risk as well as risk management information systems and a comprehensive internal control system.

One very important element of risk management in Islamic Banks is financing risk management (Khan dan Bhatti, 2008). Financing risk is the risk due to the failure of customers to meet their obligations in accordance with the agreed contract or what is referred to by the term non-performing financing (NPF). In some Islamic Banks, financing risk is the biggest source of risk (Sadique, et al., 2011). In fact, financing risk is a major risk, hence the ability of Islamic Banks to identify, measure, monitor and control financing risks and capital provision is very important (Enrismen, 2015).

The occurrence of risk is also influenced by the financing contract (Preda, 2015). Profit sharing as the main product of Islamic Banks has a higher level of risk compared to other contract, and that affects the low *mudarabah* financing portfolio. This research will analyze in more detail the level of risk that occurs in each financing contract in Islamic Banks in Indonesia in particular Sharia Rural Banks (*BPR Syariah*/BPRS).

## Theoretical Basis

Risk is an adverse event (Hanafi, 2012). Specifically, risk is the potential loss due to certain events and the risk of loss is a loss that occurs as a direct or indirect consequence of the risk event. These losses can be financial or non-financial (PBI, 2011).

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pp. 1-11, ISSN p:2622-4755
e:2622-4798

Risk can also be referred to as the possibility of the results obtained that deviate from the expected. Standard deviation is one of the statistical tools commonly used to measure the degree of deviation, therefore the standard deviation can be used to measure the level of risk. Another tool that can be used to measure risk is probability. Probability can see the level of opportunity for something to happen in the future and it can also be used to measure the probability of the level of risk that will occur. Khan and Ahmed (2008), define it with, "risk can be defined as the variability or volatility of unexpected outcomes".

Failure to anticipate risks can affect the system or is known as systemic risk. Systemic risk is the risk that a bank's failure not only causes losses that are directly faced by employees and customers but can also destroy the economy on a large scale. The occurrence of systemic risk can be triggered by factors of solvency, liquidity and national and international economic turmoil (Khan and Ahmed, 2008 and Rustam, 2013).

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## Islamic Bank Risk

Banks are financial institutions that carry a higher level of risk compared to other business sectors. Therefore the banking industry is a business sector that is full of various regulations (hight regulated and supervised industry). This is influenced by the nature of the banking business that manages public funds and distribute them back to the public. Fund owners expect high returns while fund users want a low rate of yield. This trade off condition requires banks including sharia banks to be able to manage risk well. Failure to manage risk in banks can have a broader impact because in general the economic crisis starts from the banking crisis (Khan and Ahmed, 2008).

Risk management for Sharia Commercial Banks and Sharia Business Units, there are ten risks faced by Islamic Banks, namely credit risk, market risk, liquidity risk, operational risk, legal risk, reputation risk, strategic risk, compliance risk, yield risk and investment risk. All types of risks are almost the same faced by both conventional and Islamic Banks (Edwin, dan Ranti, 2007). But specifically the yield risk and investment risk is only faced by Islamic Banks (PBI, 2011).

**Table 1.** Types of Risks Faced by Islamic Banks

| No. | Risk Type | Description |
|---|---|---|
| 1. | Risk of Financing (Credit) | Represents risks arising from the failure of customers or other parties in fulfilling obligations to banks in accordance with agreed contract |
| 2. | Market Risk | It is a risk in the balance sheet and administrative account position due to changes in market prices, including changes in assets that can be traded or leased. |
| 3. | Liquidity Risk | This is a risk that occurs due to the inability of banks to meet obligations due from cash flow funding sources and or high quality liquid assets that can be pledged without disrupting the activities and financial condition of the bank. |
| 4. | Operational Risk | Represents risk of loss caused by inadequate internal processes, internal process failures, human errors, system failures and/or external events that affect bank operations. |
| 5. | Legal Risk | Risks arising from the weakness of the juridical aspects. This risk also arises due to the absence of supporting legislation or weaknesses of the contract such as non-fulfillment of contract conditions or imperfect collateral binding. |
| 6. | Reputation Risk | Risks arising as a result of the decline in the confidence of stakeholders stemming from negative perceptions of banks. |
| 7. | Strategic Risk | Risks arising from inaccuracies in strategic decision making and failure to anticipate changes in the business environment. |
| 8. | Compliance Risk | Risks arising from banks not fulfilling and/or not implementing the laws and regulations as well as applicable regulations and sharia principles. |

| | | |
|---|---|---|
| 9. | Yield Risk | Risks arising from changes in the rate of return paid by banks to customers due to changes in returns received by banks from financing and can affect the behavior of customers who own funds. |
| 10. | Investment Risk | The risk caused by the bank taking part in the loss of the customer›s business financed with profit sharing principle. |

