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AGENCY PROBLEMS IN MUË •*R*ABAH FINANCING: THE CASE OF SHARIA (RURAL) BANKS, INDONESIA

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ABSTRACT

This study examines the agency problems that arise in **muèŒrabah** financing in Indonesian Rural *Sharia* Banks. The study focus on project attributes, especially those projects that might consider **muèŒrabah** financing, and the attributes of **muèŒrib** who received financing. The research is explorative in nature, combining both qualitative and quantitative approaches. The study found that six attributes were considered relevent from the **muèŒrabah** projects point of view. These include: the prospect of the project, availability of collateral, healthiness of the project, the project's financial statements, clarity of contract conditions, and conformity of time period. With regard to **muèŒrib** attributes, five characteristics were considered important. They include: business capacity, collateral, **muèŒrib's** reputation and family background, and their business commitments. Further quantitative analysis has also been conducted to examine those attributes.

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1. INTRODUCTION

The formation of *Sharia* banks in Indonesia started in 1991 (Islamic or **Shar¥ªah** banks are referred to as *Sharia* banks by the Central Bank of Indonesia). Bank Mualamat Indonesia (BMI) became the first Islamic bank in 1992, after the Indonesian Parliament passed the Banking Act No. 7, 1992 (following the promulgation of Government Regulation No. 72, 1992). The growth of the industry became more progressive after the Banking Act No. 7 was amended by the Banking Act No.10, 1998. According to Banking Act No.10, 1998, the Indonesian banking industry is classified into two levels: the General or *Sharia* banks and the Rural *Sharia* banks. Bank Indonesia (Central Bank of Indonesia) statistics show that in July 2006 there were three full fledged *Sharia* banks, 10 *Sharia* banking units[1] and 94 Rural *Sharia* banks. These do not include more than 3000 **Bayt al-MŒl wa al-Tamw¥l** (BMT), or micro-finance industry establishments, that were operating under the Cooperative Act (BMT's legally function like *Sharia* banks, however they cannot be classified as such).

Currently, the market share of the industry is small, however, growth has been remarkable. Table 1 tabulates market share development in comparison to the banking industry as a whole in July 2006. Forecasts of the industry's future have also been bright. For example, Karim Business Consulting (KBC) forecasted that the Islamic bank market share could potentially reach 6.67 percent of the banking industry by

TABLE 1
Islamic Banks' Share in Indonesia (July 2006)

	Islamic Banks		
	Nominal	Share	Total Banks
Total Assets	22.86	1.51%	1517.06
Deposit Fund	16.51	1.42%	1161.04
Credit / Financing Extended	18.53	2.58%	716.79
LDR / FDR	112.23%		61.74%
NPL	4.71%		8.10%

Notes: LDR: Loan (credit) extended to deposit ratio.
FDR: Financing extended to deposit ratio.
Source: Bank Indonesia (August 2006) Islamic Banking Statistic.

2008. Alternately, the Central Bank of Republic Indonesia predicted the share to be 5.18 percent. Despite good growth and increasing market share, the overall contribution of Islamic banks in Indonesia is still below industry expectations. These expectations are based, inter alia, on the fact that Indonesia is a country with the biggest Muslim population. With a total population of over 238 million, and over 80 percent are Muslim. Therefore, market share of the Islamic banking sector should ideally be greater than what has been achieved to date.

The contribution of Islamic banks in Indonesia towards national economic growth remains dependent to a large extent on how they are able to operate effectively, either in offering attractive products or services, or in playing a constructive social-mediation role. As elsewhere, this is a balance between the availability of surplus funds (capital), and the need for investment funds (various capital requirements). Most *Sharia* banks in Indonesia have offered the following products:

(1) Funding products which include:
- (a) *Wad¥ªah* Current Account
- (b) **MuèŒrabah** Saving Account
- (c) **MuèŒrabah** Investment Account

(2) Financing products, including:
- (a) **MurŒbaúah**
- (b) *Bayª al-Salam*
- (c) *Bayª al-Isti§nŒ'*
- (d) *IjŒrah*
- (e) **MuèŒrabah**
- **(f) MushŒrakah**

(3) Supporting products which cover:
- (a) **Al-WakŒlah**
- (b) **Al-KafŒlah**
- (c) **Al-HiwŒlah**
- (d) **Al-Qarè al-úasan**

Islamic economics emphasizes the importance of the real sector rather than the financial (Adnan, 2003), or in the words of Ahmad (2000), "moving from a debt-based to an equity-based or stake-taking economy." Therefore, the Islamic banking industry should have focused

TABLE 2
Composition of Financing for Islamic Banks (Million IDRs)

