RATE OF PROFIT AS A PRICING BENCHMARK AND MONETARY POLICY TO CREATE ISLAMIC FINANCIAL STABILITY

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This study aims to find the concept of rate of profit on Islamic banking that can create economic justice and stability in Islamic Banking and Capital market as a replacement of LIBOR-Benchmarked pricing or Reference Rate that is widely used by Islamic Financial Market. Rate of profit that creates economic justice and stability can be achieved through its role in maintaining the stability of the financial system in which there is an equitable distribution of income and wealth. From the microeconomic side, the Rate of Profit is very essential to determine the role of the rate of profit as the basis of the sharing system implemented in the Islamic financial system. We can see the connection of rate of profit in creating financial stability, especially in the asset-liability management of financial institutions that generate a stable Net Profit Margin or the rate of profit that is not affected by the ups and downs of the market risk factors including indirect effect on interest rates. Furthermore, Islamic financial stability can be seen from the role of the rate of profit on the stability of the Islamic financial assets that are measured from the Islamic financial asset price volatility in Islamic Bond Market in Capital Market. From the macroeconomic side, The use of Sharia Reference Rate as a substitute for Interest Rate Channel used by the Central Bank in its monetary operation today is very important in determining the Rate of Profit to be used as a reference. The reference rate will affect the short term and long term profit rate in Islamic Banking which will determine the price of financing rate, the price of deposit rate, the price of bonds and the net-worth of asset liability management of Islamic banks. The Usage Rate of Profit as a reference rate is expected to create stability in the Islamic financial market and to achieve the equitable distribution of income and wealth in accordance with maqashid sharia goal.

Keywords: rate of profit, sharia reference rate, economic justice, stability, equitable distribution of income, equitable distribution of wealth.

1.   THE BACK GROUND

As a consequence of the abolition of interest, Islamic financial system requires a replacement and applicative concepts of interest at the operational level in the Islamic Financial Institutions which is in accordance with Islamic principles. Applicative concepts as a substitution of interest, in the Qur'an mentioned as profits that derived from the commercial transaction without any exploitation, while in the economic literature of Islam, among others referred to as the (expected) rate of profit[1] or (required) rate of profit. Some classical economists call it as the rate of profit like Von Neumann and Pierro Sraffa. From the neo-classical economist

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[1] M.A. Choudhury, *Generalized Theory of Islamic Development Financing* (London: The Edwin Mellen Press, 1997), 47.

Henry Thornton refer the concept as a marginal rate of profit[2], while Knutt Wicksell called the concept as a natural rate of profit[3]. In the concept of thoughts itself, there are disagreement among both Conventional and Islamic economist. At the level of application of the concept of rate of profit as a substitution of interest concept is very important, given the policy management of Islamic financial system today in some countries, both at the macro and micro levels still do not have a clear concept.

At the macro level, the application of the rate of profit concept for example can be seen in central bank policy in countries that have implemented Islamic economic system either the dual banking system or Full Islamic economic system (single economic system). Amongst both systems the application in the financial system is different. The central banks are found to have used different transactions in implementing an instrument of monetary control. In the practice of the Islamic financial system, there is a difference of opinion in the use of contracts in the instrument of monetary operations, i.e. the countries with monetary instruments which use the rate of profit that is post determined (ex post) and the countries that use the monetary instruments with the rate of profit that is predetermined (ex-ante). Countries that implement monetary instruments with a rate of profit that is post determined (ex-post) are Sudan, Iran and Pakistan with the contract of Musharakah and Mudharabah, while the countries that implement monetary instruments with the predetermined rate of profit (ex-ante) is Malaysia and Indonesia, namely the contract of Bay 'al-'inah, Murabahah[4] and Ju'alah. According to the authors, the differences in the use of monetary instruments are due to the differing views on the effectiveness of monetary policy to regulate the money supply. Instruments with a predetermined rate of profit are considered more effective in attracting money in circulation.

At the micro level, the application of the rate of profit concept is often facing a problem because there is no yardstick (benchmark) in determining the profit margin on natural certainty contracts such as the Sale-based contract like Murabahah and the Leasing Based contract like Ijarah in Islamic banking practices in some Islamic countries. Furthermore there is a difference in the application of the rate of profit, especially on a sale based contract i.e. Murabahah. Some Muslim countries apply the rate of profit in Murabahah (called as a margin or mark-up in some countries) and Ijarah (called as ujrah or coupon in sharia bond transaction) which are quoted fixed for long term financing transaction. In Pakistan, Murabahah with a fixed rate of profit can be used both in the short term, medium and long term. In Bangladesh, the contract of Murabahah is used for short-term transactions while the Bay 'muajjal with installments is used for the purchase of long term assets. In the UK, the contract of Murabahah even used in home financing transaction with a very long period of 20-25 years.

The Application of the concept of rate of profit[5] as a replacement of the rate of interest concept (interest rates) in the banking and capital markets (bond) sharia system is often facing a

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[2] Henry Thornton, *An Inquiry Into the Nature and Effects of the Paper Credit of Great Britain*, edited by F.R. von Hayek. (New York : Rinehart, 1965), 35.

[3] Wicksell, *Lectures in Political Economy*, trans. E. Classen (London : Routledge, 1934), 148.

[4] Saiful Azhar Rosly, *Islamic Interbank Money Market: Critical Issues on Islamic Banking and Financial Markets,* 595-601 dan Mohd Azmi Omar, Muhammad Abduh dan Raditya Sukmana, *Fundamentals of Islamic Money and Capital Markets*, 60.

[5] See M.A. Choudury, *Generalized Theory of Islamic Development Financing* (London: The Edwin Mellen Press, 1997), 47.

problem in the field because there is no yardstick (benchmark) in determining the profit margin on the contract of sale like *Murabaha* and the leasing costs on the contract of leasing like *Ijara* in Islamic banking transactions or on Islamic bonds transactions[6]. As a result, the entire applications of riba in Islamic financial institutions like the 4-type of interest rate formula i.e. simple interest , compounded interest , fixed interest, variable interest which are all determined in advance (predetermined), are all applied in Islamic Banking Products especially trade and leasing based financing like *Murabaha* and *Ijara*.[7]

Among the critical issues that emphasized in the debate over the concept of rate of profit as a replacement of rate of interest concept is that whether Islamic financial institutions has incorporated elements of *'iwadh* (counter value for a benefit of the good or service) or they just do the *ziyadah* (profit creation in the absence of activity in the real sector) in the determination of its rate of profit. According to the theory of Islamic rate of profit, to take a legal profit a product must contain three elements, namely: 1) the value added or value addition in a product as a result of the element of work (*kasb*), 2) risk-taking (*ghurm*) due to the risk of price changes on goods that is traded and 3) underwriting liability in case there is a defects in goods sold (*dhaman*).[8]

Nowadays Islamic banks in the financial center around the world are still using the LIBOR (London Inter-Bank Offered Rates) which is the average lending rates of the largest banks in London as a benchmark in quoting rate of profit to their products. The use of LIBOR as a benchmark is practiced in the determination of profit margin (rate of profit) of *Murabaha* or *Ijara* for home financing, leasing and other commercial financing such as financing of cars, motorcycles and other consumer goods as well as pricing Sukuk Al-*Ijara* (Islamic Bond). In Indonesia, Islamic banking is still using SBI (Indonesia Central Bank Certificate) or JIBOR (Jakarta Interbank Offered Rate) i.e. interest rate average of the largest banks in Indonesia, in determining the Islamic financing price such as mortgages, multipurpose loan and other financing as well as in determining the *ujrah* (leasing cost) on Sukuk al-*Ijara* in the Capital Market. The use of LIBOR or JIBOR is essentially the interest rate charged by the 5 (five) largest banks in the world financial centers such as London and Jakarta, which is basically the loan transactions between banks in the money market (not profit from real market), and this rate is determined by the forces of supply and demand for money (money supply and demand) as the cost of funds and is not based on the price of rent or (rate of) profit in the market for goods and services.

The use of LIBOR as a benchmark has raised pros and cons among Muslim economists. Mahmoud A. El-Gamal supports the conventional use of LIBOR as a benchmark or mark up on Islamic Sale Based Product like *Murabaha*.[9] According to the Professor of Economics and Statistics and Head of Islamic Economics, Finance and Management Study at Rice University's,

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[6] Mahmoud A. El-Gamal, *Islamic Finance: Law, Economics and Practice* (New York: Cambridge University Press, 2006), 77.

[7] Abdullah Sa'eed, *Islamic Banking and Interest: A Study of the Prohibition of Riba and its Contemporary Interpretation* (Leiden: E.J. Brill, 1996), 43.

[8] Saiful Azhar Rosly, *Islamic Interbank Money Market: Critical Issues on Islamic Banking and Financial Markets,* 595-601.

[9] Mahmoud A. El-Gamal is a professor and Head of Islamic Economics, Finance and Management Study, Department of Economics at Rice University, Houston. See http:// www.ruf.rice.edu/~elgamal/files /newvita. pdf

the use of "Islamic Benchmark" unnecessary, impractical and dangerous because even though he acknowledges that the implicit rate (rate actually charged) in Islamic financial product differ with the rate of interest in nature, depending on the quality of the underlying asset, but Islamic benchmark in the Islamic financial market is not deep enough and did not have a good liquidity to form a uniform rate implicit (uniform) as a benchmark transaction.[10] The differences amongst Islamic Economist in the opinion regarding the use of LIBOR, whether it can be used as a benchmark in Islamic financial market in general, can be rooted from the use of LIBOR as a benchmark in the mark-up of sale based product. They argue that LIBOR as a benchmark is treated only as a point of reference (a reference point) to the cost of capital in the Islamic financial market which is currently co-exist with the conventional financial market which is globally using The Time Value of Money Concept. This is in contrast with other Islamic Economists opinions that prefer to use The Economic Value of Time Concept, which refers to the profit in real sector.