Source: PBI (2011)



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e:2622-4798

**Risk of Financing**

Financing risk is the risk arising from the failure of customers or other parties to meet obligations to banks in accordance with agreed contract (PBI, 2011). Financing risks are the main risk groups faced by banks, including Islamic Banking (Ismal, 2010). What is meant by customer failure in this case includes intentional failure triggered by character factors and failure due to bankrupt business conditions, so that the customer is unable to return the financing in accordance with mutual contract (Preda, 2015).

Included in the category of financing risk is the concentration of financing only in certain industries or the accumulation of financing for certain people or groups, certain regions or certain geographical areas. The more concentrated the financing, the higher the potential for risks (Enrisman, 2015).

The failure of Islamic banks in managing financing is influenced by qualitative and quantitative factors (Hassan, 2009). The influential qualitative factors include: decreased business and industry cycles, high dependence on raw materials from suppliers, debtor intervention to accountants in making financial statements, shareholders' reputation is not so good and there is no desire for going concern in their business and debtors do not have expertise in their fields. While the quantitative factors that influence include: over-optimistic cash flow, side streaming, less competitive selling price, too expansive, price mark up, low sales realization and group company debt are not openly presented (Rustam, 2013).

In sharia perspective, financing risk can also be influenced by the financing contract used (Preda, 2015). For *murabahah* financing contract, the cause of the bad debt is due to bank errors in assessing prospective debtors and lack of monitoring, while for mudarabah contract, bad debt are caused by incomplete information, debtors' lack of transparency, difficulty in seeing the debtor's business and limited information about the debtor's business productivity and the existing of moral hazard (Xiang et al., 2012 and Zain, 2017).

**Table 2. Financing Contract and Risk**

| No. | Financing Contract | Risks |
|---|---|---|
| 1. | Murabahah | 1. Financing in the long run raises the risk of uncompetitive margins to third party funds.<br>2. If the goods belong to the bank directly, there is a risk of inefficiency and damage to the goods because they must be stored or showroom.<br>3. When using wakalah, there is a risk of non-fulfillment of the purchase of goods according to the contract. |
| 2. | Ijarah | 1. If the goods belong to the bank, then the risk is that assets are not productive when no one is renting.<br>2. If the goods do not belong to the bank, the risk is damage to the goods due to improper use.<br>3. If the service is leased, the risk is the underperformance of the service provider. |
| 3. | Salam and istishna | Risks that can arise are failure to deliver goods and decrease in value of goods when delivered. |
| 4. | Mudarabah and Musyarakah | Reduction or even non-payment for results due to moral hazard, side streaming and asymmetric information. |

Source: Karim (2004).

In addition to various factors causing the risk of financing mentioned above, bad financing can also be caused by moral hazard factors, both from internal and external factors (Arifin, 2002 and Mihajat and Alim, 2018). From internal factors, moral hazard is caused by bank officers making mistakes in the assessment of prospective debtors, while from external factors the occurrence of side streaming and the limited information provided to bank officers in calculating the feasibility study (Zain and Ali, 2017 and Tesemme at al, 2017). Customers have a tendency to hide various information or asymmetric information related to business conditions. (Edwin and Ranti, 2007). Therefore, credit or financing failures can be caused by internal and external factors (Mulyono, 2001).