Items of Financing		Sep-05	Dec-05	Mar-06	Jun-06	Jul-06	Aug-06
Musharœkah Financing	Amount	1,830,176	1,898,389	2,005,520	2,099,122	2,206,122	2,298,641
	Share	12.41%	12.46%	12.54%	11.55%	11.91%	12.07%
Muèœrabah Financing	Amount	3,004,030	3,123,759	3,208,905	3,560,848	3,636,451	3,697,849
	Share	20.36%	20.51%	20.05%	19.61%	19.63%	19.42%
Murœbaúah Receivable	Amount	9,310,948	9,487,318	9,981,242	11,778,333	11,843,364	12,118,566
	Share	63.11%	62.29%	62.39%	64.85%	63.92%	63.66%
Salam Receivable	Amount	150	-	-	-	-	-
	Share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Istisnœ' Receivable	Amount	297,086	281,676	289,179	293,359	301,079	303,335
	Share	2.01%	1.85%	1.81%	1.63%	1.63%	1.59%
Others	Amount	310,909	440,800	512,102	430,464	540,250	619,201
	Share	2.11%	2.89%	3.20%	2.37%	2.92%	3.25%
Total		14,753,299	15,231,942	15,996,948	18,162,126	18,527,228	19,037,592

their operations on products such as **muèŒrabah** and **musharŒkah** since these two products are closer to the equity-based economy. However, the latest developments in Islamic banking does not exactly show this trend (Karim, 2001; Warde, 1999). Mujiyanto (2004) reported that in Indonesia, **muèŒrabah** contributes only 14.33 percent, while **musharŒkah** even less at 2.86 percent, of total Islamic financing.

Table 2 tabulates the current development of financing modes in Indonesia. While it shows a promising change, the total composition of product portfolio has yet to yield the outcomes as expected by Ahmad (2000) and Adnan (2003). The figures presented indicate the significant differences between theory, expectations and reality. It is undeniable that a number of factors are in play. Two different perspectives can therefore be applied. One is internal Islamic banking factors and the other is external factors. A full understanding of the products offered, like **muèŒrabah**, is one such important internal factor. The readiness to deal with risk is another. Most Islamic bank managers are accustomed to the risk-averse, rather than the risk-taking approach. This implies that **muèŒrabah** has been perceived as a risky product. The risk is in fact related to agency issues associated with external factors, where the honesty, transparency and trustworthiness of the consumers cannot be guaranteed.

The **muèŒrabah** contract is an agreement between two or more parties, where profit and loss are shared between the capital owner or the principal, and the agent or bank's consumer. It is important therefore to understand that the contract functions effectively when both parties are ready and willing to be transparent. This includes disclosure of all aspects of the businesses they have agreed upon. Such a contract is strongly associated with moral hazard particularly in the context of asymmetric information that is likely to be unavoidable in the contract of **muèŒrabah**.

2. RESEARCH QUESTIONS, OBJECTIVES AND CONTRIBUTION

There are two level of research questions that need to be answered. These two levels also make up the objectives of this study. The first is the attributes of the project and the **muèŒrib** that are considered by the Islamic bank. At this level, the aims of the study are to answer the following questions:

1. What are the attributes of the projects that are considered by the **§Œhib al-mŒl** (Islamic banks) in financing **muèŒrabah** projects.
2. What are the attributes of the **muèŒrib** that are considered by the **§Œhib al-mŒl** in financing **muèŒrabah** projects*?*

In the second level, the study aims at examining the model designed to ensure that those attributes (from the first level questions) can effectively reduce agency problems. The questions raised are as follows:

1. How far can the screening mechanisms of project attributes reduce agency problems in **muèŒrabah** financing?
2. How far can the screening mechanisms of **muèŒrabah** projects reduce agency problems in **muèŒrabah** financing?

There is a demonstrable need to orientate the Islamic banking industry to be closer to the real rather than the financial sector (Adnan, 2003) or from debt-based to equity-based financing (Ahmad, 2000), i.e. those that promote **muèŒrabah** and **musharŒkah**. However, industry data, particularly in Indonesia, and at the international level, indicate the contrary. Obstacles remain when **muèŒrabah** products are being offered, such as moral hazard, asymmetric information and so forth. Significantly, there has been no research conducted to specifically investigate these attributes, especially in the Indonesian context.

This study is an effort to offer a solution to these problems. It is expected that the attributes investigated will contribute to the general knowledge about **muèŒrabah** practices. Furthermore, the Islamic banking industry is likely to benefit from utilizing these attributes in order to promote one of the basic tenets of Islamic economics.

3. BACKGROUND

A survey of the literature reveals that some cursory research associated with the issues of **muèŒrabah** have been conducted.Warde (1999), for example, has focused his study on the impediments and problems of implementation of the profit-and-loss sharing contracts. By applying the explorative method, Warde (1999) found that **muèŒrabah** contracts were often associated with adverse selection and moral hazard. Warde's findings are important; however the research has not formulated a measurement of adverse selection.