The concept of rate of profit as a substitute for the concept of rate of interest is very important in Islamic Finance Theory, because it plays a very central role in assessing the price of any financial assets. In conventional finance, financial asset prices, especially bond (including sharia bond) is largely determined by the rise and fall of interest rates. If interest rates rise, the prices of financial assets with fixed interest (fixed coupon rate) will automatically fall, because the value of the present value or the current price of the assets are valued based on the discounted value of the cash flow of money to come, whereby interest rates is used as a measurement. So in essence, the rate of profit or margin on the sale based transactions such as *Murabaha* and the leasing cost (ujrah) in *Ijara* transactions basically follow the prevailing interest rate at the conventional banks.

Malaysia and some other countries are using the LIBOR (London Interbank Offered Rate) as a reference in leasing –based product like *Ijara* or leasing, while in Indonesia, based on the research by the author, Permata Bank Syariah uses SBI plus in Indonesia Rupiah *Ijara* Transaction and SIBOR (Singapore Interbank Offered Rate) plus in US Dollar *Ijara* Transactions. Therefore, it is now very urgent to have a standard on Islamic Benchmark separated from conventional banks considering Islamic economics has different characteristics from conventional economy, especially in terms of determining the rate of profit as compared to rate of interest. Basically the concept of rate of profit is the concept of ex post (post determined-cash basis), while the interest is basically the concept of ex-ante or predetermined (accrual basis).

The determination of the rate of profit in the Islamic financial products and Islamic bonds is the key to create economic justice and stability in investment income and welfare of the community. The justice issue can be seen in the form of a just (considerably low) business costs especially for the lower segment like micro entrepreneur when compared to using a system of interest (rate of interest). In the stability issue, unlike conventional banking system which is uses interest rate, the rate of profit which will be used by Islamic Banks and Capital Markets (Bonds) should be guided by the rate of profit or gain in the real sector. From the macroeconomic side, this study represents a fundamental research aimed to find a replacement of the BI (Central Bank) rate as a reference rate in the Islamic financial market transactions that are currently still used by Islamic banking in Indonesia as a basis of reference (benchmark) in determining asset and liability pricing such as deposits and financing cost. The Substitute of BI rate as a reference rate for Islamic banking is particularly important; given the BI rate (non-contractual) now has been replaced by the BI 7 day repo rate which is contractual rate. This means that the reference

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[10] Mahmoud A. El-Gamal. *Islamic Finance: Law, Economics, and Practice*, 79.

rate is determined by the supply and demand of borrowing transaction using the instrument of SBI in conventional money markets between BI and conventional Banks that are not based on the profit of transactions in the real sector which is in accordance with the principles of Islamic economics. The use of Sharia Reference Rate as a substitute for Interest Rate Channel used by BI in its monetary operation today is very important in determining the Rate of Profit to be used as a reference. The reference will affect the short term and long term profit rate in Islamic Banking which will determine the price of financing rate, the price of deposit rate, the price of bonds and the net-worth of asset liability management of Islamic banks. The Usage Rate of Profit as a reference rate is expected to create stability in the Islamic financial market and to achieve the equitable distribution of income and wealth in accordance with maqashid sharia goal. In this paper, the author will focus on the rate of profit concept that can create stability in the financial system.

The big question that arises on the formulation of the problem in this research is: "How to realize the concept of rate of profit in the banking and capital markets (bonds) sharia that can create economic stability". To answer the questions above then the question that follows is: 1) How is the role of the rate of profit in creating an equitable distribution of income measured by the Net Profit Margin of the bank's asset liability management; 2) How is the role of the rate of profit in creating an equitable distribution of wealth which is measured by the volatility of financial assets such as sharia Islamic bonds (*sukuk*) in the Islamic capital market.

1.1. The Previous Study on The Rate of Profit Stability of Islamic Bank

1.1.1 Abdel Hamid M. Bashir from Department of Economy Grambling State University conducted a study of the Determinants of Probability and Rate of Return Margins in Islamic Banking ; Some Evidence From Middle East (2000)[11]

The study used banks data in the Middle East in 1993-1998 using almost all of the dependent variable ratios to measure profitability (ROA, ROE, Net Profit Margin (NM) and Profit Before Tax) and the exogenous variables that include BVE, the ratio of loan to asset ratio of non-interest earning assets to assets, the ratio of short-term funds to assets, overhead costs to assets and liability, is also equipped with a variable derived from macroeconomic indicators, such as inflation, real GDP per capita and growth in real per annum plus indicators of tax and financial structure. The results of the study as a whole is: there are influences on the ratio of short-term funds, non-earning assets and operating costs, as well as capital adequacy and financing ratios, but the research did not include the factor of balance sheet structure (Rate Sensitive Asset-RSA/Rate Sensitive Liabilities-RSL) and did not analyze simultaneously to see the joint effect of all the factors to the profitability of Islamic banks in the countries of the Middle East from the research sample. The research using descriptive research method and associative approach with contingency coefficient correlation techniques, and the research results can be concluded that:
a. The Profitability of Islamic Bank in the Middle East countries significantly affected by the capital adequacy and funding ratios significantly and positively, this shows that this research is consistent with the previous research. This shows that the capital adequacy ratio (CAR) plays an

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[11] Bashir, A.H.M. *Determinant of Probability and Rate of Return Margins in Islamic Bankings : Some Evidance from Middle East.* (Grambling State University,2000)

important role on the performance of Islamic banks in the Middle East and that is why CAR should be considered as a dependent variable on this research.

b. The Variable of short-term third-party funds (the structure of the liabilities), non-earning asset, and overhead costs jointly influenced on the performance of Islamic banks' profitability significantly.

c. The Factors of foreign ownership significantly affect profitability, with foreign ownership in the bank is pushing management to operational procedures well and apply the precautionary principle, especially for The Islamic banks that are located in countries with income levels are still low.

1.1.2. Martin Cihak and Heiko Hesse from International Monetary Fund (IMF) on the Profit Stability of Islamic Banks in 77 Countries (2008)[12]

The Study with similar results conducted by Martin Cihak and Heiko Hesse which measures the stability at 77 Islamic banks in Bahrain, Bangladesh, Brunei, Egypt, Gambia, Indonesia, Iran, Jordan, Kuwait, Lebanon, Malaysia, Mauritania, Pakistan, Qatar, Saudi Arabia, Sudan, Tunisia, United Arab Emirates, West Bank and Gaza, and Yemen and as a comparison was 397 Conventional Bank in the period from 1993 to 2004 by using a z-score to measure the stability of each bank. A z-score is a measurement of probability value of the bank's assets to be down because of the rising value of liabilities. Z-score can be formulated as a comparison of $(k + \mu) / \alpha$ where k is the capital and reserves as a percentage of assets; μ is the average profit as a percentage of assets and α is the standard deviation of return on assets as a proxy of the volatility of returns. The results from the research concluded that large Islamic banks tend to be more volatile when compared with conventional large bank, which is calculated from the z-score. One explanation is that large Islamic banks are more difficult to adjust to the changes in the risk profile of its assets. In the studies, it were not explained clearly why the causes of the instability of the studied Islamic banks. According to the authors, the difficulty of the change was particularly difficult to change the structure of assets and liabilities (RSA/RSL) most of which have a rate of profit that is permanent in long-term, that causing a decrease in the parameter profit of μ due to the changes in the market variables (interest rate) that affects indirectly the liabilities in the form of increased demand deposits yield of *mudharabah*. That is why in this research author included the factors of the structure of the assets and liabilities (RSA/RSL) and interest rate as a dependent variables to support the hypothesis on the effect of balance sheet structure of Islamic contract and interest rate (benchmark that Islamic Bank currently use) on its profitability.

1.1.3. Amine Abi Aad dan Elias Raad from Lebanese American University on the Profit Efficiency of Islamic Bank as Compare to Commercial Bank in the Middle East (2009) [13]

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[12] Martin Cihak and Heiko Hesse, *Islamic Banks and Financial Stability: An Empirical Analysis* (Kuala Lumpur : International Monetary Fund Working Paper, 2008), 1-26.

[13] Amine Abi Aad dan Elias Raad, *The Battle of Islamic and Commercial Banks: Are Islamic Banks More Cost, Revenue and Profit Efficient than Commercial Banks: an Empirical Comparative Study from the Middle East* (Saarbrucken, Deutschland: Lebanese American University, 2009), 26-50.

Amine Abi Aad and Elias Raad studied between the years 2003-2007, especially in the countries of the Middle East, namely in Bahrain, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, Syria, United Arab Emirates and Yemen to the conventional 83 banks and 20 Islamic banks are the mean average net profit in Islamic Bank is lower by 3% compared with the net interest margin at conventional banks which approximately 6 %. According to the author, this happens because between the 2003-2007 period there was an increase in interest rates in general, so that under consideration that many assets transactions are done with *Murabahah* scheme (very long term transaction for 10-20 years) in the Middle East has caused the Islamic banks in these countries could not increase its revenue in a rising interest rate environment, which can be seen from lower AROA (average return on assets) or the average return of income of the assets of Islamic banks in these countries compared to conventional banks. Amine Abi Aad and Elias Raad researched between the years 2003-2007, especially in the countries of the Middle East, namely in Bahrain, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, Syria, United Arab Emirates, and Yemen to the conventional 83 banks and 20 Islamic banks are the mean average net profit in Islamic Bank is lower by 3% compared with the net interest margin at conventional banks which approximately 6 %. According to the author, this happens because between the 2003-2007 period there was an increase in interest rates in general, so that under many transactions *Murabahah* in the countries of the Middle East has caused Islamic banks in these countries could not increase its revenue, which can be seen from lower AROA (average return on assets) or the average return of income of the assets of Islamic banks in these countries compared to the conventional banks.

