Risk-Return Analysis of Islamic Banks' Investment Deposits and Shareholders' Fund

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ABSTRACT

In the current financial landscape, in which both return on mudarabah deposits and fixed deposits are the same, i.e. averaging at 4 percent per annum, it is unclear as to what the incentives are for mudarabah depositors to bear financing risks, particularly credit risk, where on average 80% of the financing provided by Islamic banks are debt-based financing, i.e. murabahah-based. In contrast to fixed deposits, which enjoy fixed returns, mudarabah deposits yield variable returns that may be negative, i.e. a loss. As far as risk-return relationship is concerned, as mudarabah depositors are exposed to higher risks, one would argue that they should be rewarded by higher returns, as compared to the returns to fixed depositors. As strange as the findings on the analysis of returns to mudarabah and fixed depositors may seem, the variance between return on equity and return on mudarabah deposits is equally puzzling due to the fact that shareholders receive higher returns, despite both running on profit-loss sharing principle.

1.0 Introduction

Islamic banking business based its operation on strict guidelines of the *Shariah*. It is well-acknowledged that the purpose of *Shariah* is to protect the interest of the public (*maslahah al-ammah*), one of which is the protection of property (*al-mal*). In the protection of property, the Quran prohibits *riba* and enjoins trade and commercial activities (*al-bay''*). It also condemns acquiring wealth through game of chance (*maisir*) and other illicit businesses that are prone to manipulate the public by way of introducing ambiguities (*gharar*) in contractual relationships.

One of the cornerstones of Islamic banking is the prohibition of *riba* and the application of trading and commerce (*al-bay''*). This commandment is expected to generate equitable relationship between the banking firms and their customers, such that the wealth (*al-mal*) of shareholders and depositors, who inject capital and deposits respectively into Islamic banks, increases in proportionate to the risk they took in the business. This paper intends to show that the case is not true for Islamic banks in Malaysia. It examines the factors that could have caused the dichotomy between low returns on *mudarabah* deposits and higher returns on shareholders fund, although both operate on the profit-loss sharing principle.

2.0 Principle of risk in Islam

For more than 20 years, the Islamic banks' core business have relied a great deal on installment-based financing that uses *murabahah* contracts as modes of finance. The risk exposure to these transactions is predominantly associated with credit or default risk. When Islamic banks further encroach into non-banking territory, such as joint-venture financing by means of *mudarabah* and *musharakah*, the major risks it faces are market and agency risk. Likewise, the application of *ijarah* contracts should largely expose the lessors to operational and payment risk. Further on, exposure to delivery risk are one of the top concerns in *salam* and *istisna'* financing.

Risk is the exposure to uncertainty. Man generally believed that the future is uncertain and worried that exposure to uncertainty will lead to loss and personal injury. Since uncertainty is often associated with potential harm, risk is also defined as a potential loss. However, uncertainty concerning future events can also imply a positive thing when the outcome is a windfall. Hence, taking risks can lead to profits, as well as losses. Since only God knows what lies ahead of man, risk should be faced with precision, such that any effort to confront it must be pursued without inflicting harm and injury to the society.

The juristic principle of *"al-ghunm bil-ghurm"* is often the most quoted source of Islamic values about risk (*ghurm*). Interestingly, the mentioning of risk (*ghurm*) in Islamic law is always accompanied with the possibility of gains. In general, *al-ghunm bil ghurm* means that "one is entitled to a gain if one agrees to bear the responsibility for the loss". In the *Mejelle*, the Arabic translation of the legal maxim is 'the detriment is as a return for the benefit". In other words, when one is willing to face a risk (i.e. potential loss), he expects to make some gains when the loss does not occur.

When Islam enjoins trading and commerce (i.e. *al-bay''*), it lays out a risk-return principle based on moral values. In trading, the merchant faces potential losses, since he does not know what exactly the market has prepared for him. Although he can make estimates and projections about market behaviour based on past events, his exposure to uncertainties is an overriding concern. Under uncertainties, there is no guarantee that he can make profits. But in Islam, man believes that it is God who determines the outcome of events. Man is not capable of determining the future path of his actions. Uncertainties concerning the future thus warrant him to take every precaution to minimise the loss that may occur.