Khalil, Rickwood and Muride (2000) conducted research related to the characteristics of agency problems in **muèŒrabah** contracts between Islamic banks and their customers. They found the following problems: (1) risk problems caused by moral hazard and adverse selection (2) linear relationships between projects and profit, and (3) discretionary power. They also identified several aspects which were considered important by the **§Œhib al-mŒl** in their selection: (1) the **muèŒrib** or projects (2) the criteria to accept or reject (3) the factors that determine the profitability of projects (4) the variables that can be used to restructure the **muèŒrabah** contract (5) agency problems and (6) monitoring and contractual governance. However, the study did not identify the influence or the contribution of the factors found in agency problems faced in **muèŒrabah**.

Karim (2000), in studying the suitability of **muèŒrabah** and *mush***Œ***rakah*, financing found that **muèŒrabah** and **musharŒkah** financing fit small and medium business enterprises, provided that incentive compatible constraint mechanisms are applied. These include: (1) the setting up of capital proportion or the collateral contributed by the **muèŒrib** (2) a minimum operational business risk (3) the project should be ready with financial statements, and (4) the project has relatively low uncontrollable expense.

According to Sumiyanto (2004) who conducted research on **muèŒrabah** at BMT found that project attributes, **muèŒrib** compliance and financing prerequisites, have a significant role in the increasing **muèŒrabah** contract between the BMTs and their customers. However, this study was more focused on BMTs instead of Islamic banks, which are much bigger in terms of size and complexity.

In addition to the studies above, Darmawangsa (2003) implemented the case study approach and found that *ghar***Œ***r* will emerge in **muèŒrabah** contracts when two conditions exist: (1) the project financed has incomplete information and (2) the **§Œhib al-mŒl** has insufficient information about the project, so that they have no capacity to control the project.Several research projects in a related area (**muèŒrabah**) have been conducted, however they have maintained a different perspective in terms of research questions, methods, scope and data analysis. This study aims at a determination of project attributes considered by Islamic banks for their financing services, as well as **muèŒrib** attributes in selecting the potential **muèŒrib** to be financed.

3.1 LITERATURE REVIEW

This study is conducted because of the low proportion of **muèŒrabah** financing offered by *Sharia* banks in comparison to other products such as **murŒbaúah** or other 'trading' products. Indeed, this is why many critics have raised questions about the operations of *Sharia* banks (see for example Kuran, 1986; Weiss, 1999; Ahmad, 2000; Adnan, 2003). Among the concerns of the **muèŒrabah** operation is the possibility of agency problems linked with modern investments. Jensen and Meckling (1976) are among the pioneers who raised the issue of agency problems. The agency concept is related to incentive based contracts, where the rewards are provided by the principal for the party working to improve productivity (Pass, Lowes and Davies, 1985). The reward can be in the form of a bonus, profit-related-pay or profit sharing.

A **muèŒrabah** contract is defined as a contract between the **§Œhib al-mŒl** (in this case the capital provider) and the **muèŒrib** (business operator) in which the profit earned is shared according to a previously agreed upon proportion. This includes the case of loss, which the two parties will also share, the capital provider being responsible for financial loss and the **muèŒrib** being charged with non-financial loss (see for example Antonio, 2000). The modern investment concept is not exactly similar to the **muèŒrabah** concept, despite some similarities. Therefore, it is possible to associate **muèŒrabah** with the agency problem.

Jensen and Meckling (1976) offered two methods by which a capital owner can reduce the risk of an inappropriate conduct of an agent. One is by monitoring the agent, and the second is by bonding the manager or agent to certain positive outcomes. Consequently, this process limits the opportunity for an agent to mismanage or abuse the project, which at the same time increases expenses and reduces profit. Any residual losses are categorized as an agency cost. According to Rechelstein (1992), the agency problem will arise when the principal hires the agent, and the agent does not share what he or she has earned. Stiglitz (1992) views that the agency problem exists if in the relationship between the principal and the agent there is imperfect or asymmetric information.

Asymmetric information can be either in action or information. It is related to action if there is a hidden outcome; it is related to information if there is hidden information. Harri and Raviv (1990), in examining both the asymmetric information and agency model, found that there was an association between asymmetric information and the agency

model under default probability. He further stated that the existence of asymmetric information might influence the return to investment.

The principal-agent relationship in the **muèŒrabah** context has been discussed theoretically by Ahmad (2000). Ahmad analyzed the limited information obtained by the principal on the **muèŒrib**, where he proposed for the adverse selection index. Ahmad also suggested that the difference should be identified through auditing practices. An example of moral hazard might be excessive project cost (window dressing) and retaining some of the profit earned.