2.   RESEARCH METHODS

### 2.1. Types of Research and Approach.

Based on the scientific field, this research can be categorized as an Islamic Economic Research where the research associated with the concepts of Islamic economics and then adjusted with the facts or practices in the field of Islamic economics. Based on the data collected approach, this kind of research is qualitative and quantitative research. The qualitative research is a research procedure that produces descriptive data in the form of words, relating to the understanding, meaning and value.[14] In this qualitative study, the author tried to explain the real facts occurred in the field on the application of the concept of rate of profit in Islamic banks both in the macro-economy and micro-economy levels. After that we see how the concept of Islamic economics of the rate of profit in a comprehensive manner, by doing a research study on the Islamic Rate of Profit and the application of rate of profit which has been applied in the previous Islamic financial institutions.[15]   Based on the level of achievement, this research can be categorized as a descriptive research and inferential research. Descriptive research is conducted to describe the phenomena that occur in Islamic financial institutions in terms of both macro and micro, in this case the banking and Islamic capital markets. Inferential research is done to find a solution as recommendation that the application rate of profit may bring justice and economic stability (equitable distribution of income) and the prosperity of the society (equitable distribution of wealth), both in the Islamic banking system and capital markets/bonds (Islamic Financial Market).

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[14] Kaelan, *Qualitative Methodology in Philosophy* Research (Yogyakarta: Paradigma, 2005), 5.

[15] Muhammad Teguh, *Economic Research Methodology : Theory and Application*, 16-17

The main method of the study analysis is documentary research for qualitative research and combined with quantitative research. The research was done by analyzing data or facts that are logically composed from a variety of data both primary and secondary. The Descriptive research conducted to describe the phenomenon that occurs in the Islamic financial market, namely the operation of sharia monetary transaction that creates the reference rate for Islamic banks in pricing their products. The inferential research conducted to find solutions as a recommendation for the application of rate of profit instrument in accordance with Islamic principles and for the objectives of the maqashid sharia that if we use the rate of profit as a reference rate, it can realize economic justice (equitable distribution of income) and the prosperity of society (equitable distribution of wealth). The approach that also used in this study is the jurisprudence (Fiqh) and Islamic economics approach to analyze the concept of rate of profit and its application as well as the influence on the distribution of income and wealth through investment and financing transactions in Islamic banks.

Figure 1.
Research Framework in Finding the Rate of Profit Concepts as the Reference Rate in Islamic Banking
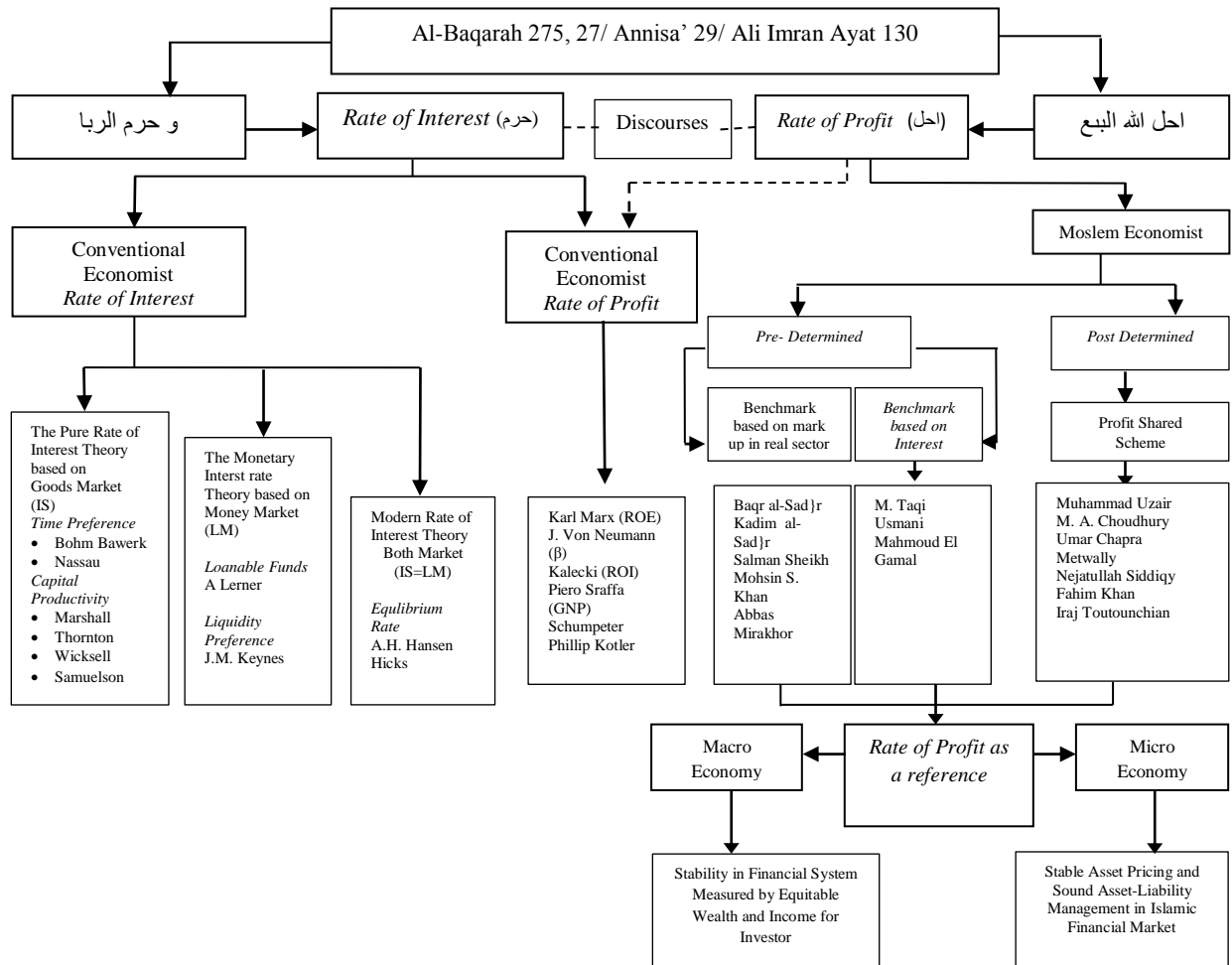
To complete this research, the author held a study-case quantitative research on the effects of the use of indirect form of interest rate to the rate of profit of Islamic Bank in the period of rising interest-rate from the period of 2004-2009 in Bank Syariah Mandiri (The Biggest Sharia Bank in Indonesia). The purpose of this research is to analyze the concept of rate of profit that is currently used in Islamic Banking practice as a replacement of interest rate concept and its application as well as the influence of the rate of profit if we use this benchmark ideally on the distribution of income (net profit) and wealth (asset value) through the investment product and financing transactions in Islamic Bank.

The study aims to prove the hypothesis of a relationship between the variables of the balance sheet structure (Rate Sensitive Asset (RSA)/Rate Sensitive Liabilities (RSL), Interest Rates (Represented by SBI-Central Bank Certificate of Deposit), Financing to Deposit Ratio (FDR), Capital Adequacy Ratio and Non Performing Financing to Net Profit Margin of Islamic Bank represented by the largest Islamic Bank in Indonesia i.e. Bank Syariah Mandiri. Most of these ratios are a key measurement of the health of the banks which is very important and the other variable is SBI as a representation of interest rate as an external factors that is currently used as a benchmark in Islamic Bank Product as discussed earlier and is dominantly affected the pricing of Islamic Bank Product, while Net Profit Margin is a measure of the performance of rate of profit of Islamic Bank.

Among the models for measuring and managing interest rate risk, the repricing gap (RSA/RSL) model is the best known and most widely used[16]. Since currently Islamic Bank used LIBOR or SBI as a benchmark on their product pricing, for instance, Bank Permata Syariah in Indonesia uses SBI + 5 % as a benchmark for their Islamic mortgage financing product, the authors want to know the effect of using interest rate as a benchmark (not the rate of profit of the transaction) on the Net Profit Margin of Islamic Bank which is largely determined by their balance sheet structure (RSA/RSL). A bank's exposure to interest rate derives from the fact that interest-earning asset (RSA) and interest-bearing liabilities show differing sensitivities to changes in market rates. The repricing gap model can be considered an income-based model. The gap is a concise measure of interest risk (or in Islamic Bank case is indirect use of interest rate) that links changes in market interest rate to change in Net Interest Income, in this research Islamic Bank call it Net Profit Margin (NM). Interest rate risk is identified by possible unexpected changes in this variable. The gap (G) over a given time period t (gapping period) is defined as the difference between the amount of RSA (Rate Sensitive Asset) and RSL (Rate Sensitive Liabilities):[17]

$$G_t = RSA_t - RSA_t = \Sigma\, rsa_{t,j} - \Sigma\, rsl_{t,j}$$

Table 1 report the possible combinations of the effects of interest rate changes on Islamic Bank Profit Margin, depending on whether the gap is positive or negative and the direction of the interest rate change.

[16] Andrea Resti and Andrea Sironi, *Risk management and Shareholders' Value in Banking : From Risk Measurementt Models to Capital Allocation Policies*, (Chicester : John Wiley, 2007), 9-20

[17] Andrea Resti and Andrea Sironi, *Risk management and Shareholders' Value in Banking : From Risk Measurementt Models to Capital Allocation Policies*, (Chicester : John Wiley, 2007), 9

Table 1. Gaps (RSA/RSL), Rate Changes and effects on Net Profit Margin on Islamic Bank

Gap	Interest Rate	Net Profit Margin
Zero Gap	Up	Stable
RSA = RSL	Down	Stable
Positive Gap	Up	Up
RSA / RSL > 1	Down	Up
Negative Gap	Up	Down
RSA / RSL < 1	Down	Up

Given the data that currently Islamic Bank on the negative gap condition since the asset are dominantly based on sale based product like *Murabahah* Financing with long term and fixed rate/profit rate while on the liabilities side are dominantly based on variable rate product like *Mudharabah Deposit*, the use of interest rate as a benchmark will harm the Islamic Bank Net Profit Margin. This theory ideally should be proved by the research to look at the effect of using the same benchmark in different nature of transaction in Islamic Banking environment.

