

A Design for Islamic Banking Rating System: An Integrated Approach

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In this paper, we analyze an alternative tool to assess the operational soundness of the Islamic banks. The tool should accommodate the salient features of the Islamic banks so that it is capable of being used as an effective supervisory tool not only for assessing the operational quality but also directing the Islamic banking authority when formulating the supervisory actions based on the supervisory review. Basically, the tool designed can still use the CAMELS rating system but with some adjustments on financial ratios and managerial assessment. Operationally, Islamic banking could use the CAMELS rating system when assessing the soundness of the Islamic banks. The difference would be on several aspects like: (1) the agency role in the capital assessment, (2) value added distribution, (3) identification of risks which do not appear in the conventional banks, and (4) the incorporation of the Islamic values and norms which particularly emphasis professionalism, competence to promote conducive and friendly atmosphere in the organization and other Islamic values like environment orientation besides transactionally shari'ah compliance. Islamic bank rating system is expected to benefit the supervisory process as it could reflect the operational soundness more objectively. The rating system would then be used as a base to formulate supervisory actions. Therefore, the rating system designed should be able to locate the problems occurred in the bank more precisely.

1. Introduction

Bank rating system has been one of important tools for banking authorities to assess the operational quality of the banking institutions.¹ A bank with high quality rating is expected to operate sustainably in the future. Each country might have different approach when conducting assessment, depending upon its peculiarity. Most countries use C(apital), A(Asset quality), M(angement), E(arning), L(iquidity) and S(ensitivity to market risk) rating system as the framework for conducting supervisory activities. Some countries use CAEL when conducting the assessment of bank operational quality. The CAMELS rating system has also

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¹ The need to have a prudential set of banking regulations has been outlined in the Basle Core Principles (Basle Committee (1997) and Basle Committee (1999b) and also Hall (1997)).

evolved in time. The components cover quantitative aspects as well as qualitative, like supervisory judgements.

The rapid development of Indonesian Islamic banking industry in Indonesia in the last few years has promising optimism for further development that would benefit the Indonesian economy in general. The development would also pose challenge to the authority as it requires a different set of banking regulations. Conceptually, Islamic banking should be financially sound and shari'ah-compliant so that the system could always maintain a high level of public confidence. Islamic bank rating system designed should be able to promote the financial soundness and the salient features of the Islamic banking operations. The operational differences of Islamic banking operations as compared to the conventional one lie upon several aspects. First, all the financial transactions should have shari'ah endorsement from the shari'ah authority which cover the legality of the transaction and the object transacted. Second, the different financial structure would require different financial ratios and methods when assessing the financial soundness. The implementation of sharing principle, for instance, would require modification in the solvency indicators and application of addition indicators to indicate the agency role played by the Islamic bank.

The design for Islamic banking regulation, as a matter of fact, should be able to benefit from the current development achieved in the conventional banking system. The latest framework of the CAMELS rating system has been improved to describe the structural soundness of the bank which has been adjusted by risk assessment. This approach would be in line with the implementation of Risk Based Supervision (RBS) as a new approach towards more effective banking supervision activities.

The paper proceeds as follows. The chapter 2 discusses the background of the need to design an appropriate bank rating system in order to promote the soundness of the banking operations. The chapter 3 discusses the salient features of the Islamic banking operation that differentiates the Islamic banking system from the conventional one. The chapter 4 discusses the possible approach to an appropriate design of Islamic banking rating system with a comprehensive scope. The chapter 5 concludes the paper.

2. Background Analysis

2.1. Bank Rating System As An Indicator for Operational Sustainability

Banking institutions are expected to operate sustainably in order to contribute to the economic development through intermediation process i.e. promoting

investment activities through public funds mobilization.² However, the banking authority should also concern about possible systemic costs resulted from bank failures that would ultimately put expensive burden to the whole stakeholders.

$$NW_A^\infty = \lim_{t \rightarrow \infty} NetWorth(A(t)) > 0 \tag{2.1}$$

Equation (2.1) describes networth (NW) of a bank that is expected to have a positive value until the periode of infinity. This is, in fact, in line with the treatment of the banking system as a highly regulated industry (see Dewatripont and Tirole (1994), Fama (1985) and Wesson (1995)).

Public regulation should be in place when the costs resulted from the failures exceed the private costs.(Hart et.al., 1999)

The banking authority would, in practise, minimize the supervisory cost that is resulted from either the monitoring cost or the cost of bailing-out (see Llewellyn (1999a)). This calculation would be one of significant factors when implementing the exit policy. The banking authority might opt to cease the operational activities of a bank if the condition of the bank indicates a higher maintenance cost if compared to bail-out cost. Contrary wise, the banking authority might opt to continue the operation of the bank if the maintenance cost is lower than the bail-out cost.³ An operationally prudent and efficient bank implies a lower maintenance cost which technically is expressed below.

$$Min \left[\pi C_{BO} + (1 - \pi) \int_t^\infty \Gamma C_M dt \right] \tag{2.2}$$

Where π is the probability of having bail-out, C_{BO} is the cost resulted from the bail out process, C_M is the maintenance cost, and $\Gamma = 1/\rho$ is the discount rate. The first expression πC_{BO} describes the cost expectation from bail-out, whilst the second expression $(1 - \pi) \int_t^\infty \Gamma C_M dt$ describes expectation of present value of the maintenance cost accrued from t to infinity (see Greuning et.al (2000) and Hall (1996b)). The determining variables for the event probability, the banking authority would choose a series of dependent variables which are considered capable of

² There have been a number of academic papers discussing the implementation of a fractional reserve banking and its implication to its operational stability (see Benston et.al. (1976, Campbell et.al. (1980), Fama (1980) and Diamond (1984).

³ In depth discussion on the systemic costs could be seen in Campbell (1980), Diamond (1983) and Llewellyn (1999b) and (1997).

reflecting the actual condition of a bank; $\pi : \pi(x_1, \dots, x_{n-1}, x_n)$. The assumption is that if the result of the calculation of the independent variables for Bank A is higher than Bank B ($\pi_A > \pi_B$), then the probability for longer operational sustainability for Bank A is higher than that of Bank B ($P(NW_A^\infty > 0) > P(NW_B^\infty > 0)$). As mentioned earlier, the banking authority would tend to adopt CAMELS framework in assessing the level of soundness of a bank.