3.0 Behaviour towards risks

In Islam, behaviour towards risks has many dimensions. Individuals who wish to see their money intact and preserved can do so by putting them in *wadiah dhamanah* financial instruments. They can even keep cash under the pillow but doing so will leave their money depleted by way of *zakat* and inflation. *Zakat* serves as a penalty to those who choose to keep idle balances for more than a year. In this way, people who want to avoid potential losses on their assets should know the unwarranted cost of doing so. Avoiding risk in Islam is allowed with a condition that no contractual income is given away on the placement made with the Islamic bank. In fact, one may have to pay fees on the service rendered to protect their idle balances from theft and destruction caused by say, natural calamities.

In general, Islam's attitude towards risk-taking behaviour is a positive one. When an individual plans to invest his money and expects to earn returns from the investment, he is not allowed to avoid potential losses from uncertainties of future cash flows of the investment. This means that he can neither expect to receive capital protection nor receiving fixed returns from the investment. He must allow the capital to depreciate and appreciate along with the market movements and is prohibited from passing the risk to someone else.

4.0 Extreme behaviour towards risks

Since Islam is a religion that cherishes moderation and prohibits excesses, it is critical to note that the prohibition of *riba* is allied to an extreme behaviour against risk in wealth creation. Likewise, the prohibition of gambling signifies Islam's rejection of extreme behaviour of risk-taking. These two extreme behaviour towards risks are explained below:

a. Risk-Avoidance in interest-bearing loans

Under prudent loan management, loans are free from default risk when fully collateralised. In this sense, the interest income is acquired by the lender without potential losses, since there is no uncertainty that the borrower will default on the loan.

This is an extreme side of a financing contract, where the borrower bears the risk of bankruptcy, while the lender takes no risk at all. The lender is a risk-avoider since he rejects taking risk with an expectation to gain in granting the loan. He desires to make money from the loan but refuses to face uncertainties of non-repayment.

b. Excessive Risk in Game of Chance

In an act of gambling, winning and losing are driven by pure chance alone. The outcome of gambling is neither influenced by knowledge nor skills of the bettors. In this sense, taking part in gambling exposes gamblers to huge potential losses. People who gamble embrace risk in the most excessive ways. They are willing to lose their bets in exchange for a disproportionately huge prize that is impossible to win. As a game of chance, gambling often makes people behave irrationally since their decision is predominantly driven by false illusions of winning big. This extreme behaviour of risk-taking is prohibited in Islam in view of the outcome which is aleotary in nature. However, Islam allows extreme risk-taking behaviour when the outcome is non-aleotary but based on insightful market research and sound business planning. For example, investment in the venture capital sector is extremely risky. It is common knowledge that out of every ten venture projects, only one is in the money. Failures in venture capital are often caused by market volatilities and lack of monitoring on the investee company.

5.0 Risks in Islamic Banks' Shareholders' Fund

Capital is the fund contributed by the owners of a banking firm. Bank owners contribute part of their wealth to banking firms in a hope to acquire a competitive return on their invested funds. These funds are however subjected to many risks that may erode the value of the funds but may also increase its value when the banking firm performs very well. Capital in an Islamic bank works the same way. It is generally mobilised through *musharakah* agreement, where capital owners place their funds at risk in the pursuit of profits. For example, the value of share capital in the form of common stocks is exposed to market volatilities. Their value will increase or decrease based on the banking firm's performance.

The nature of risk faced by capital owners in an Islamic bank varies in accordance to the types of financial instruments it uses, the people it hires to manage the bank and how open it does business globally. These are examined in the following:

5.1 Risk in Islamic Banking

Islamic banking firms use various forms of Islamic finance contracts to fulfill customers' need for financing facilities. Each of these products has its own unique risks that expose the bank to potential losses in return for expected returns. The risks associated with each single product can be further broken down into major and non-major risks. Major risks mean the risks that dominate the product in use. The major risks faced by Islamic banking products are given below:

Product based on	Major risks	Risk Classification
Murabahah	Credit risk	Unsystematic
Musharakah	Market and agency risk	Systematic
Mudarabah	Market and agency risk	Systematic
Ijarah thumma al-bay''	Credit risk	Unsystematic
Ijara wa iktina	Operational and payment risk	Unsystematic
Salam	Delivery risk	Systematic
Istisna'	Delivery risk	Systematic
*Bay' al-ena*h	Credit risk	Unsystematic
Tawarruq	Credit risk	Unsystematic
Commodity murabahah	Credit risk	Unsystematic

Some of the risks faced by the shareholders of Islamic banks can be minimised and even eliminated, while some cannot. For example, *murabahah* credit risk can be minimised by tightening up credit valuation or it can simply be eliminated by not offering the facility at all. Non-systematic risks, such as credit risk as evident in *murabahah* financing can use available risk mitigation strategies such as high down-payments, higher collaterals and stringent credit enhancers. On the contrary, market risks in *musharakah* and *mudarabah* products can neither be avoided nor transferred to a third party by way of undertakings, recourse and claims.