From the study of literature, besides allegedly affected by the external factors such as interest rates in conventional banks as mentioned earlier, the Net Profit Margin of Islamic Banking also influenced by internal factors such as the level of Islamic Banks Financing to Deposit Ratio, Non Performing Financing, Balance Sheet Structure or Asset – Liability and CAR[18]. To look at the effect from other factor i.e. the variables of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF) and Financing to Deposit Ratio (FDR) are included at the inception of the research process.

2.2. Data Sources and Data Collection Methods

In this study, the types of data used are primary and secondary data. Primary data is data that is extracted from the main data, in this study because it deals with the concept of rate of profit, the primary data is taken from the literature of Islamic Economics. Secondary data is the data obtained through the processing of the primary data using statistical tools. Sampling is a method used to select and take some members of the population. From the samples taken, the data can be used as a reference as the characteristics of the population. Data derived from the financial statements of The Bank Syariah Mandiri used as data research. These data have been published by the Bank Syariah Mandiri. The data captured includes financial ratios and Net Profit Margin on a monthly basis within a period of 5 years. The selection of Bank Syariah Mandiri because the bank currently running independently with separate management from the owner, while the other is still a business unit of sharia. On this study, the author used the secondary data retrieved from the data of rate of profit that is called The Net Profit Margin (NM) of Bank Syariah Mandiri (BSM) from year 2004 to 2009 (5 years). The period is selected due to the ideal condition for this research where there is a period of rising interest rates.

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[18] Rivai, V. *Bank and Financial Institution Management Conventional and Sharia System.* (Jakarta : PT Rajagrafindo Persada, 2007), 407

2.3 Data Processing and Analysis Methods

The analysis method of this study is using documentary research (documentary analysis), whereby the research done by analyzing data or facts which are logically composed of a variety of data both primary and secondary. Other analytical methods is the method of survey (analytical survey), i.e. the research activities conducted with a view to draw conclusions in order to get the sense hidden behind the data.

Other analytical methods that had been used is a survey method (analytic survey), i.e. the research conducted to draw a conclusions in order to obtain further meaning hidden behind the data. To find the concept of rate of profit that creates economic stability, the author use independent variable i.e. the structure of the balance sheet represented by the RSA/RSL which is specific in Islamic Bank as currently dominated by the product of long term and fixed rate and the use of quantitative research on the effect of interest rate volatility as represented by the SBI (along with other factor) to Net Profit Margin (the rate of profit of Islamic Bank)) in the BSM for 5 years i.e. 2004-2009 is being conducted.

In order to see a model that can be used in this study, based on the nature of the data the author use time series multiple regression model, because in this study there is only one dependent variable and more than one independent variable on the individual object. Statistical test conducted to validate the over-all model, the author used F test (ANOVA). The analysis is used to see how much the influence of the independent variable on the dependent variable. In this study, the independent variables are numeric variables, since the independent variables used in the can from the data of the financial statements of Bank Syariah Mandiri and Bank Indonesia data publication, which is time series data in the period of May 2004 to May 2009, where the interest rate was rising.

The flow process data analysis was done to facilitate the stages of research or analysis of the data, so the research can be more effective and concise. The order of the research conducted as follows:

1. Collect the data of the net profit margin of the bank which is the object of the research, and also collect the data of RSA/RSL, Financing to Deposit Ratio, SBI, CAR and Non Performing Financing (NPF) of Bank Syariah Mandiri
2. The second phase is to test the overall model on this multiple lines regression model by using F-test and R-Square to prove the influence of the independent variables on the dependent variable simultaneously.
3. Finally testing the data to get the model that is BLUE (Best Linear Unbiased Estimator), whereby the author test the data normality with Jarques-Berra test, test the data homoscedasticity with the white heteroscedasticity test, test the autocorrelation with the Durbin-Watson test , test Breusch-Godfrey Serial Correlation LM test and finally test the multi collinearity with VIF test and Condition Index.
4. Having obtained the BLUE model, the third stage is to test F and R-Square to test to the overall independent variables that have been selected and have significant value.
5. Then proceed to test the hypothesis, which is to see the influence of the independent variable partially on the dependent variable by doing the Partial Test or t- test.

6. After the model testing is complete, the best model is found.

3. RESULTS AND DISCUSSION

The concept of rate of profit that can realize the economic stability of the banking and Islamic capital market in this research means the concept of rate of profit that can create economic justice in the distribution of income and wealth. Rate of profit that creates economic stability can be achieved through its role in maintaining the stability of the financial system in which it is realizing the equitable distribution of income and wealth.

The Role rate of profit as the basis of distribution of profit sharing system implemented in the Islamic financial system can be seen in the connection of the rate of profit in creating financial stability, especially in the management of asset-liability of financial institutions like bank resulting in stable Net Profit Margin or rate of profit to be shared out between the customer and financial institutions that are not affected by the ups and downs of the market risk factors, including the indirect effect of the interest rate. Therefore, we need to see: 1) The role of the rate of profit on the stability of the Islamic financial system as measured by the Net Profit Margin on asset-liability management of Islamic banks (to create equitable distribution of income); 2) The role of the rate of profit on the stability of the Islamic financial market as measured by the volatility of the value of Islamic financial assets (to create equitable distribution of wealth); 3) Verification of the empirical results of the concept of rate of profit in Islamic banks, by using quantitative research methods, by analyzing data or facts that are logically arranged from both primary and secondary data.

3.1. Rate of Profit Role in Creating Equitable Distribution of Income Measured from the Net Income Margin of Islamic Bank Asset Liability Management

One of the most important tasks of banks including Islamic banks is to transform the maturities of its assets and liabilities. Almost all banks have assets in the form of financing (loans) and investments in marketable securities, which is funded by liabilities in the form of demand deposits, savings deposits, term deposit and the issuance of securities which has shorter maturity than the asset.[19] The occurrence of this balance sheet structure, we named it the so-called Gap (difference in repricing time period) in the assets and liabilities that will have the implications on the exposure of the rate of profit/net income (or in this research, we called it Net Profit Margin) in the bank as a result on the changes in the market variables including indirect result of interest rate that affect the asset-liability of the bank. For example, the intermediary function of banks offering mortgage financing with a *Murabaha* contract with a mark-up or margin of 14% per year permanently (fixed) for 10 years. To finance this home financing bank offering an investment product in the form of short-term deposits with maturities varying between 1-6 months with an equivalent yield of 7% per year equivalent. Here there is a difference in repricing (gap) between assets that are fixed or, in other words the bank facing a gap risk by a fixed rate in 10 years asset with the liability that will be repriced every 1-6 months.

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[19] Andrea Resti and Andrea Sironi, *Risk Management and Shareholders' Value in Banking : From Risk Measurement Models to Capital Allocation Policies* (Chicester, West Sussex, England : Jhn Wiley & Sons Ltd), 3.

The net result of bank income (Net Profit Margin) or other financial institution (in a conventional bank is referred to a net interest income-NII) at the beginning of the first year thus amounted to 7 percent per annum. If in the second year, there is an increase of interest rates by 1 percent (usually started from SBI rate), this will affect the bank to repriced its liability by 1%, then the bank in the second year have a decreasing Net Profit Margin to 6% per annum. There has been a loss of 1%, as bank is not able to raise the price of the asset- as a result of fixed 10 years asset.

Risk arises in the rate of profit because of the change (indirect) market variables such as indirect effect of interest rates rise in Islamic banks due to the longer-repricing maturity assets than liabilities is referred to the risk of refinancing (refinancing risk).[20] As a result of the reverse effect can also occur if the maturity of the asset is shorter than a liability, then the rate of profit or net bank margin (sharia) may go down if a decline in bank earnings due to the indirect effects of the decline in market interest rates. This is often referred to as the risk of bank assets to invest or we call it as a reinvestment risk. In general, due to a decrease in the rate of profit as a result of the influence either directly or indirectly on the bank's interest rate is often referred to as the spread risk which is a difference between income (revenues) of the asset and the cost of liability.[21] The Effects of changes in market variables such as interest rates to the rate of profit or a Net Profit Margin of Islamic banks has become very important because the structure of Islamic banks profit whereby 90-100% of the revenues derived from sale based financing products like *Murabaha* and *Ijara* that use interest rate benchmark (SBI or SIBOR). Any economic system needs a financial system that can maintain the level or rate of profit (margin) which is stable and sustainable to create the stability of the banking and capital market system.

Another risk that is often occurred due to the difference in the maturity of asset-liability re-pricing period of financial institutions   is called mismatching that can create liquidity problem. Mismatching is the difference due to the principal amount of assets and liabilities of Islamic banks. Looking at the maturity of assets in the bank either in the form of investment or financing has an average maturity of over 1 year compared to an average maturity of liability with the majority in 1 month period. This has led the bank running the risk of mismatch which causing liquidity risk that may lead to subsequent risks which is more crucial called the reputation risk. This is because banks are not able to provide liquidity in a timely manner resulting in a run-off of massive liquidity so that the banks can't operate anymore because it ran out of cash. From the above facts it can be concluded that the management of net profit margin or the rate of profit of Islamic banks becomes very important in maintaining the stability of the financial sector so that an economic system as a whole can work well. Some theories can be developed to manage the Net Profit Margin of Islamic banks to be stable and has sustainable growth at such repricing gap models and maturity gap models that adjusted the Net Profit Margin of the bank to be stable.

In addition, the risk of a decrease in Net Profit Margin due to the changes in interest rates could lead to the collapse of the asset value (market value) of the assets of fixed income in the bank so that it can lead to instability in the financial sector even worse. The theory that has been developed to manage the market value or the value of the bank's assets is duration and convexity gap models. Financial stability in an economic system can be seen from several

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[20] George H. Hempel, Donald G. Simonson and Alan E. Coleman*, Bank Management; Text an Cases* (New York: John Wiley & Sons, 1994), Fourth Edition, 596.