Capital – Indicator indicating the operational sustainability of a bank particularly when facing temporary financial shocks so that the bank would consistently operate in its risk taking capacity. Externally, capital would also indicate the potential systemic cost since it reflects the actual networth of the bank in the event of default. Therefore, most banking authorities use capital as important aspect to support exit policy. The aspects cover capital adequacy ratio (CAR), capital composition, trend of the capital, capital coverage on the risky assets, internal support on capital growth and access to sources of capital including the existing shareholders.

Asset quality – Basically, the profit or loss of the bank depends upon the quality of its earning assets. The higher the quality of the assets, the higher the bank would have the operational profit in the long run. The assessment process would also describe the capability of the bank in spreading the risk, and recovering the problem loan. Specifically, the aspects cover general figure of non performing loans, concentrated loan on particular debtors and sectors, credit granting process, documentation and treatment on non performing assets.

Management – The quality of the management would bring impact on the bank operations in the long run. The assessment of the management quality covers the general management, risk management and compliance. General management covers structure and composition of the management, the quality of corporate governance, transparency and effectiveness of the committee. Risk management covers supervisory process of the commissioners, policies and procedures, risk management process and comprehensive internal control. The bank would also be assess its compliance to particular regulation such as legal lending limit, net open position, know your customer and other commitment and specified regulations.

Earning – The level of earning indicates the competitiveness of the bank in the industry. A bank with a high level of efficiency would be expected to be more robust in facing fierce competition by acquiring bigger share in the market as it could sell products with a relatively lower price. The assessment also shows how the bank would financially sustainable. The aspects cover return on asset, return on equity, net interest margin, operational efficiency, trend of operational earnings, and the trend of operational earnings.

Liquidity – The level of liquidity indicates the capability of a bank in optimizing prudential aspect and profitability at the same time. It has been

evidence how illiquidity could throw a solvent bank into insolvency since the bank were forced to liquidate its asset far under par value to fulfil its current financial obligation. The aspects cover the composition of current asset and liabilities, short term maturity mismatch, cashflow projection and deposits.

Sensitivity to Market Risk – Assessing the capability of an Islamic bank in identifying, measuring, monitoring and controlling the exposure to market risk according to business volume and its complexity. The aspects cover the capital accumulations available for covering adverse movement of interest rate, exchange rate, the implementation of market risk management and effectiveness in the implementation of internal control.

Recent development has also indicated the involvement of qualitative judgement as additional factors to improve the quality of the assessment. The assessment report covers both the financial ratios and also the management quality when achieving particular financial objectives. The assessment report on operational soundness of the bank is normally used by the banking authority as an internal guidance to set supervisory actions. This is conducted in the light of risk based supervision that focuses the activities onto the critical points and adopt the forward looking principle.

2.2 Bank Rating System in Different Countries

The implementation of CAMELS rating system may vary from country to country. The US banking authorities determine a set of financial performance indicators set in a composite assessment that reflect the evaluation of standards, criterias dan financial principles and operations of those institutions. The objective of the assessment is to identify the deficiencies in terms of financial capability, quality of the operations, risk management and compliance with prudential standards that requires supervisory actions. The Financial Services Authority (FSA) put the assessment spots on nearly the same aspects with the US banking authority plus several additional aspects i.e. Business analysis, internal control, organization and management quality. The assessment framework is known as CAMELB-COM. Different from the US and British authorities, the Belgian bank rating system does not specifically assess the capital, asset quality, management quality, earning and bank liquidity like in CAMEL. The bank is assessed on the aspects of inherent risk, risk management and risk controlling. The French banking authority (The General Secretaria of the Commision Bancaire) applies three supervisory appliances to assess the risks of the banks. The first appliance focuses on the profitability and the capital structure of the banks. The indicators are compiled industrially to describe the level of efficiency in the industry level. The second appliance is designed to detect potential deficiencies at the earliest possible by analyzing all the components relating to the bank activities and external factors that affect the bank financially. Based on the analysis, the banking authority sets the supervisory actions to rectify the adverse condition faced by the bank. The third

appliance is an automated system fed by internal as well as external database to indicate the early symptoms of potential problems. Other countries like South Korea, Malaysia implement the US type CAMELS rating system

3. Salient Features of Islamic Banking and Oversight Requirement

3.1. The Operational Foundation of Islamic Banking

the birth of Islamic economics and finance is driven by the eagerness of Muslim community to have a financial system (including banking system) that incorporated Islamic values in the activities as it is believed to promote sustainable development of the society comprehensively, not only economically (see Ahmed (1983) and Khan (1983)). The Islamic principles characterizing the economic system that are considered unique as compared to the mainstream one are as follows:

Ethical investment – Islamic economics requires all transactions are used to facilitate activities which are considered *ḥalāl*, such as: fulfilling the requirements in preserving the environment, avoiding projects that can cause damage to the public morality e.g. Drugs, narcotics and prostitutions. These issues, partially, have also been raised by international community when proposing a new method in calculating the true financial profit by a company, which has substantially putting the environmental cost into account. It is believed that the long term economic system can only be sustained by moral fibres within the economic system. The economic development ignoring moral values would loose its strength in the long run since the quality of the players as one of the supporting components that characterize the system would deteriorate.

The prohibition of ribā (usury) and the obligation of zakāh – The essence of prohibition of taking usury and the fulfilment in paying *zakāh* is actually forming the incentive mechanism so that the idle funds would be pushed into real sector of economy. While in the micro level, the implementation of sharing concept (as the replacement of interest in the transaction mechanism) is believed to bolster the feeling of brotherhood since both parties are sitting in the same position when facing the uncertainty. This idea has, in fact, been raised by mainstream economist that suggested the application of stamp duty on the notes when it is held idle. The reason behind his suggestion is because the notes are considered as public goods that should be in circulation so that everybody would have a fair chance to use as measure of exchange. Major prominent economists, at least like Krugman and Weitzman, state that equity based economy is more stable in facing an economic disturbance. It is understandable since in the equity based economy, the burden resulted from any economic disturbance will be shared by the wider economic participants.

Non-speculative transactions – The prohibition of conducting speculative activities, particularly the transaction with no real underlying transaction, is essentially aimed at preventing a financial detachment in an economic system; although the application of this concept would reduce the level of liquidity in the market as a trade-off. The more efficient the intermediary institution deliver the financing, the more effective the task is to be carried out. However, this would create contradiction to the current development achieved in the financial market in which the players are free to create any instruments which is considered acceptable to the market and could potentially generate substantial profits.