5.2 Capital Risk in Banking

The risk exposure of Islamic banking products examined above can affect the financial performance of an Islamic bank. For example, when the bank makes an excessive amount of *murabahah* financing, which resulted in large amounts of non-performing financing (NPF), provision for bad and doubtful debts will be set aside to reflect the strong probability of uncollectible loss to the bank. When losses are reported after adjustment to both general and specific provisions, the value of the shareholders' capital will depreciate. For an Islamic bank to stay in business, fresh capital injection is in order. In Table 1 below, the exceedingly high NPF (i.e. caused by the profit-interest rate gap), has caused the bank to put high provisions for bad debts. Although, it has reported $100 million in gross profits, the net profit after the provisions for NPF is negative. Subsequently, the shareholders' capital will decline by $100 million. Usually, when no fresh capital injection is forthcoming, the bank may have to cease operations.

Table 1: Islamic Banking: Net Loss and Capital

ASSET-LIABILITY STRUCTURE (ASSUME SRR = 10 %)	
Asset	**Liability**
Statutory Reserves $40 m Financing $3600 m *Non-Performing Financing (NPF) $200 m	Deposits $4000 m Capital $400 m Capital after loss $100 m
Profit = $100 m General Loss Provision = $200 m Loss = $100 m	Capital depreciation $100 m

Table 1 above shows that a reported loss of $100 million will cause capital to depreciate by the same amount. However, the above model assumes that all losses from financial activities are carried only by the shareholders and as such, does not adversely affect the size of investment deposits. In this way, the risk in using Islamic financial instruments opens the bank to potential losses in its share capital. This capital risk is the risk that the shareholders must accept to carry, in return for profits. The higher the risk that they are expected to take, the greater the amount of return that they expect to make from the investment. Table 2 below shows the return on equity (ROE) for all FDIC banks in the United States between 1992 and 1995.

Table 2: Return on Capital – FDIC banks in the United States (1992-2005)

Year	Return on Capital (ROE) %
2005	12.68
2004	13.27
2003	15.04
2002	14.11
2000	13.53
1998	13.51
1996	13.31
1994	13.33
1992	12.21

Source: Peter Rose & Hudgins – Bank Management and Financial Services 2008, pg.172

Return of Equity (ROE) is the rate of return flowing to the stockholders. It is the net benefit that the shareholders receive from investing their capital in the bank and risking their capital in the hope of earning a decent profit. By placing their capital at risk, the shareholders deserves to earn profits, which are also determined by bank management efficiency, which include efficiencies in tax management, expense control, asset and fund management.

The positive return on equity for conventional banks however does not mean that shareholders received a stream of permissible (*halal*) income since the financing

operations implicates interest as *riba*. Although the bank's exposure to risk is readily evident, the major risk it holds is credit risk, which is often mitigated by stringent risk management. Risk exposure to credit risk is often put to a minimum by prudent lending and well-disciplined collection policy. In this manner, the ROE is reflective of the bank's attitude towards risk, which is credit risk. The shareholders are willing to lose their capital from bad loans in return for profits generated from debt financing services. In addition to that, the bank's exposure to other unsystematic risks, such as interest rate risk, forex risk, liquidity risk and operational risk also exposes it to potential losses. However, these additional risks are tied up to the loans taken up by the bank's customers. They are risks associated with debt financing and not financing involving profit sharing or purchases of assets, such as land and properties.

On average, banks in the United States earned 13.44 cents from every dollar of investment in the loan market. In other words, the ROE of 13.44 is the return from investing in the loan market, where the demand and supply of deposits and loans are based on fixed income and capital protection contract. The return on interest-based deposits is expected to be lower than ROE, as the former is risk-free, in the sense that the bank guarantees deposits a fixed return, as well as capital preservation. The fact that depositors are not willing to carry any risk of investment in their respective fixed deposits accounts helps explain why returns on deposits are always lower than ROE.