[21] George H. Hempel, Donald G. Simonson and Alan E. Coleman, *Bank Management; Text an Cases*, 576.

factors: 1) The absence of a guarantee of a return on the principal of the placement; 2) Have a positive cash flow in the growing economy condition; 3) Do not face the asset-liability gap and mismatch and 4) Do not connect in the structure of loans (financing) with another bank so as to cause a domino effect.[22] Four of these factors greatly affect the stability of an economic system.

In today's Islamic bank assets and liability management techniques, known as Asset Liability Management (ALMA), that uses the ratio of Rate Sensitive Asset (RSA) and The Rate Sensitive Liability (RSL) as a representation of bank's balance sheet structure is basically the same as in conventional banks. Especially if we are looking at the balance sheet structure of Islamic banks' asset and liability that are dominated by the sale based product, the gap and mismatch of the asset and liability nature basically the same with its conventional counter party.[23] Therefore, in order to solve this instability risk in the Net Profit Margin, Hosein Askari in the opinion that the asset liability model of Islamic banks are ideal when there is no Islamic bank products that are based on the contract of sale and lease such as *Murabaha, Istisna, Salam* and *Ijara*. In the Islamic Bank ideal model which is developed by Hosein Askari, he described that ideally the assets and liability in Islamic Bank balance sheet should be only *Mudaraba* or *Musharaka* (equity based financing) products which is based on profit sharing scheme. This will create a perfect mirroring structure of balance sheet resulting in no gap and mismatch risk that will create instability in the bank Net Profit Margin.

However, practices which are majority prevalent in today's Islamic banking, in order to finance any project, *Murabaha* is used with the the rate of profit or mark-up which is fixed for long periods of time and they are using an interest rate benchmark such as LIBOR from conventional banks or SBI (in US we call it Fed Funds). The creation of the Asset Liability mismatch in Islamic banks which is the same pattern as conventional banks would create ALMA risk that will be strongly influenced by interest rates. If we use the financial measurement tools such as Duration and Convexity as a measure of market risk as a result from changes in interest rates, it can be ascertained that the duration of Islamic banks would always be away above zero. This is because that the majority (70-80%) of assets of Islamic banks are based on the sale based product with a fixed mark-up (rate of profit) for long term. In theory, the ALMA structure of Islamic banks, on the other way around, should produce a "duration and convexity" that is close to zero (risk neutral) as to create stability in net profit of the bank.

The use of margin (rate of profit) in long-term fixed assets of Islamic banks in the *Murabaha* product massively, has create the negative gap of structure of the balance sheet (Rate Sensitive Asset / Liability Rate Sensitive < 0) or also called positive net refinancing. In the conditions of interest rate rises rapidly then this condition will result in adverse effect on the Net Profit Margin of the banks because banks are not able to make changes in the rate of profit of the assets (already fixed in the long term). These events are called "negative spread" in conventional banking whereby the rising interest expenses exceed the interest income of the Bank. In a state of economic overheating, as it did in 1998 in Indonesia, the "negative spread" phenomenon is prolonged and the loss had been continuously eroded bank capital resulting in almost all banks have to be rescued by Bank Indonesia Liquidity Assistance (BLBI). The banks that had to be

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[22] Hosein Askari, etc, *The Stability of Islamic Finance: Risk Profile of Islamic Financial Intermediaries* (Singapore : John Wiley and Sons (Asia) Pte. Ltd, 2010), 134.

[23] Hosein Askari, etc, *The Stability of Islamic Finance: Risk Profile of Islamic Financial Intermediaries* (Singapore : John Wiley and Sons (Asia) Pte. Ltd, 2010), 134.

bailed out by the central bank rescued by issuing Government Recapitalization Bonds (Recap Bond) amounting up to Rp 650 trillion.[24] This condition has to be expensively paid through the taxes by all of the people of Indonesia up to now.

In Islamic banking practices, the wrong application in the use of *Murabaha* transactions occurred in Home Ownership Financing Product with fixed and long term margin (rate of profit) for 10-15 years which create high volatility if we use duration and convexity risk measurement. This practice is certainly contrary to the principles of Economic Value of Time concept in the theory of Islamic Finance as a replacement of Time Value of Money principle. *Murabaha* margin (rate of profit) is inherently based on the principle of Economic Value of Time should be based on short term profit in the real market (goods market not money market) and should be used for short-term financing. Rate of profit used in *Murabaha* transactions as the economic value of a short-term profit then should be reprice according to the nature of the transactions in the real sector. For *Murabaha* the profit rate should be benchmarked against the leasing cost of the goods periodically. For instance, in car transaction it could be repriced once a month but for home financing it could be at least once a year like in home leasing transactions. This would create a risk neutral balance sheet transactions in Islamic Bank, because *Murabaha* transactions now quoted in fixed profit rate but periodically repriced in shorter term that will create value "duration" equal to zero. Almost similar to this practice was *Murabaha* products with a capped system and can be repriced according to market rate (money market rate like JIBOR) was ever introduced and applied by Bank Syariah Mandiri. The difference with the concept of rate of profit is, they based/benchmarked on money market rate, like SBI plus, JIBOR or ATD (Average Time Deposit quoted by the State Banks) that is not based on the profit in the goods market like leasing cost in house/car transactions.

The argument that why the majority of the Islamic Banks today is still using the sale based products (*Murabaha*, *Istisna* and Salam), contrary to the Islamic economist against this transactions, said that these transactions are allowed by the majority scholar (*jumhur ulama*).[25] Naturally, this transactions are also needed by the Islamic Banks in order to offer a different product variants in the middle of the demands of customer demand that very wide and that the duty of the bank to create a stable asset-liability. Based on the principles of Islamic rate of profit, the transaction based on the contract of Sale Based Product or *Ijara*, the profit rate quoted either in the terminology of margin or leasing cost (*ujrah*) are not used for long-term transactions. In risk management perspective, the longer the period the greater the duration of its value, so the more unstable the change in rate of profit resulting in the more risk in revenue that can cause income and capital loss.

As a solution, Islamic Bank can use variations in contracts with the same financing purpose. For example in financing home or car purchases, instead of using *Murabaha*, Islamic Bank can use the contract called *Musyarakah Mutanaqishah* (MMQ) and *Ijara Muntahia Bittamlik* (IMBT), where by the rate of profit (*ujrah*) repriced periodically according to the profit in the goods market. In the study of the rate of profit concept, these transactions then can be used as a solution for creating a just and stable distribution of income as its rate of profit can be adjusted (reprice) according to the rate of profit in the real sector. Based on this principle, the

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[24] See Sasmito Hadinegoro, "Stop Obligasi Rekap atau Tunda Bayar Pajak", *Sindo Weekly*, http://m.sindoweekly-magz.com/artikel/19/i/12-18-juli-2012/ analysis /39 /stop-obligasi-rekap-atau-tunda-bayar-pajak. (accessed on 8 Maret 2013).

[25] Bank Indonesia, *Dewan Syariah Nasional Majelis Ulama Indonesia Fatwas, 2nd edition.* 21-39

supposed margin in *Murabaha* transactions as well as the leasing cost charged to the customer in MMQ and IMBT will be the same and also the nature of the rate of profit. In practice *Murabaha* rate charged to customers different in nature with a leasing rate that is charged on transactions of MMQ and IMBT. *Murabaha* quoted in fixed and long term rate meanwhile MMQ and IMBT quoted floating and reprice-able based on JIBOR or SBI even though both transactions were used for the same purpose of financing.

Based on the principle of Islamic economics, in accordance with the rules of Islamic Law, the practice of using *Murabaha* for long term transaction also violate the basic principles of *riba al-fadl* (excessive/exploitative profit). Based on this principle, Islamic banks will manage the rate of profit of the product based on the maturity nature of the transaction. The practice of this principle will separate the management of Islamic banks into short-term assets (*Murabaha*, *Istisna* and *Salam*), medium term investment (*Ijara* and *Istisna*), and long-term partnerships (*Mudaraba*, *Musharaka*) portfolio.[26] With this asset-liability management system, the net profit/income of Islamic banks will not fluctuate due to changes in money market variables. In risk management theory, asset-liability structure with same repricing profile period on both side will create duration approaching to zero or risk neutral, so that it will be immune to the changes in market variables such as indirect interest rates (since Islamic Bank uses interest rate as a benchmark). Asset-liability management that implemented matched repricing profile will also have a sustainable rate of profit growth in line with the asset growth which will be distributed to the *Mudaraba* Deposits customer every month.

Furthermore, the rate of profit concept will be useful in determining the price of Islamic Bank assets like Financing. In its application, Islamic Bank uses the theory of Capital Asset Pricing Model (CAPM) and tries to adjust it with Islamic principles. CAPM theory states that in determining the rate of profit (return) of an investment can be divided into two formulas, namely: (1) Formula represents the risk free return or RF, (2) formula represents the risk premium as a compensation for additional risk bearing for the investor on an investment in a certain time period. The CAPM final formula is: $RF + \beta (Rm - RF)$.[27] The first formula is essentially to replace the element of the time value of money concept and the second is the formula concerning the risks associated with an investment in a project or the securities that are selected. If we viewed from the theory on how to determine the rate of profit based on this CAPM theory, the first element is basically based on the rate of interest concept which is the risk free interest rate. In terms of Indonesia case the risk free rate can be represented by Bank Indonesia Certificates (SBI) which is determined in the supply and demand of money in money market (market trade instrument below 1 year maturity). SBI interest rate then is used as the base interest rate (base rate) and benchmark rate in case of Islamic Bank for pricing ujrah or margin in the financial markets product and coupon for Indonesian bond product.[28] SBI considered as having no risk of default due to the consideration that the central bank as the issuer is part of the Government of the Republic of Indonesia.

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[26] Hennie Van Greuning and Zamir Iqbal, *Risk Analysis for Islamic Bank* (Washington : The World Bank, 2008), 19.

[27] Willian F. Sharpe, Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk, "*Journal of Finance*," Vol. 19, No. 3, 425. http://web.cenet .org.cn /upfile/ 17485.pdf.