Besides those three basic distinctive features, Islamic contents relating to the financial best practise also promote other values which are very much in line with the universal perception towards having a safe and sound financial system. The implementation of the concept of shiddiq (honesty), fathanah (professionalism and competence), *amānah* (responsibility) and tabligh (openness and education) are in accordance with the international practises towards the implementation of good corporate governance and minimum level of transparency which have been addressed internationally. In short, Islamic economics and finance could be perceived to promote professionalism, competence and good governance universally besides ethical contents which is typical to the Islamic finance.

Those salient features mentioned above would bring operational particularities as compared to the conventional one. First, the presence of investmetn accounts that based on profit and loss sharing would shift the fiduciary role performed by the bank to the agency role proportionate to the intensity of the investment account presented in a particular Islamic bank. This would bring a shift on the paradigm when calculating the capital adequacy of the Islamic bank. Second, the interpretation of Islamic values could also be extended to the managerial aspects. Some relevant Islamic values can be implemented to improve the quality of GCG, transparency and ethics; besides the compliance with the particular sharī'ah transactional arrangements. Third, the implementation of the Islamic norms would bring the differences when conducting value added distribution which cover not only the management and the share holders of the Islamic banks, but also the stake holders of the Islamic banks. Fourth, the difference in determining the rate of returns to the investors of the Islamic banks would also bring possibility of an Islamic bank to be exposed to the commercial displacement risk. Although conceptually the Islamic banks do not use the interest rate as the bechmark when determining the return to the investor, they cannot ignore the potential of the investors to suddenly shift their fund to other financial institutions that commit for a relatively higher of returns.

3.2. The Oversight Requirements

One of important aspects that should be described to build an efficient Islamic banking system is the oversight structure that would allow the regulatory and

supervisory functions operating well. In the banking sector, particularly, the implementation of the Basle standards would impact on the strengthening the capability of Islamic banking authority to maintain the soundness of Islamic banking system. The regulatory framework applied should be consistent to promote the quality of the banking operation and, at the same time, be flexible enough to accommodate the dynamics in the market that are caused by the product innovation and the technological invention. However, the flexibility to adopt the market changes should consistently reflect the uniqueness of Islamic banking operations as its distinctive features (see Farahbaskh (1998)).

Operationally, the oversight framework should also be able to accommodate the prospective changes in the market. In the traditional financial system, the saving-investment process and trading activities are conducted mostly through banking system. The investors are not supplied with adequate level information allowing them to objectively assess the risk inherently contained; and therefore, most investors would choose banking institutions to invest their funds whilst maintaining minimum level of liquidity required. The tradition banking simply transforms liquidity which is accumulated through fractional reserve system into non-marketable and non-liquid investment. In the modern days, banking industry around the world faces formidable challenges from other non-bank financial institutions. They are losing some of their past monopolies and comparative advantages which have underpinned their position in the financial system. Due to the impact of the technological innovation and regulatory shift, the entry barrier into banking becomes lower. Consequently, banks are facing competition from a wider range of actual and potential suppliers of banking services: the capital market, money market, non-bank financial institution. The banks are now expanding into new areas: insurance, life insurance, unit trusts and other financial services that were not done in the past. As entry and regulatory barriers are eroded banks and other financial institutions will face asymmetric competition from a wider range of potential competitors. Some large corporate customers have become more creditworthy than their bankers, in which case it is not surprising that they both displace banks and to some extent, provide limited range of banking services to others. Technological inventions have a powerful effect on the mode of delivering financial services such as direct banking including phone banking and on line banking. Development in technology have the effect that financial systems are substantially over-supplied with infrastructure and overlapping delivery system through a duplication of traditional delivery system. In some models, the existence of banks is viewed as an endogenous response to imperfect and incomplete markets. The process of spectrum filling reduces the number and extent of discontinuities in the range of market instruments. The borrowers have now a wider range of capital market instruments. In addition, new information and trading technology has reduced information and transaction cost in capital markets relative to bank lending cost. Supported by the technological development, the banking and financial transactions become borderless as a number of internationally active

banks and financial institutions try to facilitate international financial activities more actively. Islamic banking and financial industry and should have an explicit and transparent regulatory framework that would effectively define its operating areas to cope with prospective changes that would eventually affect the scope of supervision and regulation.⁴

4. A Comprehensive Approach Towards Structural Assessment

4.1. The Objectives of the Assessment on Islamic Banking Operational Soundness

Risk based supervision has become a best practises universally for conventional banking as well as Islamic banking. That is along with the vast developments in the economy that implies to the complexity of the financial transactions and its inherent risks. As mentioned earlier, the Islamic banking should be able to benefit from the current development in the mainstream banking as far as no contradiction occurred within the implementation process. The Islamic banking industry might also use the same CAMELS framework when designing an appropriate rating system for Islamic banking, but with some improvement and modifications to adopt the typical differences in the Islamic banking operations. Like in conventional system, the rating system designed is used as one significant base in conducting supervisory actions. The supervisory authority should have strong confidence when letting the particular Islamic bank to operate or even when deciding to stop an operation of one particular Islāmī bank. Besides playing a role as significant source of information regarding the financial soundness, the regulations set would also play a role as an effective tool when shaping the operations of an Islamic bank. The Islamic bank rating system is also meant to promote Islamic norms being implemented comprehensively. Therefore, the Islamic bank rating system might cover a wider scope of assessment as compared to the conventional one. It should, at least, contain the prudential aspects which apply universally plus typical salient features, such as compliance to the sharī'ah principles, adjustment of sharing concept into the assessment tools (i.e. Financial ratios and thresholds) and the implementation of Islamic norms in the management. In the long term, the Islamic bank rating system should be capable of directing the Islamic banks to the ideal state of operations, including the products offered and the management style. Exhibit 1 shows the comparison between the components of the conventional bank rating system as compared to the Islamic bank rating system.

⁴ Khan et.al (2000) discuss the possible regulatory and supervisory regime applied to the Islamic banking system after considering the possible adoption of existing prudential regulations applied to the conventional banking as long as it is still relevant to the Islamic values besides also trying to implement Islamic values in the concept.