Table: 3 Yield on Certificates of Deposits – United States

Cerficates of Deposits	Yield (ROD) %
6 months	4.59
I year	4.83
5 year	4.78

Source: www.bankrate.com, 2007

Table 4: Yields on 1 year Certificate of Deposits and Shareholders' Fund

Variable	Financial Contract	Yield (%)
1-year ROE	Debt	13.44
1-year CD	Equity	4.83
		Variance = 8.61

Based on Table 4 above, the gap of 8.61% between one year ROE and deposit yield evidently shows that a risk premium actually exists to reward risk-taking behaviour of the bank's shareholders, in contrast with the risk-avoidance behaviour of depositors. The bank's shareholders are willing to risk their capital while the depositors are not willing to do so. The inverse risk-return principle is working well in the conventional banking system.

6.0 Risk to *mudarabah* depositors

The public in general place their money in banks for two main purposes, namely for fulfilling transaction and investment needs. To fulfill transactional objective, Islamic

banks offer facilities such as *al-wadiah yad dhamanah* deposit, which provides safe-keeping with guarantee services. In using this product, depositors no longer supply funds to earn a fixed income. Instead, they place deposits for protection. *Al-wadiah yad dhamanah* means safekeeping with guarantee. *Al-wadiah yad dhamanah* depositors allow the bank to invest their money in return for deposit protection that they got for free. Since the custodian service is given without a price, the bank holds no legal obligation to pay depositors a fixed return and may do so only on voluntary ground. In this manner, the bank holds prerogative on profit distribution policy in the form of gifts (*hibah)*.

The same is not true for Islamic fixed deposits, often known as the *al-mudarabah* investment deposits. In this partnership structure, no guarantee is given to capital preservation and fixed income, as it runs under equity principle. It is a risky product as the underlying contract is based on profit-loss sharing system. Profits are acquired only when the investments are performing, while capital may depreciate or even diminish if the investment ends in losses.

The *mudarabah* investment deposits constitute the bulk of total deposits in Malaysia. In Table 5 below, all Islamic banking institutions secure more than 50 percent of their total deposits in *mudarabah*, the highest being Bank Islam Malaysia Berhad (BIMB). Returns on Islamic deposits are however flexible in nature since residuals is based on performance rather than contracted upfront as evident in all interest-bearing deposit. Although, these *mudarabah* rates are quoted using the rates declared in the previous months, they are not fixed upfront and serve as an indicative rate of return on *mudarabah* deposits.

The *mudarabah* contract operates along profit-loss sharing principles while fixed deposits are based on the contract of debt. As an equity product, *mudarabah* deposits offers no capital protection and legal claims against any form of returns. To make up for the risk exposure of the product, *mudarabah* depositors are expected to receive higher returns relative to that of fixed depositors who avoided risk.

Table 5: *Mudarabah* and Non-*Mudarabah* Deposits – Malaysia (2005)

	Islamic bank	***Mudharabah* Deposits (MD)**	**Non-*Mudharabah* Deposits**	**Total Deposits (TD)**	**(MD/TD) x 100**
1.	Bank Islam Malaysia Berhad	8,376,629,000	5,106,542,000	13,483,171,000	62.13%
2.	Hong Leong Islamic Bank Berhad	3,929,304,000	1,348,236,000	5,277,540,000	74.45%
3.	RHB Islamic Bank Berhad	3,778,185,000	1,733,460,000	5,511,645,000	68.55%
4.	Maybank Berhad	5,281,273,000	9,763,430,000	15,044,703,000	35.10%
5.	Bank Muamalat Malaysia Berhad	5,146,334,000	4,227,637,000	9,373,971,000	54.90%
6.	EONCap Islamic Bank Berhad	2,839,268,000	700,347,000	3,539,615,000	80.21%

Source: Annual Reports 2006

7.0 Risk and Reward under profit-loss sharing principle: Rate of return on Mudarabah (ROMD) deposits and Return on Equity (ROE)

In an Islamic bank, the contract between the bank and the *mudarabah* depositors involve equity participation. In the case of depositors, they act as capital providers (*rabb al mal*) in a *mudarabah* contract with the Islamic bank, where the Islamic bank is the entrepreneur (*mudarib)*, i.e. the party that manages the venture. In a *mudharabah* contract, profit will be distributed according to a pre-determined profit-sharing ratio. However, in the event of losses, the losses shall be borne solely by the *rabb al mal.* In the case of loss out of negligence in managing the funds, the *mudarib* is required to cover the loss.