[28] Adler Haymans Manurung, *Pengelolaan Portolio Obligasi* (Jakarta: PT Elex Media Komputindo, 2007),

Furthermore, using the basic theory of CAPM, Islamic bank extents this concepts for calculating the financing product such as other cost elements i.e. as operating costs (overhead costs), return on equity for stake holder and risk premium for default risk to be charged to the customer. Structurally, all the interests of "profit" are determined exactly in front. Cost of funds component is the compensation given to depositors, whose value approaches the risk free rate of return at a different levels of maturity. This is in line with the Keynes's liquidity preference theory. Demand deposit, Savings and Time Deposits, at different levels of interest rates is in accordance with the purpose of the transaction and the time period. Demand deposit is used for transactional purposes get the lowest interest rates compared to the savings that are usually used as a precaution transaction and deposits for investment (speculation according to the terms of Keynes). Deposits interest rates varying in its yield curve in accordance with the expectations of interest rate and the liquidity premium added if the product to be quoted fixed rate for long term like *Murabaha* originally based on the theory developed by Hicks and Hansen.

Islamic banks that only know the rate of profit for their product then use the benchmark cost of funds from conventional banks which are speculative and its volatility based on the dynamics of the financial markets certainly does not fit with the character of the rate of profit that is guided by the real sector profits. While risk premium component that also added in the formula reflecting the additional burden to the company or the debtor, as an anticipation of bad credit or default risk costs which vary according to the type of industry. In practice, small customer like micro entrepreneur get the higher risk premium charge from the bank resulting in unjust treatment for this segment as they will pay expensive rate of profit. Finally, added by the management profit as represented by the Spread, the asset pricing formula becomes:

$$\boxed{\textbf{Cost of fund + Overhead Cost + Risk Premium + Spread}^{29}}$$

In practice, the components of risk premium imposed on the segment of micro and small businesses, far exceeded the other components such as the cost of funds, overhead costs and the spread (ROA). Other additional practice is often applied in Islamic Banking called Term Premium which is basically an extra charged due to the fixed pricing quoted for its rate of profit because of the long maturity of the financing such as *Murabaha*. The longer the maturity, the greater the additional premium will be. With the percentage of bad loans are small, then from all the components of the income that earned from financing, the portion of a risk premium, the return on asset for the banker and the term premium is the most dominant component when we compared to other components, so that the financial system such as this would create an unfair income distribution or in terms of the Quran, only circulated among the wealthy amongst you.

In Islamic financial institutions, the term of the cost of funds is not known because it is predetermined and calculated based on the simple or compounded time value of money considered as usury transaction which benefit only the investors. The risk premium is added to address the risk of uncertainty/default risk (according to the opinion of Paul Samuelson) which is charged to the loans taker to ensure the return of the loan.[30] This practice against the Islamic principle because it would mean eliminating the element of risk which is one of the legal reason to allow the profit-making ('*iwadh*) by *the rabb al-maal* (owner of the funds) in the real sector

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[29] See Ismail, *Bank Management* (Jakarta: Kencana Prenada Media Group, 2010), 136.
[30] Paul Samuelson, *Economics*, 10th edition (Tokyo: MacGraw Hill, 1976), 618

transactions. Samuelson opinion is contrary to the opinion of Muhammad Baqir al-Sadr stating that the risk of uncertainty/default (risk premium) is not a factor of production and therefore the additional profit is not legal to be charged as a compensation for this risk.[31] Profit component to compensate business risk   actually can be represented by the spread or return on asset components, i.e. the appropriate level of risk being taken for profit which is allowed by Islamic principles ('*iwadh*), as long as not persecute one another or exploitative.

In determining the rate of profit, Islamic Bank should have the real profit proxy that will used as a benchmark which is not speculative (real) and not exploitative, taken from gains in the goods market or the real sector. In taking profit proxy from cash transactions, for example Islamic Bank should not take interest rates in the money market as a benchmark. GDP which is calculated based on the value added of the national production of goods can represent (proxy) a minimum profit rate (rate of profit) nationally, as it is a measure of the level of output of 19 goods produced in the country. This opinion is basically in line with the opinion of Piero Sraffa as the basis for the calculation of the rate of profit.[32]   After that in calculating the price of financial assets in Islamic banks, we can add other factors like the cost that should be recovered such as: Over Head Cost (OHC) and the profit rate coming from asset turnover in the period of financing (Return on Assets) expected by management at the appropriate reasonable industry level. So based on this theory, the price of financial assets at Islamic financial institutions, according to the author should be:

$$\boxed{\textbf{GDP + OHC + ROA}}$$

Thus, based on the above general formula, the rate of profit in Islamic Bank should be cheaper and provide *maslahah* (benefit) than conventional banking because it creates an equitable income distribution when compared to lending rates in conventional bank loans.

The risk of financial instability in the bank net income can be measured by the volatility of portfolio net worth (PNW) per market value of asset that had been managed as below:

$$\textbf{d (PNW/A) = -dG . dR + CG/2 . dR}^2\textbf{/(1+R)} \qquad \text{whereby} \quad \textbf{CG = CA – (L/A).CL}$$

CA = Convexity Aset, CL = Convexity Liability, L = Matek Value of Asset, A = Market Value of Liability, D = Duration and R = (interest) Rate

3.2. Rate of Profit Role in Creating Equitable Distribution of Wealth Measured by the Volatility of Asset Value of Islamic Finance

Basically, all financial assets have cash flow in the form of cash inflows and outflows. Cash inflows can be in the form of installments in the financing contract in Islamic banks, coupons paid by the issuer of Islamic securities and income from investments in the real sector. Cash inflows and outflows can include cash flows that are fixed and predetermined (fixed and ex

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[31] Muhammad Baqir al-Sadr, Iqtisaduna (Beirut: Dar al-Fikr, 1961), 559

[32] Piero Sraffa, *Production of Commodities by Means of Commodities: Preclude to a critique of Economic Theory* (Bombay: Vora & Co., Pub;ishers PVT.LTD, 1960), 6 http:// laprimaradice.myblog.it /media /02/02/ 2829581832. pdf   (accessed on 15 Mei 2013)

ante) and cash flows that are not fixed and determined at the rear (variable and ex post). In the Islamic financial system, the cash flow that is fixed and predetermined can be seen on the sale based transaction such as *Murabaha*, *Istisna* and Salam as well as the transactions that are based on the leasing agreement such as: *Ijara* and *Ijara Muntahia bit Tamlik* (IMBT). It's fixed and predetermined, because margin or mark-up (in this paper we call it as a rate of profit of the sale based product) is determined ahead and remain unchanged within the prescribed period.

From the characteristics of the transactions that generate cash flows that are fixed and pre-determined like this sale based transactions, then the value of a financial asset can be measured. The stability of the financial assets can thus be measured by the value of the asset changes to the change in the benchmark used in determining the transaction price (such as margin, mark up, *ujrah* and all kind of rate of profit) which involved rate of interest as the benchmark such as SBI (if the instrument denominated in Rupiah) and LIBOR (London Interbank Offered Rate) if the instrument denominated in US Dollar. In theory, the measurement of the value of a financial asset can be determined by The Duration theory.[33] The risk of financial instability thus can be measured by the volatility of financial asset prices derived from the formula:

$$\boxed{(dV\,/V) = -n\,(dR\,/\,1 + R)}$$

In other words, changes in the value of financial assets (including Islamic Financial Asset) can be affected by the changes in the benchmarks used to assess an asset. For example if interest rate is used as a benchmark on the formula in *Ijara* or *Murabaha* contract, any change in interest rates at 1%, it will cause changes in the value of an asset or assets by: -1 (0.01 / 1.1) for assets with a maturity of one year or at - 0.91%. If a period longer used for example 5 years, the risk of price changes becomes larger assets, namely: -5 (.01 / 1.1) = -4.55%. So the management of financial assets with the interest rate benchmark is very vulnerable to the decline of asset price, which means that it will decrease the public wealth (the investor of the financial asset) in the form of the decline in the value of financial assets.

From this theory can be concluded that the Long Term *Murabaha* financing transactions, for example to finance home ownership, which is usually take a period of 15-20 years have a very large volatility i.e : 13.65% for *Murabaha* with a maturity of 15 years and 18.2% for *Murabaha* with a maturity of 20 years. Here the author concluded that the use of interest rates in Islamic transactions causing instability in the value of financial assets that can be detrimental to investors and lead to instability of the financial system as a whole, i.e both in financial institutions and Islamic bonds like Sukuk. For instance Government *Ijara* Sukuk SR01 Series with 12 percent p.a. coupon payment with a maturity on February 25, 2012 has ever reached the price of 107.7199 or appreciation of 7.7199 percent above the par (initial) level. While the Government Sukuk Series IF8 price with a coupon of 8.8 pct maturing March 15, 2020 had reached 98.50 price or suffer a capital loss of 1.5% of their principal amount.[34] The price movements of financial assets that can suffer a capital loss (the wealth decline) will lead to instability of the Islamic financial system, due to instability in asset-liability management of Islamic banks, which in turn affects the wealth of the society who invest funds in Islamic banks.

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[33] Goerge H. Hempel, *Donald G. Simonson, Alan B. Colemean, Bank Management: Text and Cases* (New York: John Wiley & Sons, Inc, 1994), 599.

[34] Bloomberg Company, www.bloomberg.com (accessed on June 4, 2010).