In addition, there is also a need to screen both the projects and the **muèŒrib**. The screening, may help the **§Œhib al-mŒl** reduce related problems. Some variables were identified and proposed. In terms of the project, they are: profitability, return, risk, monitoring cost, accounting aspects, related social and environmental support, contract period, cash flow and collateral (Khalil, Rickwood and Murinde, 2000). In terms of the **muèŒrib**, they are: reputation, experience and qualification, religiosity, and the ability to access information (Khalil, Rickwood and Murinde, 2000). In addition, Sumiyanto (2004) added: track record, business skill base, ability to adjust to business risk and ownership of the business.

4. RESEARCH METHOD

The study applies the "combined qualitative and quantitative design" method (Cresswell, 1994). This method is used because the area under study is still in its infancy and is still trying to seek possible factors related to the issue of agency problems in **muèŒrabah** practices. While, the qualitative approach is an appropriate method to be applied, there is a strong willingness to examine those potential factors quantitatively as well. According to Niglas (2004), this approach can be a complement between the qualitative and quantitative approaches. As he adds: "there is a possibility to use both quantitative and qualitative data within each study regardless of the overall strategy of a piece of research or the concrete data-gathering techniques." According to Cresswell (1994), combined research can be considered in one of following research designs: (1) the two-phase design, (2) the dominant-less dominant design, or (3) the mixed-methodology design. Based on this classification, this research might be classified as a two-phase design.

In this regard, the qualitative design approach is first conducted in order to investigate the possible attributes associated with both projects and **muèŒrib**. In the second step, these attributes are examined

statistically. In the qualitative step, the explorative approach is applied. This includes the following procedures (1) key-informant technique; (2) focus group interview; (3) secondary-data analysis, and (4) case study method (Mudrajad, 2003). The attributes identified, either with regard to projects or **muèŒrib**, are then examined quantitatively.

The samples are the Bank Perkreditan Rakyat Syariah[2] (BPRS or Sharia Rural Banks) managers. It represents the banks in two important islands of Indonesia, namely Sumatra and Java (which includes West, Central and East Java). The BPRS were chosen on the basis of purpose cluster sampling method. The samples selected were required to conform to the following conditions: first, the bank had been applying the **muèŒrabah** contract, and second, the **muèŒrabah** contracts had been operating for a period of at least three years before the commencement of the study. There were 89 BPRS or *Sharia* Rural Banks in Indonesia during the time of the study. 84 were sent questionaires, 64 of them either replying or deemed eligible for analysis. Finally, 16 of the 64 BPRS managers were selected to be interviewed. Primary data was collected by interview and by the observation approach. The qualitative data was then examined by using the triangulation technique (Moleong, 2000). It is important to ensure that the data was valid and reliable. In turn, this guarantees that the knowledge generated is true, researchable, verifiable and can be generalized (Strauss and Corbin, 2003). On the other side, the validity and reliability of examination of the quantitative part is conducted with product moment correlation and alpha techniques. Research variables were decided after exploratory steps were conducted. As alluded earlier, the following items were investigated during the research. First, the possible attributes associated with the projects, which include the characteristic of projects deemed by the bank to be worthy of finance. Second, possible attributes related to **muèŒrib**, which comprise the characteristics of **muèŒrib** considered by the bank before contracts were approved and finally, agency problems in the **muèŒrabah** contract. Agency problems deal with the disobedience of **muèŒrib** v's-a-v's the agreed contract, particularly in terms of profits earned that must be shared with the bank. The agency problem was measured by comparing the percentage of expected and actual return (Ahmad, 2000).

Following the research objectives, two tiers of analysis techniques were prepared. They are: (1) qualitative analysis and (2) quantitative analysis. The first technique was aimed at investigating the attributes

considered by the Islamic banks' management in deciding both projects as well as **muèƈribs** prior to the approval of the **muèƈrabah** contract.

The quantitative analysis was designed to examine the investigated attributes identified in the qualitative approach. Two more techniques were also applied at this level. First, factor analysis screened attributes of projects and **muèƈribs** statistically. This was then followed by regression analysis. This ensures to what extent the screened attributes are involved in agency problems. This approach strongly suggests that this research may constitute a new model.

5. DATA ANALYSIS AND RESEARCH FINDINGS

The analysis follows these steps: (1) description of how **muèƈrabah** is practiced in the BPRS; (2) exploratory analyses of project and **muèƈribs**' attributes; (3) analyses of factors attributed to projects as well as **muèƈribs** in financing **muèƈrabah** contracts; (4) research model confirmation.

5.1 DESCRIPTION OF **MUë •RABAH** PRACTICES

Table 3 describes the portion of **muèƈrabah** contracts included in the samples. The figures are in line with the data issued by the Central Bank of Indonesia, where **muèƈrabah** contracts constituted 15.35 percent in 2004 (and 19.42 percent in August 2006) of the total financing products applied.