Exhibit 1: The components of bank rating systems: a comparison

Components	Conventional banking	Islamic Banking	Notes
Capital	Solvency level	The same	-
	Prediction	The same	-
	-	Agency role	The existence of investment deposit puts the issue of agency role as an important aspect
Asset quality	Probability of default	The same	-
	-	Variable income	The existence of variable income assets
	Performance	The same	-
Management quality	Concentration risk	The same	-
	Administration	The same	-
	MU – GCG, transparency and efficiency	The same	-
Management quality	-	MU - Shari'ah value in management	There are Islamic values that should be reflected in terms of professionalism, morality and brotherhood
	MR – Identification, measurement, monitoring and control	The same	-
	Comp – Prudential	The same	-
Earning	-	Comp – Shari'ah compliance	Management capability to comply with the existing regulations
	BEP – Efficiency	The same	-
	-	BEP - Pricing policy	Assessing the pattern when determining the cost of capital-nya
Liquidity	Industrial comp – ROE/ROA	The same	-
	-	ROE/benefit	Measuring the value added resulted and compare it with the non financial aspects
	Short term mismatch	The same	-
Sensitivity to market risk	-	Short term mismatch- Displacement risk	Measuring the potential of the funds displacement resulted from the dynamics of market indices
	Structural mismatch	The same	-
	Interest rate risk	Schenario analysis on commercial displacement risk	Measuring the potential of the funds displacement resulted from the dynamics of market indices
	Exchange rate risk	Idem	-

Generally, Islamic bank rating system might have the same objectives except: the agency role at the liabilities side, the existence of variable income assets, the need to incorporate Islamic values in the management and the compliance with the internal policies, pricing policy, value added distribution principles and the possibility of facing displacement risk as a result of dynamics of the market indices. The rating system implemented should be able to describe the actual financial condition as well as the benefits (including socially) from the existence of the Islamic banks which, indeed, reflects the *maṣlaḥat* as its principles of operations.

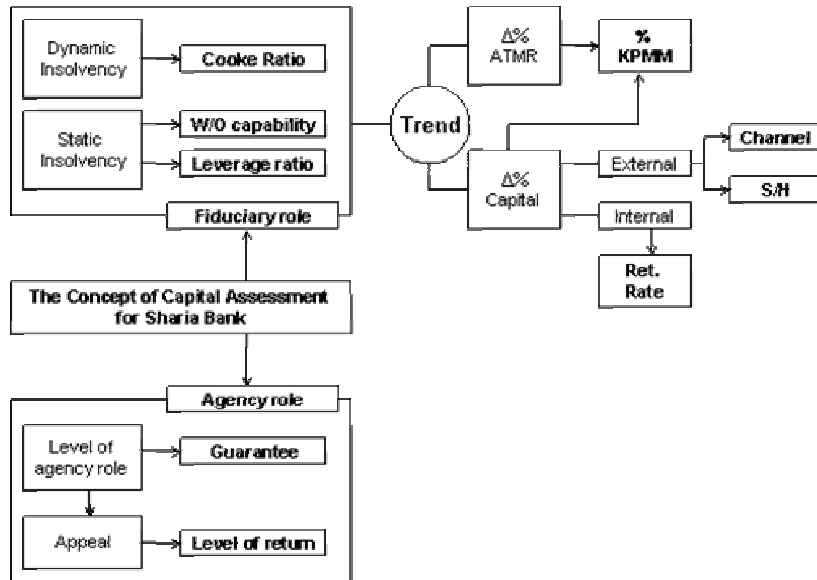
Technically, the assessment process would cover nearly the same aspects except for particular aspects as follows. First, the assessment tools for assessing the financial soundness would be adjusted into the structure of Islamic banking. Second, it would cover the Islamic objectives that have not been covered in the conventional framework, such as ethical investment, shari'ah compliance and the adoption of Islamic values in the banking operations.

4.2. The Components of Islamic Bank Rating System

4.2.1. The Component of Capital

The analysis of capital is conducted to prevent the insolvency in the banking system since any negative networth would eventually be levied on the public as the tax payers. As indicated in Exhibit 2, it is proposed that the capital assessment covers three major areas: the level of solvability which reflects bank's capability in performing fiduciary role, the trends of the solvability and the level agency role performed by the bank (see Appendix- 1 for ratios and details).

Exhibit 2: The indicators used for the bank's capital assessment



There are three indicators possibly used to indicate the level of bank's solvency with different interpretations. First is the Cooke ratio which is known widely as Capital Adequacy Requirement (CAR).⁵ Second is the Equity Coverage Ratio that reflects the capability of the own capital to effectively cover the potential loss resulted from bank's financial exposures. Third is the leverage ratio that indicates the estimate of the residual claims of the bank.

Besides the indicators that reflects the current capital condition, it is also recommended to assess the trends of the solvency level based on some assumptions and prediction. There are three sources of information that can be used: internal support of capital, external support of capital and the business expansion. The internal support could be assessed from the dividen policy set by the bank's management as indicated from retention rate. This would reflect the internal commitment to stay in the business by accumulating parts of the financial profit to build a stronger capital base. The external support could also be considered as one assumption when predicting the future risk absorbing capacity as long as there is strong indication towards the realization. The assessment on the business expansion can be predicted from the bank's business plan which is regularly reported to the banking supervisory authority. The level of agency role of an Islamic bank can be seen from proportion of the profit and loss sharing deposits on

⁵ The calculation of the CAR for Islamic bank following the recommendation by the IFSB that structurally differs the assets based on its sources of funds

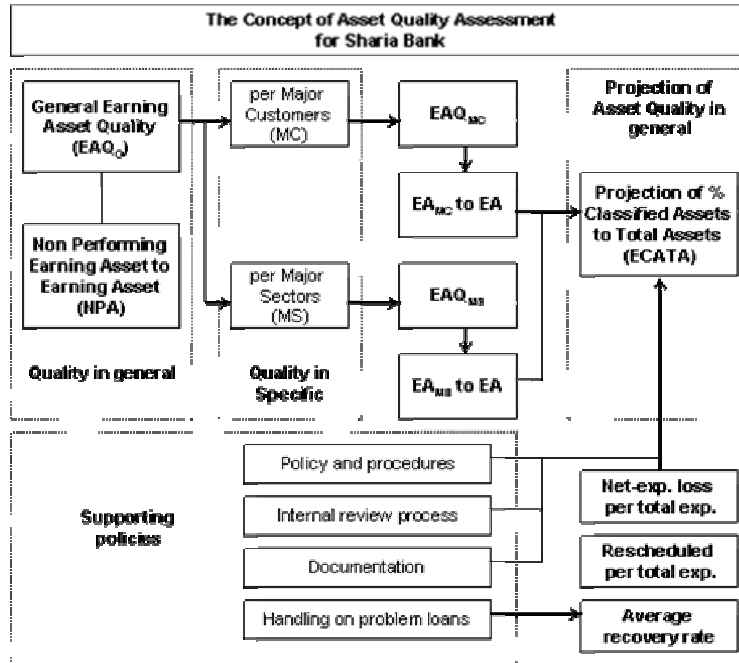
its liabilities. The higher the proportion, the higher the bank performs its agency role. There are three possible financial ratios to assess the agency role. First is the ratio of unrestricted investment account holder to the total deposits. This would simply reflect intensity of agency role performed. Second is ratio between the Tier-1 capital to the unrestricted investment account that reflects the agency costs to the shareholders, and third is the level of return to the restricted investment account holders.