As the relationship between the *mudarabah* depositors and the Islamic bank, a capital provider-entrepreneur relationship that entails profit-loss sharing, the evaluation of an Islamic bank's performance is important to the *mudarabah* depositors. This is due to the nature of the contract, in which the performance of the Islamic bank will determine the quantum of profits to be distributed to all *mudarabah* depositors. In the competitive global financial system, an Islamic bank's performance provides signal to depositors and shareholders alike, whether to invest or withdraw their funds from the bank.

One way of measuring an Islamic bank's performance and managerial efficiency is by analysing its return on equity. Return on equity (Profit after tax/Equity capital) is the net earnings per dollar of the Islamic bank's equity capital. As such, a high return on equity indicates a high degree of managerial efficiency.

Table 6 below shows that for the year 2005, the ROE of six Islamic banking institutions averages at 7.27%, the highest and the lowest being 13.37% and 4.44% respectively.

Table 6: Return on Equity (ROE) of Islamic banking institutions

	Islamic bank	**Profit after taxation and *zakat (RM)***	**Share capital (RM)**	**ROE (%)**
1.	Bank Islam Malaysia Berhad	- 507,807,000	730,181,000	NA
2.	Hong Leong Islamic Bank Berhad	23,194,000	521,937,000	4.44
3.	RHB Islamic Bank Berhad	41,484,000	565,154,000	7.34
4.	Maybank Berhad	241,607,000	1,806,571,000	13.37
5.	Bank Muamalat Malaysia Berhad	32,328,000	523,683,000	6.17
6.	EONCap Islamic Bank Berhad	20,686,000	410,747,000	5.04

Source: Annual Reports 2006

Profits are created from all financing activities conducted by the Islamic bank as a *mudarib*. But as a *mudarib*, the bank is also required by law to support the deposits it mobilises from the public, which is defined by regulatory capital of 8%, as required by Basel 1. In this way, the proportion of *mudarabah* deposits to the share capital as shown in Table 6 seems to show that the *mudarabah* model actually does not hold well in the

current Islamic banking environment. In fact, the bank who serves as a *mudarib* actually holds capital, in which it is less than the total deposits that the bank mobilises from the public. As shown in table 6, the share of *mudarabah* deposits is higher than the share capital, the highest being 982.72% or 9.82 times. On average, the *mudarabah* deposits are 5.47 times higher than the share capital.

Table 7: Ratio of *mudarabah* deposits to shareholders' capital

	Islamic bank	*Mudharabah* deposits	*Mudharabah* deposits/Share capital (%)
1.	Bank Islam Malaysia Berhad	8,376,629,000	1147.20
2.	Hong Leong Islamic Bank Berhad	3,929,304,000	752.83
3.	RHB Islamic Bank Berhad	3,778,185,000	668.52
4.	Maybank Berhad	5,281,273,000	292.34
5.	Bank Muamalat Malaysia Berhad	5,146,334,000	982.72
6.	EONCap Islamic Bank Berhad	2,839,268,000	691.24

Source: Annual Reports 2006

The performance of the *mudarib*, i.e. the Islamic banking firm is measured in two forms. The first one reflects her relationship with the depositors, which is measured by the return on *mudarabah* deposits. The other measurement refers to the returns on equity (ROE). ROE actually implies that the shareholders agreed to run the Islamic banking business on a *mudarabah* basis with bank's *mudarabah* depositors and on custodian basis with the *wadiah yad dhamanah* depositors. In the former, the bank shares the risks with depositors while in the latter, the bank guarantees the deposits and therefore abandons any form of profit-loss sharing arrangement with the *wadiah yad dhamanah* depositors.

In 2005, the industry average rate of return on a 12-month *mudarabah* deposits (ROMD) is 3.5%. The variance between the ROE and ROMD of six Islamic banking institutions as mentioned above reveals that the ROE is higher than the ROMD, the highest being 9.82, as recorded by Maybank, the largest Islamic banking institution in Malaysia. On average, the variance between ROE and ROMD is 3.69 .