The **muèƈrabah** contract can be further classified into two types. They are the **muèƈrabah mu‹laqah** or unrestricted investment accounts, and **muèƈrabah muqayyadah** or restricted investment accounts. Table 4 shows the applied preference of BPRS. A majority of BPRS prefer the **muèƈrabah mu‹laqah** (56.25 percent) compared to the **muèƈrabah muqayyadah**. Two explainations are suggested to explain this phenomenon. First, most customers who have invested their money prefer this type of **muèƈrabah**; it is then easier for the banks to manage the investment under the same type of investment. The second reason is that the **muèƈrabah mu‹laqah** is both more flexible as well as more profitable than **muèƈrabah muqayyadah**, since the latter is subjected to some constraints stipulated by the **§Ƈhib al-mƈl** (Karim, 2004; Waris,[3] 2004). With regard to the length of contract, most contracts were signed for a period of 1 to 2 years (81.25 percent), and only 18.75 percent of contracts stiputaled a period of

between 2 to 3 years. None were longer than 3 years. The trend indicates that the BPRS were avoiding longer contracts due to limited funds available for financing, since the BPRS are classified as small to medium size banks, and that the banks followed *'urf* or "socio-cultural habit" or business practices in general. As indicated in Table 6, the trading sector dominated the **muèŒrabah** contract, accounting for 51.56 percent of total share. According to the bank managers interviewed, trading is the most manageable sector. This is consistent with conditions

TABLE 3
The Proportion of **MuèŒrabah** financing at BPR *Sharia* in 2004

The proportion of **MuèŒrabah** financing of the total financing products offered	Frequency	Percentage
Less than 5%	24	37.50
5% - 10%	0	0
10% - 15%	0	0
15% - 20 %	40	62.50
More than 20%	0	0
T o t a l	64	100.00

TABLE 4
The Proportion of **MuèŒrabah Mu‹laqah** and **MuèŒrabah Muqayyadah** at BPR *Sharia* in 2004

Types of **MuèŒrabah**	Frequency	Percentage
MuèŒrabah Mu‹laqah	36	56.25
MuèŒrabah Muqayyadah	28	43.75
Total	64	100.00

TABLE 5
Length of **Muèℂrabah** Financing Contract in BPR *Sharia* in 2004

Length of **Muèℂrabah** Financing Contract	Frequency	Percentage
1 – 2 years	52	81.25
2 – 3 years	12	18.75
T o t a l	64	100.00

TABLE 6
Types of Business / Industry Financed under **Muèℂrabah** by BPR *Sharia* in 2004

Types of Business / Industry	Frequency	Percentage
Agriculture	7	10.94
Animal husbandary	15	23.44
Trading	33	51.56
Manufacturing	9	14.06
Craft	0	0
Other	0	0
T o t a l	64	100.00

such as the availability of financial statements and other related documents. In turn, this facilitates the banks in undertaking their control function. Moreover, the trading sector is more flexible than for instance, agriculture and husbandary, which are subject to external factors such as weather, seasons and so forth.

5.2 EXPLORATORY ANALYSIS

With respect to the exploratory analysis of attributes of projects and **muèℂrib** based on questionaires circulated and the in-depth interview,

the following projects attributes are noted in choosing **muèCrabah** projects: minimum business risk; accounting information system; the certainty of return; low monitoring cost; the project's rate of return; project soundness; guarantee or collateral; project cash flow; contract period; project horizon; project's prospect; business's going concern; contract condition.

Based on the same method for exploring project attributes, the following factors are considered important by the management of BPRS, with regard to **muèCrib's** attributes. They are: having skill in the related business or area; market familiarity; ability to correct business risk; possesing collateral; family business background; business commitment; ability to articulate particular business language; having business habit; having own business; historical business lingkage with **§Chib al-mCl**; ability to grasp business opportunity; social class; ability to anticipate business risk; and track record.

5.3 ANALYSES OF FACTORS

There are several attributes noted for both the projects and the **muèCrib** from the BPRS management point of view. In this section those attributes are statistically examined. Table 7 shows the ranks of the attributes

TABLE 7
Ranking of all Projects' Attributes

Attributes	Abbreviation	Mean	Std. Deviation	N
Certainty of return	PSTHASIL	4.30	0.68	64
Collateral on project	JAMINAN	4.09	0.68	64
Prospects financed	PROSPEK	4.02	0.72	64
Rate of return	TKRETURN	3.97	0.76	64
Period of financing	JGKWAKT	3.94	0.79	64
Rate of risk	TKRISIKO	3.88	0.85	64
Cash flow	ARUSKAS	3.77	0.77	64
Conditions	KLAUSUL	3.77	0.81	64
Age financed	USIAPRO	3.69	0.75	64
Going concern	BERKMB	3.56	0.89	64
Business health rate	TKKSHTAN	3.55	1.05	64
Acct information system	SIA	3.39	0.81	64
Cost of monitoring	BIAPANTU	3.33	1.13	64