4.2.2. The Component of Earning Asset Quality Assessment

The Islamic banking can use almost the same principles and techniques to assess the earning asset quality that is currently used by the conventional banking. As indicated in the Exhibit 3, the assessment process would concentrate on four main areas: general asset quality assessment, specific asset quality assessment which covers specifically large exposure customers and business sectors, supporting policies implemented to promote sound granting process and the projection of asset quality projection in general which is based on the first three assessments (see Appendix-2 for ratios and details).

The general assessment on earning asset quality covers the potential loss of the earning asset (proportionated to the total earning assets) and the proportion of the non performing assets to the total earning assets. The general assessment for earning asset quality can also be applied to assess the risk specifically in the particular major customers and sector where the banks get into.

Exhibit 3: Indicators used for earning asset quality assessment



Besides the quantitative aspects reflected in the financial ratios, the assessment of earning asset quality should also cover the qualitative aspects, such as the supporting policies, as the significant aspect when drawing the conclusion. The qualitative aspects cover the policy and procedure quality, internal review process, documentation process. Normally, the policy assessment would also cover the capability of the bank when handling the problem financing would ultimately be indicated by high recovery rate. This should be supported by a high haircut level and appropriate representation of rescheduled assets.

4.2.3. Component of Management Quality Assessment

The management quality assessment is suggested covers a wider area that it used to. The suggested framework would cover general bank management, the qualitative aspects of risk management process, and the compliance to the prudential banking regulations. This, in fact, adopts the current best practises in the western banking system which has been evolving through times and experiences. Besides adopting the current developments from the western banking system, the concept designed should also contain Islamic values and norms which are reflected from its operations. This is quite important since the regulations set should also

promote the implementation of Islamic values and norm which is demanded by the customers.⁶

Exhibit 3.(a): Islamic values relating to the general management aspects

Supporting indicators	Notes	Relevant Islamic values
Structure and composition of bank management	Bank has an effective composition of boards of commissioners that is in accordance with the business volume and the level of complexity in the daily operations. Besides capacity in financial management, the board should also presenting positive attitude, manners and morality.	Adil – positioning the personnel appropriately according to their competences; Mas’uliyah – accountability in performing the tasks; resources optimalization; Intaj – high productivity; <i>ihsān</i> and Fathanah – professionalism; Divine leadership – financial and spiritual leadership.
Capacity to handle possible conflict of interest	Internal management system designed could minimize the potential moral hazard. Management as the executor has an integrity in decision making process.	ijabiyah - Positive attitude when facing ‘agency problem’ resulted from potential conflict of interest; Istiqamah – compliance with the operational policy; Mas’uliyah – Accountability when performing the tasks.
Managerial independency	The members of the board have capacity to independently take action in anticipating any possible interference causing deterioration of the GCG.	Independen – Independency in the decision making process and robust from external interference.

⁶ In depth discussion on the Islamic perspectives towards management system could be found in Al-Buraey (1990).

Supporting indicators	Notes	Relevant Islamic values
Capacity in maintaining the quality of the GCG	Capacity to avoid any activity that potentially deteriorate the quality of GCG like unsound financing granting process. Sound relationship among the work force which is indicated by harmony and effective official chains among individuals in the bank.	Iman – clear objectives in all levels of the management Ahlaq – the management has positive intention when performing the tasks; Divine leadership – adequate cares to the work force; <i>amānah</i> and loyal – stick to the commitment and be responsible; Jama’ah – managerial cohesiveness in achieving the objectives; Communicative – adequate communication skill; Efficiency – cost consciousness; Ikhlas – sincerity Ishlah – continual improvement
Informational transparency and educations	Adequate level of transparency in implementing GCG to the stakeholders to mitigate the reputation risk.	Learning organization – adequate informational dissemination in the management and to the customers in general. Sidiq – honesty.
Effectivity of the committee	Adequate understanding by the board in the area of risk management to effectively evaluate their performance and formulate the business strategy.	Fathanah – professionalism.

Supporting indicators	Notes	Relevant Islamic values
Fair value added distribution	Mechanism in place to ensure value added distribution internally as well as externally.	Adil – just in distributing value added including management, customers and the environment; Tawazun – balance in achieving the objective materially and spiritually
Brotherhood	Effective mechanism in place to promote brotherhood and positive cohesiveness internally as well as externally.	Ukhuwah – positive relationship internally as well as externally Musyawarah – maşlahat oriented decision making process Silaturrahim – close and warm relationship
Social education	Effective mechanism in place for appropriate positioning financially as well as the activities building up the quality of human being in general	Tabligh – performing social education to the stakeholders
Service excellence	Memiliki motif pelayanan yang tinggi terutama terhadap nasabah	Ri'āyah – the spirit to deliver the best to the stakeholders

Assessment on the quality of general management

The areas of the assessment on the general management assessment covers several aspects i.e. The structure and the composition of the bank management; the capability to handle possible conflict of interest; the managerial independency; the implementation of Good Corporate Governance; informational transparency and educations; and, the performance of the committee. Sharī'ah principles, in practisal, contain managerial guidances that are, in fact, in line with current management concept promoting a higher level of operational efficiency. More over, Islamic values has a wider coverage which are illustrated in Exhibit 3.(a). It is seen that Islamic principles have close relationship to the factors supporting the general operational soundness. In specific, the aspects that have not been covered in the current best practises are: the quality of leadership in both aspects, financially and spiritually; the capacity to handle the possible conflict of interest; the just position among the managerial components leading to the implementation of GCG.

Other indicators that have not been covered in the the assessment on general management include fair value added distributions, brotherhood, social education and service excellence. Islamic values promote the concern on the fair value added distribution by the bank including the community and environment preservation; brotherhood enabling a fruitful participation in the decision making process including facilitating the voice of strategic investors of an Islamic bank to participate in the decision making process; social education; and service excellence.