Table 8: Return on *Mudarabah* deposits and Shareholders' Fund

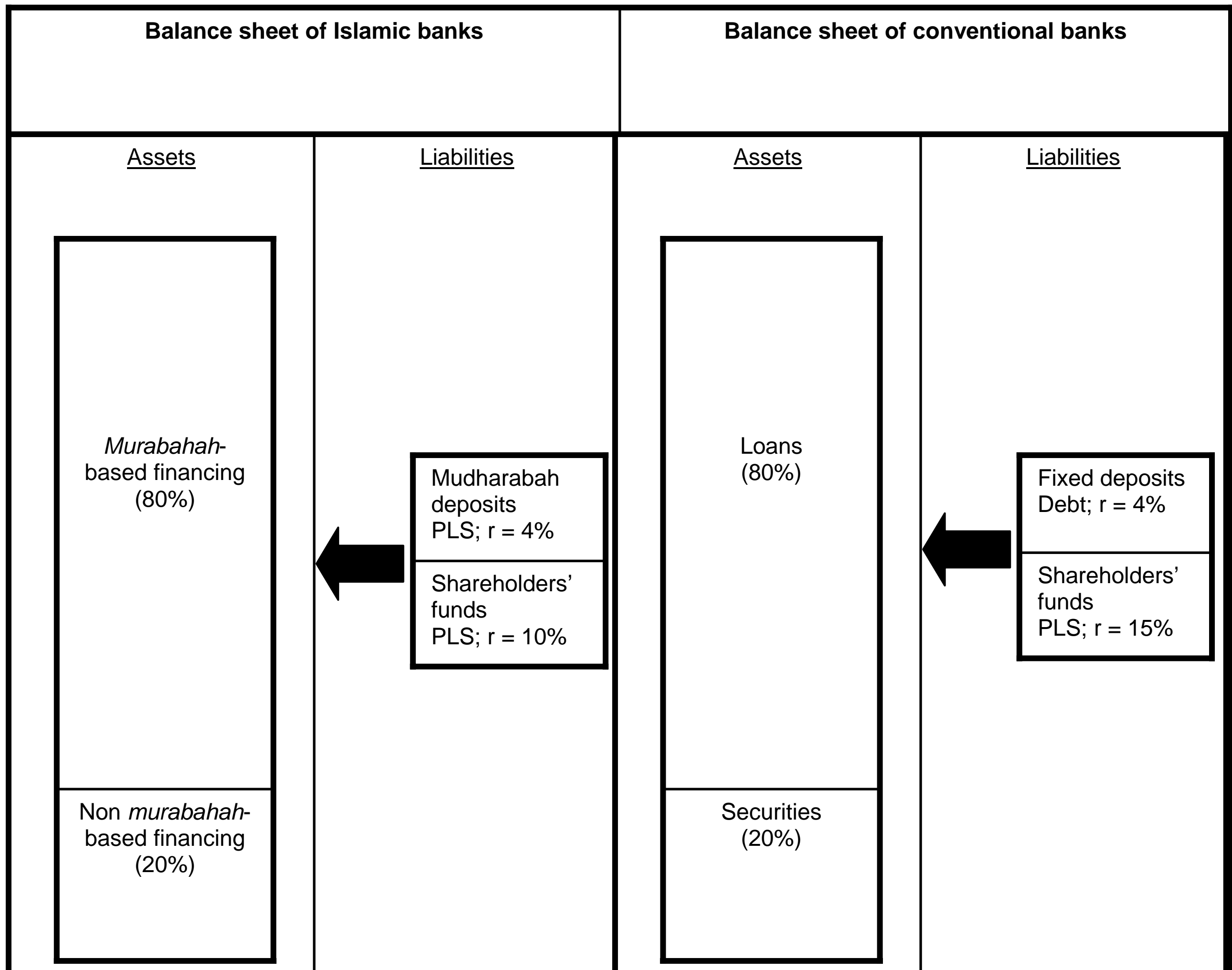
	Islamic bank	ROE (%)	12-month ROMD (%)	Variance (ROE-ROMD)
1.	Bank Islam Malaysia Berhad	NA	2.71	NA
2.	Hong Leong Islamic Bank Berhad	4.44	3.80	0.64
3.	RHB Islamic Bank Berhad	7.34	3.42	3.92
4.	Maybank Berhad	13.37	3.55	9.82
5.	Bank Muamalat Malaysia Berhad	6.17	3.40	2.77
6.	EONCap Islamic Bank Berhad	5.04	3.73	1.31