TABLE 8
Summary of Kaiser-Meyer-Olkin (KMO) and Bartlett Examination

Kaiser-Meyer-Olkin Measure	0.502
Bartlett's Test	297.632

TABLE 9
Communalities of Projects' Atributes

Attributes	Abbreviation	Initial	Extraction
Cost of Monitoring	BIAPANTU	1.0	0.670
Period of Financing	JGKWAKT	1.0	0.839
Business Health Rate	TKKSHTAN	1.0	0.841
Accounting Information System	SIA	1.0	0.854
Certainty of Return	PSTHASIL	1.0	0.865
Rate of Return	TKRETURN	1.0	0.887
Conditions	KLAUSUL	1.0	0.797
Rate of Risk	TKRISIKO	1.0	0.805
Prospects	PROSPEK	1.0	0.787
Cash Flow	ARUSKAS	1.0	0.745
Collateral on Project	JAMINAN	1.0	0.724
Going Concern	BERKMB	1.0	0.748
Age Financed	USIAPRO	1.0	0.806

and their standard deviations. The standard deviations indicate to what extent the **§Œhib al-mŒl** rank the project attributes. The certainty of return is considered to be the most important attribute. The examination by the Kaiser-Meyer-Oklin (MKO) and Barlett measures of sampling of attributes confirm the result, as shown in Table 8. The coefficient for the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) was 0.502. This indicates that the samples used are sufficient, since the mark required by Hair et al. (1998) is 0.50. The interrelation of attributes can be seen from the coefficient of Bartlett's Test of Sphericity, which is 297.63.

The analysis to determine the projects attributes is initiated by communalities analysis, which is tabulated in Table 9. This analysis

grouped attributes which have a significant relationship. They were analysed using the orthogonal varimax method. The summary of results are tabulated in Table 10. There are six factors out of 13 which contributed 79.75 percent to the total projects attributes, each with the following figures: component 1 = 21.98 percent, component 2 = 19.24 percent, component 3 = 11.24 percent, component 4 = 10.95 percent, component 5 = 8.63 percent and component 6 = 7.72 percent. The result of principal component analysis with extraction method and varimax rotated component explains the content of each component.

The first component is named Project Soundness which includes project monitoring cost with coefficient value of 0.559, business health

TABLE 10
Projects Attributes Based on Factor Analysis

Projects' Atributtes	Set Variable					
	1	2	3	4	5	6
Cost of monitoring	0.559					
Business health rate	0.902					
Going concern	0.854					
Certainty of return		0.921				
Collateral on project		0.647				
Rate of return			0.542			
Rate of risk			0.762			
Prospects of financed			0.825			
Acct info system				0.899		
Cash flow				0.557		
Conditions					0.850	
Period of financing						0.614
Age						0.885
Eigen Value	2.858	2.501	1.461	1.424	1.121	1.003
Variance	21.98	19.23	11.23	10.95	8.62	7.71

Remarks: 1) Business health rate; 2) Collateral on project; 3) Prospects of projects financed; 4) Financial reports; 5) Conditions of Projects, and 6) Time period of projects

TABLE 11
Ranking of All Attributes of **Muèrib**

Attributes of **Muèrib**	Mean	Std. Dev	N
Having a good track record	4.09	0.68	64
Owning business collateral	4.05	0.70	64
Historical relationship	4.03	0.85	64
Good business habit	4.02	0.72	64
Good relatiosnhip with §*ib al-ml*	3.97	0.76	64
Market accepted	3.94	0.79	64
Project (self) possesion	3.88	0.85	64
Ability to grab an opportunity	3.86	0.85	64
Ability to articulate business language	3.86	0.81	64
Good social class	3.72	0.58	64
Having related business skill	3.70	0.71	64
Ability to Control the risk	3.70	0.85	64
Coming from business family	3.39	0.81	64
Having a good business commitment	3.33	1.13	64

TABLE 12
Kaiser-Meyer-Olkin (KMO) and Bartlett Test

Kaiser-Meyer-Olkin Measure	0.573
Bartlett's Test	496.605

rate with coefficient of 0.902 and business's going concern with coefficient of 0.854. The second component is named Repayment Guarantee which include payment certainty and project collateral, with coefficients of 0.921 and 0.647 respectively. The third component consists of the project's rate of return (0.542), project risk (0.762), and prospect of the project (0.825). This component is identified as Project's Prospect.The fourth component is classified as Financial Aspect, which include accounting information system (0.899) and the project's cash flow (0.557). The fifth component is identified as Contract Conditions, which include the conditions required by the contract (0.850) and finally the project age (0.885). All attributes mentioned above have loading factor greater than 0.05.