Exhibit 4.(b): Compliance to the banking regulations

Supporting indicators	Notes	Relevant Islamic values
Legal lending limit	Emphasizing the mitigation on concentration risk.	Qunuunuyah – compliance with the existing regulations.
Net open position	Emphasizing the mitigation on the currency risk.	
Know your customers	Compliance with the regulation assuring all the funds coming from the legitimate funds.	Qunuunuyah – compliance to the existing regulation. Niat – each financing process should be believed to generate maşlahat
Compliance to the shari‘ah principles	Internal corrective mechanism to ensure a low level of compliance on shari‘ah regulations.	Syar’iyyah – Compliance with the matters considered as prohibited such as: maysir, immorality, <i>gharar</i> , <i>ḥarām</i> , <i>ribā</i> , <i>iḥtikār</i> , and dangerous.
Ethical investment	Besides shari‘ah compliance, management should also concern about aspects which have moral dimansion such as environment etc.	Moral Environmental consciousness

Assessment for the quality of risk management

In the risk management assessment, the Islamic values are conceptually in line with the best practises. The assessment covers the supervisory activities by the top management on all banking activities, policy adequacy, procedures and limits; risk management process (identification, measurement, monitoring and mitigation); and internal management. The Islamic values relating to the risk management cover supervisory principles through check and recheck culture (*tabayyun*), good administration (*idarah*), realistic planning (*tadarruj*), continual evaluation (*muhasabah*), continual improvement (*tawakal*), fulfilment to the commitment by the management (*wafa*) and appropriatness in the risk management (*wasathan*).

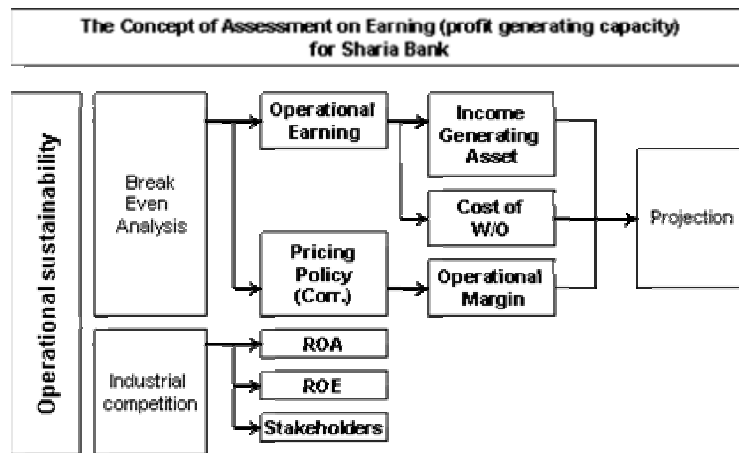
Assessment for the bank compliance with the banking regulation

Islamic values promote compliance with the regulations issued by the regulatory body as the party that performs the role in achieving *maṣlaḥat* for the community. The regulations issued would cover both financial aspect and *sharīʿah* aspect as shown in the Exhibit 4.(b).

4.2.4. Components of Earning Assessment

Earning asset quality indicated the ability of an Islamic bank to operate sustainably. The assessment is represented by two main indicators i.e. Break even analysis and the industrial competitiveness (see details in Appendix-3 for ratios and details).

Exhibit 4: Indicators use in earning quality assessment



Break-even analysis focuses the analysis on describing the banks capacity to operate sustainably based on the actual activities. The first tool is the operational earning to expenses ratio. The second ratio (portfolio composition ratio) describes the actual percentage of earning assets that sustain the bank operations. The third ratio is proposed to describe the proportion of operational expenses that is disposed as write off. The fourth ratio is operational margin reflecting the operational surplus or deficit as a result of the business activities.

Analysis on the industrial competitiveness would involve three indicating ratios. As it has widely used, the first two indicators are Return on Assets (ROA) and Return on Equity (ROE). The ROA indicates the bank's efficiency level if compared to the industrial benchmark; whilst the ROE indicates level of attractiveness of the industry to the potential investors. Besides those two ratios, the additional ratio that reflects the bank's competitiveness is the correlation ratio of the return of the Islamic banks to the investors. The more uncorrelated the return to

the investors, the more the Islamic bank independent from adverse effect resulted from the dynamics of the interest rate i.e. The investors are not easily shift because of the rate differential between the two industries.

4.2.5. Components of Liquidity Assessment,

Liquidity is one of important aspect in the banking operation since its operation is based on public confidence. Illiquidity could throw solvent bank into insolvency since it has to sell its assets far below its market values to fulfil its current financial obligations.

Exhibit 5 (a): Component of liabilities and its characteristic

No	Items	Terms	Maturity
1	Short term liabilities (including interbank liabilities)	Short	Certain
2	Medium and long term liabilities	Medium to long term	Certain
3	Expected withdrawal of deposit funds	Depends upon the confidence level of the depositors	Uncertain
4	Equity	Infinity	Certain

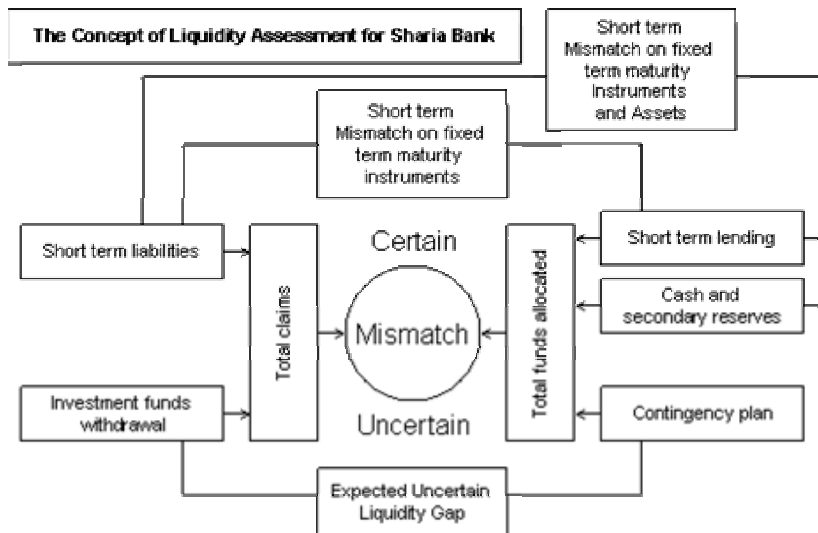
As a financial intermediary institution, an Islamic bank has a certain level of similarities on the liquidity profile to the conventional bank. An Islamic bank has short, medium and long terms of products with certain periods of maturity and uncertain period of maturity. Exhibit 5 (a) and 5 (b) describe the components of the asset and liabilities side of an Islamic bank and its characteristics.