Source: Annual Reports 2006

8.0 Profit distribution to the *mudarabah* depositors and shareholders

With the liberalisation of the financial sector in Malaysia, Islamic banking institutions have to offer competitive rates of return at acceptable risk levels. As shown in the analysis conducted above, the *mudarabah* deposits leveraged by the Islamic banking institutions are significantly higher than the capital provided by the shareholders, i.e. 5.47 times on average. In view of the larger proportion of total deposits to bank's capital, are returns acquired by the depositors and shareholders reflect fairness and proportionate to the risks that they each party faces?

Figure 1: ROD and ROE



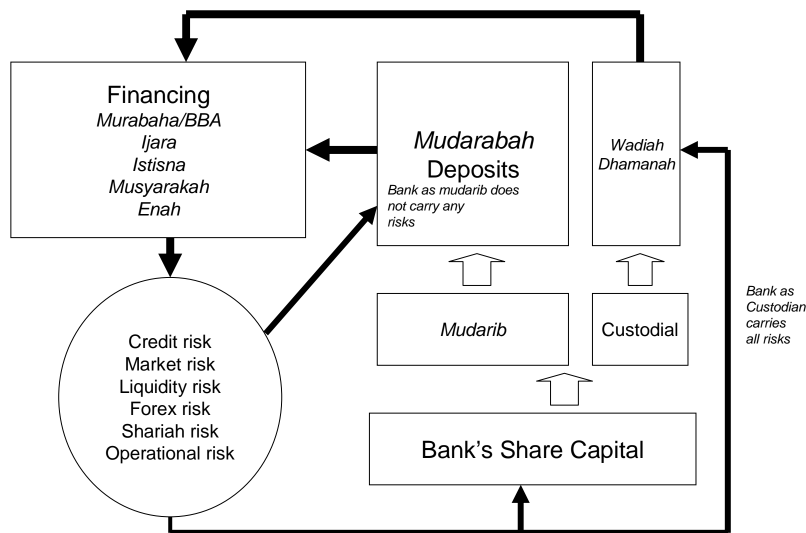
There are two possible reasons as to why the return on *mudarabah* deposits (ROMD) is considerably lower than the return on shareholders' capital (ROE). These are explained as follows:

1. The bank's capital absorbs all systematic and unsystematic risks: Although in theory, *mudarabah* deposits carry significant amount of market risk as defined by

the principles of *mudarabah*, this risk is in reality not operationally recognised by Islamic banking regulators. For example, *mudarabah* and *musharakah* financial products are allotted huge risk-weights up to 400 per cent by the Islamic Financial Service Board (IFSB). In view of such degree of risk taken by the bank's capital and practically none by *mudarabah* deposits, it is not surprising to see that *mudarabah* deposits command a similar earning capacity to their conventional counterpart. See Figure 2.

2. Investments in *murabahah* and other credit-related instruments carry small margins. In this way, only large volumes of transactions can secure larger earnings and net profits. The smaller ROEs of Islamic banks relative to conventional banks shows that this is true. This consequently generates lower ROMD relative to interest income from earned on fixed deposits.

Figure 2: Distribution of Risks Among Bank's Shareholders and Depositors



9.0 Conclusion

Although it is believed that Islamic banking runs on profit-sharing basis with depositors, it is evident that this equity principle has yet to be operationalised and reflected in the return on *mudarabah* deposit (ROMD) and return of bank capital (ROE). The large discrepancy between ROMD and ROE in Islamic banking seems to imply that *mudarabah* deposits are treated like fixed deposits, where banking risks are entirely borne by the bank's capital. For this reason, Islamic banking may not be able to find its competitive edge in profit-sharing or commercial ventures as stipulated by the Quran under the pretext of *al-bay'*. It is well understood that the current risk-appetite of bank stakeholders may not warrant the wholesale application of *mudarabah* in deposit mobilisation for fear of sudden withdrawals and bank runs, as a result of losses suffered by *mudarabah* depositors.