According to the Global Association of Risk Professionals, the interest rate charged on a loan is determined by a number of factors such as time period, namely: 1) Cost of Fund; 2) Spread / margin required for such products; 3) Market Conditions (how much is paid by competitors); 4) The period of the instrument.[35] Bank charges interest (rate of interest) on the credit transaction or financing for various ranges of period. Problems on the fourth factor in Islamic Banking because the loan interest rate is calculated based on the theory of Fischer's (The Theory Of Expectation), in which the determination of long-term rates based on the expectations of short-term rates in the future.[36] The Expectation theory is based on the calculation which create structure of interest rates or commonly known as the yield curve in the bond market (capital markets) in the form of positive slope (the longer the period, the interest rate will be higher). The determination of an additional element of term premium as a time-element component is made at the initial stage of agreement without any basis or guided by the profit or loss (rate of profit) in the real sector. Additional premium term is just following the trend prevailing interest rates in the money market and is linear based on the concept of the time value of money. In other words the concept of rate of profit used in *Murabaha* margin has followed the concept of rate of interest. Based on the research result, if Islamic Bank use interest rate as benchmark, it has significant effects on the value of the portfolio of asset and liabilities.

According to Islamic profit theory, the rate of profit taken in front in the Islamic transactions like sale-based products should be based on cyclical gains (circular repricing pattern) per transaction according to its economic value. If this concept is applied, the rate of profit in a long-term deal, Islamic Bank has to do a mark to the market (MTM) process (the comparison with the rate of profit in the real sector) periodically. In other words, the price adjustment should be carried out periodically as compared to the level of profits in the goods market (repricing) in order to avoid the practice of adding without *illat / 'iwadh* according to the rules of Islamic jurisprudence.

In general, the current imposition of *Murabaha* profit based on money market rates plus a fixed term premium, basically based on Islamic Bank decision to overcome fears of rising interest rates on the long-term. Therefore, if interest rate unchanged, in practice Islamic banks will give *muqasah* (discount) every month or every year.[37] So muqasah is provided as a means for adjusting the gain (rate of profit) with market rates (rate of interest). According to the author, based on the analysis of *iwadh* (legal profit), the uses of risk premium and term premium as additional price component in Islamic Bank, are groundless. Instead of using fixed and long term rate of profit, we should use a circular/periodic rate of profit appropriate to the level of profit in the real sector. Rate of profit is circular (as opposed to interest rates that are linear), as a gain in the trading transaction in the period of sale of goods or services. Turn-over of goods sometimes fast and sometimes slow.[38] If it is faster, the gain will be big. If it is slow, the gain will be little. So, the gain or rate of profit will follow the pattern of an economic growth.

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[35] *Indonesia Certificate in Banking Risk and Regulation*: Work Book Level 2 (Jakarta: Badan Sertifikasi Manajemen Risiko, 2007),49.

[36] Andrea Resti and Andrea Sironi, *Risk Management and Shareholders' Value in Banking: From Risk Measurement Models to Capital Allocation Policies*, (Chicester, West Sussex, England: John Wiley & Sons Ltd, 2007), 28.

[37] Wiroso, *Murabahah Sale*, 93

[38] Nadratuzzaman Hosen, Maulana Hadanuddin dan Hasan Ali, Islamic *Economic Principles* (Jakarta: Pusat Komunikasi Ekonomi Syariah, 2009), 134.

3.3. The Role of Rate of Profit in Money Market Regulatory Policies and Sharia Monetary Operation by The Central Bank which created the Central Bank Rate as a reference rate pricing.

From the macroeconomic side, the biggest challenge in the Islamic financial market today is creating a Sharia Interbank Money Market instrument and the monetary policy tool which can replace the rate of interest (Central Bank Base Rate) in accordance with Islamic principles and especially to meet the objectives of sharia (maqashid sharia). The maqashid sharia purpose in Islamic financial system is to create economic justice which is to achieve equitable distribution of income and wealth as well as the stability of the financial system. The challenge for the Islamic financial is to eliminate the rate of interest from lending and borrowing money activity which is strictly prohibited. The transaction sharia interbank money market between the Central Bank in Indonesia in this case (Bank Indonesia/BI) and the Islamic Bank is in connection with the monetary operations today. The transaction is on the form of an auction or a classical repo SBI-S whereby it's divided into 2 transaction i.e. loan contract (al-Qardh) and guarantees (ar-Rahn). According to Islamic principles, compensation should come from profits on real transactions either on the purpose of monetary contraction or monetary expansion (productive expansion). Profit can only be obtained by working or through commercial / trading backed by the asset/project assets in the real sector[39].

Figure 2. Sharia Compliance Repo Transaction Mechanism
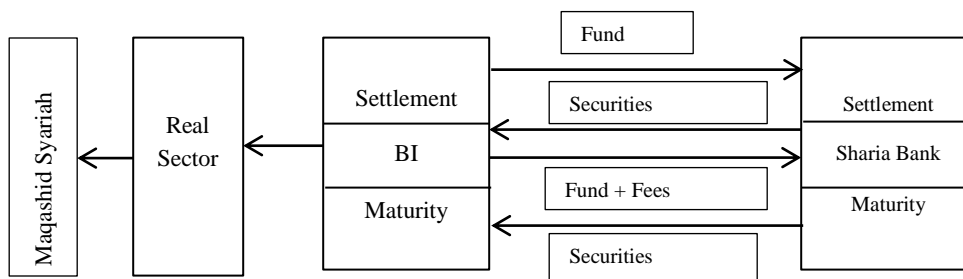
In general, the characters in time perspective between Islamic and Conventional Interbank market are the same whereby the market is trading instrument for liquidity/short-term investments with a maximum term of one year and payment is made by credit notes via clearing or funds transfer, as the definition of money market made by the ministry of finance whereby interbank money market is an organized market where securities are traded for short term under 1 year. Money Market has an important role for the bank to manage its liquidity position and trading to create profits for the banks, for the government and Bank Indonesia (BI) to do an Open Market Operations (OMO), although the OMO in this case can't be effectively used in countries that financial markets are less developed like in Islamic Financial Market. The OMO is important because it is setting reference rate (BI rate) that will be used by the banks as the

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[39] QS Ali Imron ayat 24

benchmark to price any asset and liability product of the bank. Money market used by the government as a place to sell Short Term Debt Instrument (Treasury Bill or Treasury Notes) or in Indonesia called T-Bills/Sharia T-Bills (SPN / SPN-S). Money market that can efficiently provide liquidity to Government in this case, including the expansion of liquidity that is productive because the funds used to finance the real sector or project financing in the state budget.

Money Market used by BI to conduct Open Market Operations in the form of : (i) Monetary Operations (ii) Standing Facilities through Application FPJP / S (Short-Term Facility Loans / Sharia) to help the bank overcome difficulties in short term liquidity due to mismatch, as part of an BI assignment as the lender of the last resort and (iii) Deposit facility in the form of placement of funds by the Islamic Bank in the form of Bank Indonesia Deposit Facility (FASBIS). In addition to this three monetary tools, beyond the money market operation, BI using reserve requirement tools to be maintained by the banks including Islamic banks. Especially for Islamic banks, the reserve requirement ratio is connected with the ratio of FDR (Financing to Deposit Ratio) that should be at least 80%. If the FDR is less than 80% than the reserve requirement will be increased by the BI. This suggests that the portfolio of Islamic Banks entirely go into the real sector with the consideration that the other portfolios such as Sukuk and Mudharabah Interbank Investment (IMA) is basically an investment in the real sector whereby the holders of the Certificates of IMA or SIMA get the profit distribution (called rate of profit) from Islamic Bank in the real sector. In the latter discussion this rate of profit term referred to as the profit rate that the Islamic bank distribute to third party fund investors and other banks at the end of the month. Sharia monetary operation is conducted to achieve the operational target of monetary control in Islamic Banks in order to support the achievement of the ultimate target of monetary policy of the central bank[40]. The operational target is the adequate liquidity in the form of base money (M1) which is currency and demand deposit in Islamic banks and M2 in the form of savings, deposits and repos with the central bank. The operational target of monetary policy is conducted by influencing Islamic banking liquidity through monetary contraction or monetary expansion.

Sharia monetary contraction is a reduction in the liquidity of banks through sharia monetary operations while sharia monetary expansion is an addition of bank liquidity through monetary operations that must fulfill sharia and Islamic principles expressed in the form of a fatwa or sharia opinion from fatwa authority. Fatwa of DSN (National Sharia Board) for the Sharia Money Market has been issued in 2002 No. 37 / DSN-MUI / X / 2002, which says: The underlying reasons why this fatwa was issued is the reality that Islamic banks may experience liquidity shortages or excess liquidity as a result of differences in the placing and taking of funds, as well as to improve the efficiency of fund management. The fatwa was set up general provisions: (1) the interbank money market based on interest is not justified according to sharia (2) The interbank money market based on sharia is the short term financial transactions among

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[40] Bank Indonesia, Bank Indonesia Regulation No.10/36/PBI/2008 on Sharia Monetary Operation, Indonesia

the participants based on the principles of sharia (3) the participants were Islamic bank as the owner or the receiver of funds and the conventional banks as the owner of the funds only. Special provisions on the Fatwa are: (1) Contracts that can be used in the interbank money market based on the sharia principles are *mudharabah (muqadharah) / qirad, musharaka, qard, wadi'ah*, and *al sharf* and (2) the transfer of ownership of the money market instruments that used this transaction can only be sold to third party once.

Islamic Monetary Operations (OMO) with Repo transaction by Bank Indonesia is currently done with two instruments along with the price:

3.3.1. Repo and SBI Sharia-Based Auction

(a) Sharia Central Bank Certificate (SBIS) auction is conducted to absorb the excess liquidity (monetary contraction) through Open Market Operations with Islamic banks which are non-productive because funds absorbed is not used for the real sector and at the maturity date of SBIS and the principal payments will generate monetary rewards for Ju'alah so that it will create additional liquidity which is non-productive as well because of the occurrence of printing money that is not based on real transactions. SBIS time period is 1 week, 2 weeks and a maximum of one month with a minimal amount of Rupiah 500 million. Cut Off Time (COT) at 14:00 pm. The SBIS can't be traded in the secondary market thus such a mechanism does not have a role in the development and deepening of the Islamic financial market.