Exhibit 5 (b): Component of asset and its characteristic

No	Items	Terms	Maturity
1	Cash (including secondary reserves owned by the bank)	Short	Certain
2	Short term lending (including interbank claims)	Short	Certain
3	Medium term lending	Medium	Certain
4	Long term investment	Long term	Certain
5	Channelling (including strategic alliences and access to financial market)	Depends upon the confidence level of the lenders and the liquidity condition of the market	Uncertain

A soundly operated Islamic bank should be able to synchronize the possible liquidity mismatch to minimize unnecessary costs resulted from ‘panic’ sale of the assets.

Exhibit 5 (c): Indicators used on the liquidity assessment



The liquidity assessment is conducted to describe the potential liquidity mismatch resulted from imbalance of scheduled assets and liabilities (financial products with exact maturity periods). The first ratio describes the simple composition of scheduled short term financial structure leading to financial mismatch (short term mismatch ratio). The second ratio adds two additional components (cash and secondary reserves) to the first ratio to describe the potential current mismatch more representatively.

The third ratio describes the potential withdrawal by the core depositors. The ratio simply finds the proportion of the core depositors to the total deposit funds. A higher ratio indicates a higher possibility of the bank being exposed to a significant withdrawal of the deposit funds. The fourth ratio describes the growth of the core deposit which represents the future dependence of the bank on the core depositors. In order to anticipate the unexpected withdrawal, an Islamic bank would also be expected to set up a strategic alliance with other Islamic financial institutions to establish a line for mutual liquidity assistance. The commitment would be quantitatively measured in the fifth ratio.

4.2.6. Components Used for Sensitivity to Market Risk Assessment

Due to the higher exposure to the market variables, Islamic banks are also experienced to have potential losses as a result of the dynamics in the market

variables. The market variables include interest rate, commodity price and exchange rates. As mentioned earlier, the Islamic banks face commercial displacement risk as a result of lower yields given by the Islamic banks as compared to the conventional ones. The Islamic banks would also be exposed to the price risk when holding commodities in the *salam*-type of transactions. The Islamic banks would also be exposed to exchange rate risk since it could conduct cross currencies business activities. The banks are supposed to quantify the risks and compared the potential losses to the bank capital (see Appendix-4 for ratios and details). The choice of the methods for the assessments is given up to the Islamic banks.

5. Concluding Remarks

Operationally, Islamic banking could use the CAMELS rating system when assessing the soundness of the Islamic banks. The difference would be on several aspects like: (1) the agency role in the capital assessment, (2) value added distribution, (3) identification of risks which do not appear in the conventional banks, and (4) the incorporation of the Islamic values and norms which particularly emphasis professionalism, competence to promote conducive and friendly atmosphere in the organization and other Islamic values like environment orientation besides transactionally shari'ah compliance. Islamic bank rating system is expected to benefit the supervisory process as it could reflect the operational soundness more objectively. The rating system would then be used as a base to formulate supervisory actions. Therefore, the rating system designed should be able to locate the problems occurred in the bank more precisely.

Appendix – 1

Components of capital assessment

I. Fiduciary Role

Ratio Capital 1 - Capital Adequacy Ratio

$$CAR = \frac{E_{Tier1+2+3}}{RWA}$$

CAR : Capital Adequacy Ratio

E : Equity (tier 1, 2 dan 3)

RWA : Risk Weighted Assets

Ratio Capital 2 - Equity Coverage Ratio

$$ECR = \frac{E_{Tier1} + AEAL}{EAaR}$$

ECR : Equity Coverage Ratio

E: Equity (tier 1)

AEAL : Allowance for Earning Assets Losses ($\approx PPAP$)

EAaR : Earning Assets at Risk ($\approx PPAPWD$)

Ratio Capital 3 - Equity to Deposit Ratio

$$EDR = \frac{E_{Tier1}}{D_G}$$

EDR : Equity to Debt ratio

E: Equity (tier 1)

D_G : Guaranteed Debt (third party fund)

Assumption :

Short fall is a result from asset value multiplied by recovery asset (discounted value) minus bank's obligation

$$(\alpha A - D_G) = S_f$$

Networth positive in long term can be achieved if genuine bank's capital can covers short fall.

$$E_{Tier1} = A - D_G$$

By mathematical substitution process, we can set the expected long term networth position

$$\alpha E_{Tier1} + (\alpha - 1) D_G = S_f$$

$$E_{Tier1} = \left[\frac{(1 - \alpha)}{\alpha} D_G + \frac{S_f}{\alpha} \right]$$

$$\frac{E_{Tier1}}{D_G} = \left[\frac{(1 - \alpha)}{\alpha} + \frac{S_f}{D_G \alpha} \right] = EDR *$$

II. The Trend of the Bank Solvability

- **Exposure at risk** covers risk projection of placement and development of bank's asset in the future. The indicator of this projection comes from expected projection of Risk Weighted Asset (RWA/ATMR in bank's business plan.)
- **Internal source**, comes from retained earning which is related with dividend pay out policy which is formed in retention rate :

$$RR = \frac{E(1 - DPO)}{E_{tier1}}$$

RR : Retention Rate

E : Earning (available to shareholders)

DPO : Dividend pay out ratio

E_{tier1} : Equity (tier 1)

Ratio Capital 4 – Internal Support Ratio

$$IS_t = \frac{RR_t}{\% \Delta RWA_{t+1}}$$

IS : Internal Support

RR : Retention Rate (current)

$\% \Delta RWA_{t+1}$: Growth expectation RWA/ATMR (%) 1 period after in the future

- **External sources**, cover the ability of bank to invite investor and the ability of existing shareholder to improve its participation as shareholder. The bigger access to capital market and or the bigger financial ability of shareholder, it's easier for a bank to solve its capital problem especially if the growth of internal source slower to the development of its risk exposure. This need bank's supervisor professional judgement.

Ratio Capital 5 – Capital Growth

$$\% CAR = \frac{\% \Delta E_{Tier1+2}}{\% \Delta RWA_{t+1}}$$

III. Agency Role**Ratio Capital 6 – Agency Role**

$$AR = \frac{D_{NG}}{D_{total}}$$

AR : Agency Role

D_{NG} : Non-guaranteed Debt (non-guaranteed third party fund)

D_{Total} : Debt (third party fund total)

Ratio Capital 7 – Financial Participation

$$FP = \frac{E_{Tier1}}{D_{NG}}$$

FP : Financial Participation

E : Equity (tier 1)

D_{NG} : Non-guaranteed Debt (Non-guaranteed third party fund/muḍārabah)

Ratio Capital 8 – Investment appeal

$$ROD_{NG} = \frac{R_{NG}}{D_{NG}}$$

Appendix – 2

Components of earning asset quality assessment

I. General Asset Quality Assessment

Ratio Asset Quality 1 – General Credit Value at Risk

$$EAQ = 1 - \frac{EAaR}{EA}$$

EAQ : Earning Assets Quality

EAaR : Earning Assets at Risk

EA : Earning Assets (aktiva produktif)

Ratio Asset Quality 2 – Non performing asset ratio

$$NPA = \frac{NPEA}{EA}$$

NPA : Non Performing Assets

NPEA : Non Performing Earning Assets (earning asset with collectibility other than current and in special mention)

EA : Earning Assets (aktiva produktif)

II. Earning Asset quality in specific

The assessments are conducted exactly like the general asset quality assessment but on the specific major customers and major economic sectors.