Hence, it can be concluded that what have been considered by Islamic banks in financing the projects are: the project soundness, the repayment guarantee, the prospect of the project, financial aspects (financial statements), project conditions and project age.

With regards to **muèŒrib's** attributes, as stated earlier, there are 13. Table 11 dislcoses the level of importance of attributes considered by the bank with respect to the **muèŒrib**. The business track record has been ranked first, followed by collateral, and so forth. The sample suitability test was also undertaken for this case, where the Kaiser-Meyer-Olin and Barlett examination was applied. The result is as shown in Table 12. The Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) is 0.573. This indicates that the samples used are sufficient. The intervariable correlation can be referred to by the coefficient of Bartlett's test of sphericity, that is 496.605. Further analysis is required to determine the attributes by communalities analysis. The result is tabulated in Table 13.

The final analysis grouped the attributes which have significant relationship. This is done by orthogonal varimax method. The anlysis is expected to produce rotated orthogonal attributes. The summary of the result is reported in Table 14. The analysis found five components of 14 attributes, which describe 76.48 percent of the total. Each component contributes 26.47 percent, 17.03 percent, 15.18 percent, 9.42 percent, and 8.38 percent respectively. The attributes that belong to the first component are: ability to control the risk, ability to articulate business language, and ability to grasp an opportunity. They are identified as 'Business Skill or Ability.' The attributes that belong to the second component is Collateral. This relates to the following attributes: owning business collateral, good business habit, and good relatiosnhip with **§Œhib**

TABLE 13
Communalities Attributes of ***M*uèŒrib**

Attributes	Initial	Extraction
Having a good business commitment	1.00	0.797
Market accepted	1.00	0.805
Coming from business family	1.00	0.816
Having a good track record	1.00	0.712
Historical relationship	1.00	0.710
Project [self] possesion	1.00	0.631
Ability to Control the risk	1.00	0.750
Owning business collateral	1.00	0.848
Good business habit	1.00	0.700
Having related business skill	1.00	0.400
Good social class	1.00	0.770
Ability to articulate the business language	1.00	0.906
Ability to grab an opportunity	1.00	0.951
Good relatiosnhip with **§Œhib al-mŒl**	1.00	0.911

al-mŒl. The third component includes the following attributes: market accepted; having a good track record; and having related business skills. They are named as 'Reputation.' The fourth component consists of: coming from a business family, project (self) possesion, and good social class. They are identified as 'Background.' The last component is known as Business Commitment and constitutes of the following attributes: having a good business commitment and historical relationship. All those attributes have a loading factor of more than 0.05.

5.4 REGRESSION

The regression analysis on the screening effectiveness of agency problems is intended to confirm the qualitative analysis. It is expected that in passing this examination the research findings will have a sufficient platform. Three more analyses are undertaken for this purpose.

Previous analysis found the five most important attributes in reducing agency problems related to the projects from the banks' management perspective are: project soundness (KSHTPROY), projects' prospect (PROSPROY), financial reports (LAPKEU), contract conditions (PERSYKLA) and the length of contract (WAKTKONTR). When the

TABLE 14
Variable Names and *M***uèŒribs***'* Attributes based on Factor Analysis

Attributes of **MuèŒrib**	SET VARIABLE				
	1	2	3	4	5
Ability to control the risk	0.777				
Ability to articulate the business language	0.925				
Ability to grab an opportunity	0.968				
Owning business collateral		0.877			
Good business habit		0.644			
Good relatiosnhip with **§Œhib al-mŒl**		0.947			
Market accepted			0.859		
Having a good track record			0.975		
Having related business skill			0.514		
Coming from business family				0.583	
Project [self] possesion				0.528	
Good social class				0.826	
Having a good business commitment					0.782
Historical relationship					0.625
Eigen Value	3.706	2.384	2.125	1.319	1.173
Variance	26.47	17.03	15.18	9.42	8.38

Note: 1) Business skill; 2) Collateral; 3) Reputation; 4) Baackground; and 5) Business commitment.

variables are examined with regession analysis, the following result is obtained (*t*-statistics in parenthesis):

AGPROB = 0.434 + 0.0614 KSHTPROY + 0.125 PROSPROY
(4.05) (2.30) (2.36)

+ 0.234 LAPKEU+ 0.574 PERSYKLA + 0.274 WKTKONTR
(2.37) (4.46) (2.61)

The *F* statistic is 10.784, which indicates that the variables significantly affect the agency problem in the **muèℂrabah** contract. Furthermore, the adjusted R^2 is 0.437 which means 43.7 percent of the variance of the agency problem is explained by the model.

The coefficient for project soundness is 0.06 and significant. This indeed is low, but it has a significant effect toward minimizing agency problems among the BPRS. The coefficient for the other variables are positive (project's prospect, financial reports, contract condititions and length of contract). Therefore, it can be concluded that those attributes can be screened to reduce agency problems in the **muèℂrabah** contract.