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Islamic Economics,
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pp. 1-11, ISSN p:2622-4755
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Another cause of problematic financing is the excess liquidity experienced by Islamic Banks. Due to excess liquidity, it can ultimately affect the ease of management in distributing funds. As a result, the assessment of the feasibility of financing has become less accurate. Risks will be increasingly apparent when an economic crisis occurs, because the crisis will have an impact on the debtor's ability to pay back his obligations. Finally, when the bank will execute financing collateral is experiencing difficulties because the collateral is not proportional to its obligations (Antonio, 2001 and Arifin, 2002).

### Problematic Financing or Non-Performing Financing (NPF)

Problematic financing is the impact of the occurrence of financing risks which also have an impact on reputation risk (Khan, dan Habib, 2001). Financing risk is a major factor that can lead to other risks (Enrisman, 2015). Therefore Islamic Banks must be able to control the financing risks. An important indicator of financing risk is measured by the level of financing collectability or the level of problematic financing (Khan, dan Habib, 2001). The level of collectability in financing is classified into four namely; smooth, substandard, doubtful and bad debt (Arifin, 2002).

The level of collectability of financing in Islamic Banks is distinguished between profit sharing contract with buying and selling (Rustam, 2013). In contrast to conventional banks that do not distinguish the calculation of the level of problematic loans, Islamic Banks are required to do different calculations, especially for receivable and financing contract (Preda, 2015).

## Research Methods

### 1. Population and Sample

The population in the study included all Islamic Rural Bank (*BPR Syariah*) in Indonesia as much as 167, so the unit of analysis as much as the population. The data analyzed is the BPRS financial statements that have been published by the Financial Services Authority (*Otoritas Jasa Keuangan* / OJK) during 2011-2018.

### 2. Data Analysis Method

Analysis of the data in this study using quantitative descriptive analysis approach with a survey approach to describe the data Non-Performing Financing (NPF) in accordance with the actual incidence during 2011-2018. First, data is described and compared with other financing contract. the average level of data will be tested and then classified according to the NPF level.

## Results and Discussion

Based on data on the number of financing at BPRS in Indonesia during the study period, it was shown that the financing with the *salam* contract had the lowest outstanding amount, which was only 0.0096%

(less than 1%), followed by *ijarah* of 0.27%. While financing with *murabahah* contract has the highest outstanding, reaching 76.94% (table 3). With these data it can be concluded that the BPRS financing is still dominated by contract with a low level of risk because the sale and purchase contract contains lower risk compared to other contract.

**Table 3.** BPRS Financing Based on Contract (in thousands of rupiah)

| Contract | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Amount | Average | % |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Murabah*** | 1,955,532 | 2,554,774 | 3,325,460 | 3,406,902 | 4,272,107 | 4,870,453 | 5,642,734 | 6,167,210 | 32,195,171 | 4,024,396 | 76.94% |
| ***Salam*** | 20 | 197 | - | 20 | 15 | 14 | - | - | 266 | 33 | 0.00% |
| ***Istisna*** | 23,673 | 20,780 | 17,614 | 12,881 | 10,631 | 4,657 | 21,426 | 35,394 | 147,055 | 18,382 | 0.35% |
| ***Qard*** | 85,271 | 68,792 | 94,100 | 96,453 | 116,669 | 137,856 | 180,735 | 140,221 | 920,096 | 115,012 | 2.20% |
| ***Multijasa*** | 136,570 | 91,975 | 245,184 | 228,153 | 312,872 | 515,041 | 684,753 | 840,300 | 3,054,849 | 381,856 | 7.30% |
| ***Mudarabah*** | 70,124 | 73,026 | 113,763 | 123,449 | 186,724 | 154,779 | 121,505 | 168,621 | 1,011,991 | 126,499 | 2.42% |
| ***Musyarakah*** | 224,755 | 307,330 | 417,438 | 543,576 | 615,257 | 728,467 | 750,660 | 813,455 | 4,400,938 | 550,117 | 10.52% |
| ***Ijarah*** | 10,053 | 8,258 | 8,201 | 3,759 | 32,438 | 7,127 | 8,582 | 33,130 | 111,549 | 13,944 | 0.27% |
| **Amount** | **2,505,997** | **3,125,133** | **4,221,760** | **4,415,193** | **5,546,712** | **6,418,395** | **7,410,395** | **8,198,331** | **41,841,917** | **5,230,240** | **100.00%** |

Source: OJK, 2019

The profit sharing system with *mudarabah* and *musyarakah* contract has a very different outstanding, i.e. *mudarabah* only at 2.42% and *musyarakah* at 10.52% (Table 4). The *mudarabah* contract was not developed much by the BPRS because it was believed to have a greater risk. From these data it can be concluded that BPRS management tends to avoid profit sharing contract, due to risk factors.