III. Supporting policies

The assessment of earning asset quality covers qualitative aspect which covers three major spots: policy and procedures, internal review process and documentation.

The policy and procedure quality – The assessment is conducted to figure out the potential agency problem that could result in unsound granting process and failure to implement four eye principles in its activities.

Internal review process – The assessment is to ensure the the bank has delivered sufficient efforts to comply with their internal operating procedures. The assessment covers frequency of the review, the level of independeny of internal audit, incompliance of the operational activity with its internal procedures, and information system which supports administration process and management decision process.

Documentation – The assessment focuses on the quality of documentation process that should reflect the completeness and the traceability of the documents when there is a documentation failure. This includes quantitative data which can be used in back-testing process (to test validity of bank's risk modelling process as based for decision making proses)

IV. Handling on problem loans

Ratio Asset Quality 3 – Haircut level

$$HCL = \frac{EE}{EAaR}$$

Ratio Asset Quality 4 – Rescheduled asset ratio

$$RA = \frac{REA}{EA} (RA - 8)$$

RA : Rescheduled Assets

REA : Rescheduled Earning Assets

EA : Earning Assets (Aktiva produktif)

Ratio Asset Quality 5 – Non performing asset ratio

$$ARR = Avg \left[\frac{RV}{TWO} \right] (RA - 9)$$

ARR: Average Recovery Rate

RV: Recovery Value

TWO: Total Write-Off

Appendix – 3

Components of earning asset quality assessment

I. Break-even analysis

Ratio earning asset quality 1 – Operational efficiency ratio

$$OER = \frac{OE}{OR}$$

OER : Operational Efficiency Ratio

OE : Operating Expenses

OR : Operating Revenue

An efficient bank tends to have low operational efficiency ratio. The ratio is made to also accommodate the business plan of the bank with confidence level of 95 %

$$OE_t * \left[1 + \left(\sum_{t=-3}^{+1} \% \Delta RWA \right) / 4 \right] = OR_{\alpha=5\%}$$

Ratio earning asset quality 2 – Income generating assets

$$IGA = \frac{(EA - NPEA)}{TA} \quad (\text{RE} - 2)$$

IGA : Income generating Asset

EA : Earning Asset (aktiva produktif)

NPEA : Non-Performing Earning Assets

TA : Total Assets

$R_{EA} * EA = R_D * D + R_E * E + OC$, dgn $NPEA \approx 0.05 * EA$ maka:

$$IGA = \frac{0.95 * (R_D * D + R_E * E + OC)}{TA * R_{EA}}$$

Ratio earning asset quality 3 – Fee base income

$$IC = \frac{FBI}{NFBI}$$

IC : Income Composition

FBI : Fee Based Income

NFBI : Non Fee Based Income

Ratio earning asset quality 2 – Cost of write off

$$WOC = \frac{WO}{OE}$$

WO : Cost of Write-off

OE : Operational Expenses

Ratio earning asset quality 3 – Operating margin

$$OM = \frac{COR - COE}{avg(EA)} (RE - 9)$$

OM : Operational margin

COR : Core Operational Revenue

COE : Core Operational Expense

Avg(EA) : Average Earning Assets

II. Analysis of industrial competency**Ratio earning asset quality 3 – Return on Assets**

$$ROA = \frac{EBT}{TA}$$

ROA : Return on Assets

EBT : Earning Before Tax

TA : Total Assets

Ratio earning asset quality 4 – Return on Equity

$$ROE = \frac{EAT}{PC}$$

ROE : Return on Equity

EAT : Earning After Tax

PC : Paid in Capital

Ratio earning asset quality 5 – Income correlation

$$RCorr = Corr(r, i) \quad (RE - 10)$$

Rcorr : Return Correlation

R : tingkat imbalan deposito mudaharabah 1 bulan

I : tingkat bunga deposito 1 bulan

Appendix – 4

Components of liquidity assessment

Ratio Liquidity 1 – Short Term Mismatch

$$STM = \frac{STA}{STL}$$

STA : Short Term Assets

STL : Short Term Liabilities

Ratio Liquidity 2 – Short Term Mismatch Plus

$$STMP = \frac{STA + C + SR}{STL}$$

C : Cash

SR : Secondary Reserve

Ratio Liquidity 3 – Intensity of the Core Depositors

$$RDS = \frac{DS}{DPK}$$

DS : Special Deposits

DPK : Total Deposits

Ratio Liquidity 4 – Growth of the Intensity of the Core Depositors

$$GRDS = \frac{\% \Delta DS}{\% \Delta DPK}$$

$\% \Delta DS$: Earning Assets Quality

$\% \Delta DPK$: Earning Assets at Risk

Ratio Liquidity 5 – Liquidity assistance

Bank also has an obligation to quantify sources of liquidity support fund (Expected Liquidity Aid - ELA) and then compare this with net short term mismatch.

$$RCP = \frac{ELA}{DI + Net(STMP)}$$

ELA : Liquidity Commitments

DI : Special Deposits

Appendix – 5

Components of Sensitivity Assessment

Ratio Sensitivity Analysis 1 – Interest rate

$$Sir = \frac{E[Loss_{ir}]}{Capital}$$

E[Loss_{ir}]: Expected loss resulted from the interest rate volatility

Ratio Sensitivity Analysis 2 – Commodity price risk

$$Sir = \frac{E[Loss_{eq/com}]}{Capital}$$

E[Loss_{com}] : Expected loss resulted from the commodity price volatility

Ratio Sensitivity Analysis 1 – Exchange rate risk

$$Sir = \frac{E[Loss_{er}]}{Capital}$$

E[Loss_{er}] : Expected loss resulted from the exchange rate volatility

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COMMENTS

BY

MURAT CIZAKCA

SUFYAN SYAFRI HARAHAP