The same method is applied to the attributes of the **muèℂrib**. There are five main attributes identified: (1) business skill (KEMBIS) (2) collateral (JAMINAN); (3) reputation (REPUTASI) (4) background (ASALUSUL); and (5) business commitment (KOMITMEN). The regression analysis resulted in the following coefficients regression (*t*-statistic in parenthesis):

AGPROB = 0.526 + 0.103 KEMBIS + 0.144 JAMINAN
(5.78) (3.72) (3.05)

+ 0.165 REPUTASI+ 0.148 ASALUSUL + 0.220 KOMITMEN
(3.73) (2.44) (2.02)

The *F* statistic is 13.581, indicating that the variables are effective in preventing agency problems in the **muèℂrabah** contract at Islamic banks or BPRS. The adjusted R^2 is 0.50, which means that 50 percent of agency problems are explained by the model.

The final part is the examination of research design. To a large extent this relates to the question of those projects and **muèℂrib** attributes (together) that have influences on the agency problem minimally.

As discussed above, the research found six attributes of projects and 5 attributes of the **muèŒrib**. A combination of them (11 attributes) are once again tested by regression analysis. The result shows that the *F* statistic is 13.609 with an adjusted R^2 of 0.69. Therefore it can be concluded that all of the variables combined explained 68.8 percent of the possible agency problems that arise in the **muèŒrabah** contract. However, a further assestment of individual variables resulted in only 5 variables having significant influence. They are: (1) business skill of the **muèŒrib**, (2) business reputation of the **muèŒrib**, (3) business commitmnent of the **muèŒrib** (4) financial report of the project, and (5) the length of contract for the project. Based on the above findings, the model proposed is (*t*-statistic in parenthesis):

AGPROB = 0.409 + 0.150 KEMBIS + 0.142 REPUTASI
(4.10) (2.08) (2.75)

+ 0.349 KOMITMENT + 0.540 LAPKEU + 0.343 WAKTKONT
(3.22) (3.21) (3.40)

6. CONCLUSION

The study investigated how **muèŒrabah** financing has been practiced by the BPRS. From a descriptive-statistics point of view, the study found the following. First, 62.5 percent of respondents offer between 15–20 percent of **muèŒrabah** financing to customers, and the rest (32.5 percent) offer less than 5 percent. Second, 56.25 per cent of respondents prefer **muèŒrabah mu‹laqah**, instead of **muèŒrabah muqayyadah**. Third, 81.25 per cent of banks signed the **muèŒrabah** contract between 1–2 years, and 51.56 percent of banks had **muèŒrabah** with the trading industry.

The study then identified qualitatively the attributes of both projects and **muèŒribs** which are perceived by the **§Œhib al-mŒl**. The research initially found thirteen attributes related to the project and 14 attributes related to the **muèŒrib**. However, after further screening, it was found that 5 main attributes related to the project and 6 attributes related to the **muèŒrib**.

Further quantitative analysis has been conducted to examine those attributes. This finally filters all attributes into five most influential factors. They are business skill, business reputation, business commitment (all are related to the **muèŒrib**), financial report of project and length of contract for the project.

The five attributes stated above can be seriously considered by the Islamic bank management to determine both the project and **muèrib** before the contract is signed. As proven by analysis, the selected attributes are identified as the factors that might potentially reduce agency problems which is perceived as one of the reasons why the **muèrabah** contract is not widely practiced by Islamic banks.

Finally, some limitations cannot be avoided. First, the scope of the research was focused on BPRS, which represent 'small' Islamic banks in Indonesia. BPRS is a rural bank limited by size, capital and location. The second limitation is the number of samples. The sample size is statistically accepted, however it is undeniable that a larger sample, as well as broader scope might possibly, but not necessarly, produce a more accurate or representative result. The third is related to research methodology. As there are many possible statistical tools that can be applied, this research applied selected methods. This means that the aplication of other possible research methods might result in different findings. For this reason we humbly encourge other researchers to further examine what has been found by improving on some of these limitations.

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APPENDIX

The list of samples selected for in-depth interview

1. BPRS Harta Insan Karimah
2. BPRS Amanah Robbaniah
3. BPRS Syarif Hidayatullah
4. BPRS Al-Mabrur
5. BPRS Bangun Drajad Warga
6. BPRS Wakalumi
7. BPRS Bhakti Makmur Indah
8. BPRS Margirizki Bahagia
9. BPRS Amanah Sejahtera
10. BPRS Daya Arta Mentari
11. BPRS Artha Sinar Mentari
12. BPRS Ikhlasus Amal
13. BPRS Carana Kiat Andalas
14. BPRS Wadi'ah
15. BPRS Gebu Prima
16. BPRS Amanah Ummah