**Table 4.** Problematic Funding Based on Contract

| Contract | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| ***Murabahah*** | 5.43% | 6.23% | 6.50% | 8.79% | 8.83% | 7.90% | 7.81% | 7.14% | 58.64% | 7.33% |
| ***Salam*** | 0.00% | 16.31% | 0.00% | 100.00% | 100.00% | 100.00% | 0.00% | 0.00% | 316.31% | 39.54% |
| ***Istisna*** | 5.38% | 13.10% | 14.57% | 9.39% | 11.29% | 0.40% | 2.06% | 1.25% | 57.44% | 7.18% |
| ***Qard*** | 5.46% | 5.73% | 2.43% | 2.74% | 3.33% | 2.41% | 3.63% | 4.67% | 30.41% | 3.80% |
| ***Multijasa*** | 2.55% | 5.65% | 2.66% | 5.84% | 8.15% | 3.83% | 7.22% | 5.89% | 41.79% | 5.22% |
| ***Mudarabah*** | 11.02% | 12.35% | 9.08% | 10.87% | 10.98% | 13.14% | 17.81% | 12.83% | 98.08% | 12.26% |
| ***Musyarakah*** | 8.48% | 6.57% | 5.72% | 6.43% | 8.19% | 18.65% | 24.38% | 22.50% | 100.93% | 12.62% |
| ***Ijaroh*** | 21.64% | 26.23% | 28.03% | 7.24% | 25.49% | 3.91% | 2.85% | 0.74% | 116.13% | 14.52% |

Source: OJK, (2019)

*Second*, rent (*ijarah*) and profit sharing (*mudarabah* and *musyarakah*) have medium risk i.e. *ijarah* of 14.52%, *mudarabah* 12.26% and *musyarakah* 12.62%. Contract that include risk categories are also present in *multijasa*, *qard* and *isitisna*. If related to the outstanding amount, it is clear that the low outstanding *ijarah* financing is caused by the high risk/NPF. *Third*, the *murabahah* contract with the highest outstanding at 76.94% has the lowest risk, at 7.33%.

If we seen from the problematic financing data or NPF, during the study period, the following conclusions can be drawn, *first*, the *salam* contract has the highest NPF level even far above the minimum OJK provision, which is 39.54%. With this data, it means that the contract has a very high level of risk. The relationship between risk and the amount of financing can be seen very clearly, where the high risk causes low amount of financing.

The findings in this study provide important clues for sharia banks in developing financing. Development of financing products should pay attention to the contract used because each contract has a different level of risk. This research still needs a deeper discussion and study regarding various factors that influence the high level of risk inherent in the contract.

*Salam* contract, with a very low outstanding has a very high level of risk. This fact becomes important for further investigation, because in general, *salam* financing is used for the agricultural sector, while the majority of Indonesians work in that sector. If the agricultural sector is not touched by sharia bank financing, it means that the mission of sharia banks is not able to directly reach the needs of the farming community.

## Conclusion

Based on the analysis of NPF level data based on the contract, comparing it for eight years and discussion of various existing literature, it can be concluded that the risk of financing in the form of non-performing financing can be influenced by the contract used.

Based on the level of risk, the contract with a low risk category is found in the *murabahah* contract. Although this contract has the largest outstanding, the NPF level is actually the lowest compared to other contract. Whereas risky contract are present in *mudarabah*, *musyarakah*, *istisna*, *qard* and *multijasa*. The highest risk of financing based on contract is in the *ijarah* and *salam*. *Salam* contract has an extreme level of risk, because the level of NPF is very large and beyond the limits of prevalence.

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**Journal of Islamic Economics, Finance, and Banking**

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Vol. 3, No. 1, Juni 2020,
pp. 1-11, ISSN p:2622-4755
e:2622-4798

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