(b) Repo SBIS or Sharia Interbank Mudharabah Money Market Securities-SBPU-M or SIMA) which is not based on the principles of debt/borrowing funds to gain interest but based on classic repo transaction, namely lending the money with the contract of qard by the BI to Islamic Banks (BUS) and the Islamic Bank giving the collateral with contract of al-Rahn through non-auction mechanism with the repo cost : BI Rate + 300 basis points. This repo cost is determined by the BI as an obligation to pay as a penalty because Islamic Bank (BUS) / UUS not fulfill the agreed period of SBIS purchasing agreement. This practice will lead to non-productive effect of monetary expansion (non-productive liquidity management). SBIS term of repo transaction is 1 day. Repo transaction is arranged between the window time i.e. 2:00 p.m. to 5:00 p.m. after interbank clearing results were announced. Repo fees will be charged on the following day (2nd leg) on maturity.

3.3.2. Sharia Repo Based on Government Sukuk (SBSN)

(a) Reverse Repo Transaction is a conditional sale transaction of securities by banks to the central bank with the obligation to repurchase in accordance with the price and the agreed period. Islamic Banks (BUS) can repo securities with Government Sukuk (SBSN) instrument. SBSN is Government securities (SBN) issued based on Islamic principles, as evidence for the inclusion of the assets of SBSN both in rupiah or foreign currency. SBSN could in the form of Wholesale (code IFR - Indonesia Fixed Rate) and Retail Sukuk (code

SR), PBS (Project Based Sukuk) and SPN-S (Treasury Bills Sharia). The Assets of SBSN is an object of financing and or state property with economic value such as land, buildings or other than land or buildings, that in order to issue SBSN be used as basis for the issuance SBSN so intent SBSN issuance is to finance the state budget or the project development and the publisher is direct government or company issuing SBSN (UU 19 in 2008). BI can participate in the inaugural auction (primary market) SPN-S and selling SBSN/PBS in the secondary market. For that BI need to stock building by purchasing SBSN in the secondary market, given the implications of article 56 of Law No.23 of 1999 as amended by Law No. 3 of 2004 which prohibits the central bank purchases government securities in the primary market because it is a form of giving direct credit/loan to Government.

Figure 3 . Sharia Open Market Operation through SBIS auction and Government Sukuk Repo
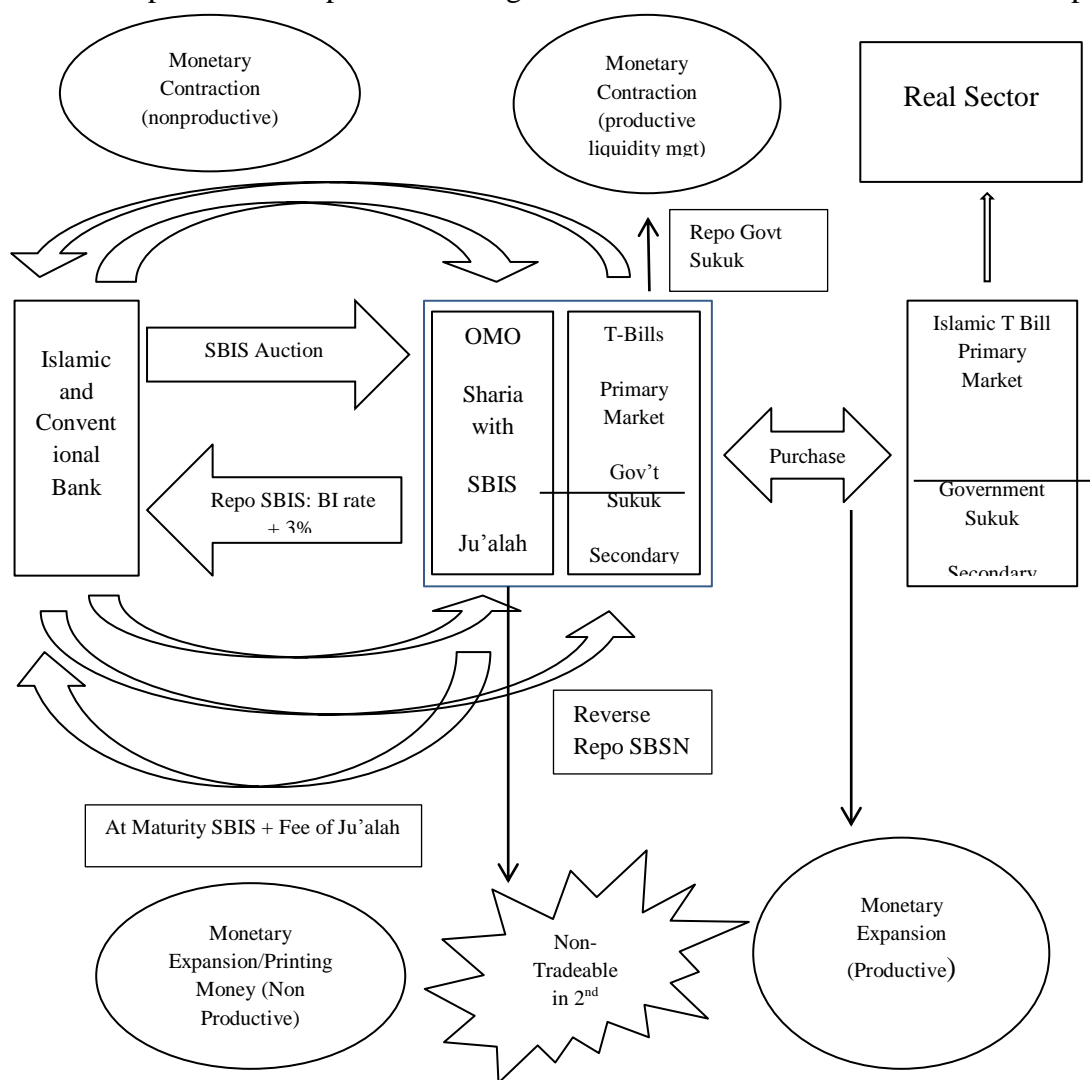
In relation to the Sharia Open Market Operations (OMO), which is part of the Monetary Operations, Bank Indonesia may conduct reverse repo SBSN with the promise of redemption by the bank at maturity in accordance with the price and time agreed. This transaction will be done after BI has purchased SBSN through auctions on the primary market for SPN - S (Islamic Treasury Bills) issued by the Ministry of Finance or Purchase Government PBS (Project Based Sukuk) in the secondary market. SBSN reverse repo transactions is conducted by using contract of al bay (buying and selling), accompanied by wa'ad (promise) by the bank to the Bank Indonesia in a separate document to resell back the SBSN within a certain price agreed. Although the contract used is in accordance with the Islamic principles, however SBSN Reverse Repo is currently not intended to develop and deepening the Islamic financial market and only a part or a supporter of the main Islamic monetary instrument with SBIS[41].

Table 2. Government Sukuk Repo Transaction Volume and Frequency

Year	Transaction Volume (Rp Triliun)		Total	Daily Average	Frequency
	Outright	Repo	(Rp Triliun)	(Rp Triliun)	
2002	105.7	25.3	131.0	0.5	16
2003	327.7	10.0	337.7	1.4	51
2004	502.1	11.5	513.5	2.1	112
2005	512.2	107.4	619.5	2.5	102
2006	795.3	24.8	820.1	3.3	138
2007	1364.0	93.0	1457.0	5.9	232
2008	866.9	170.6	1037.5	4.2	156
2009	717.0	117.7	834.7	3.4	156
2010	1091.2	139.5	1230.7	5.0	194
2011	1466.0	428.8	1894.8	7.7	295
2012	1334.8	929.6	2264.4	9.2	407

In Indonesia, the government securities repo market is relatively under-developed, the percentage of repo transactions on average less than 10 % of all government securities transactions in the secondary market even though the number tended to increase from year to year . BI is also active in repo transactions with banks in the management of money market liquidity. BI's balance sheet in 2012 is recorded transactions amounting up to Rupiah 100 trillion, or up from Rupiah 69 trillion by the end of 2012. Compared to USA and Japan which are by volume, repo transactions represents 40 % of all transactions, the debt repo transactions in Indonesia is still small.

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[41] Tarmiden Sitorus, *Indonesia's Bond Market* : Theory and Practices, (Jakarta : Rajawali Press, 2015), 140

3.3.3. Repo in the Intraday Liquidity Facility (FLI)

To support the creation of good financial systems and transactions that are quickly and accurately, since 2000 Bank Indonesia has developed a payment system known as Bank Indonesia Real Time Gross Settlement System (BI - RTGS) . To reduce the risk of failure of the transaction due to the gridlock in the BI - RTGS system, BI provides Intraday Liquidity Facility (FLI) with auto – repo transaction. FLI can only be used if a bank has securities as collateral and has transferred its securities to the collateral account for the FLI. The amount of funding - ceilings are depending on the market price of the type of securities as collateral and haircut of the securities. FLI is including FLIS (Sharia Intraday Liquidity Facility) for Islamic banks. FLI and FLIS provided during the operational hours of BI-RTGS system and shall be paid on the day of use FLI /FLIS.

3.3.4. Repo Transaction in Islamic Short Term Funding Facility (FPJPS)

Short-Term Funding Facility, herein after that referred as FPJP is a standing facility of the BI to the Bank to address the liquidity problems experienced by banks, both conventional banks and Islamic banks (FPJPS). Short-term liquidity problem is a condition experienced by the banks in general because of a mismatch in the rupiah cash flow so that the bank can't fulfill the obligations of the Statutory Reserves determined by the BI (Reserve Requirement). FPJPS given is calculated based on the estimated number of bank liquidity needs up to meet the reserve requirement. FPJPS duration is firstly given for 14 days and then can be extended up to 90 (ninety) days. Collateral of FPJP/S can be: SBSN and SBI-S or financing assets, in this case SBPU-M as mentioned earlier, also can be used as collateral of FPJPS in case the bank does not have SBSN and SBI-S. BI will charge for the FPJP/S facility: BI-rate plus a margin of 100 basis points.

3.3.5. Non-Repo Bank Indonesia Sharia Deposit Facility (FASBIS).

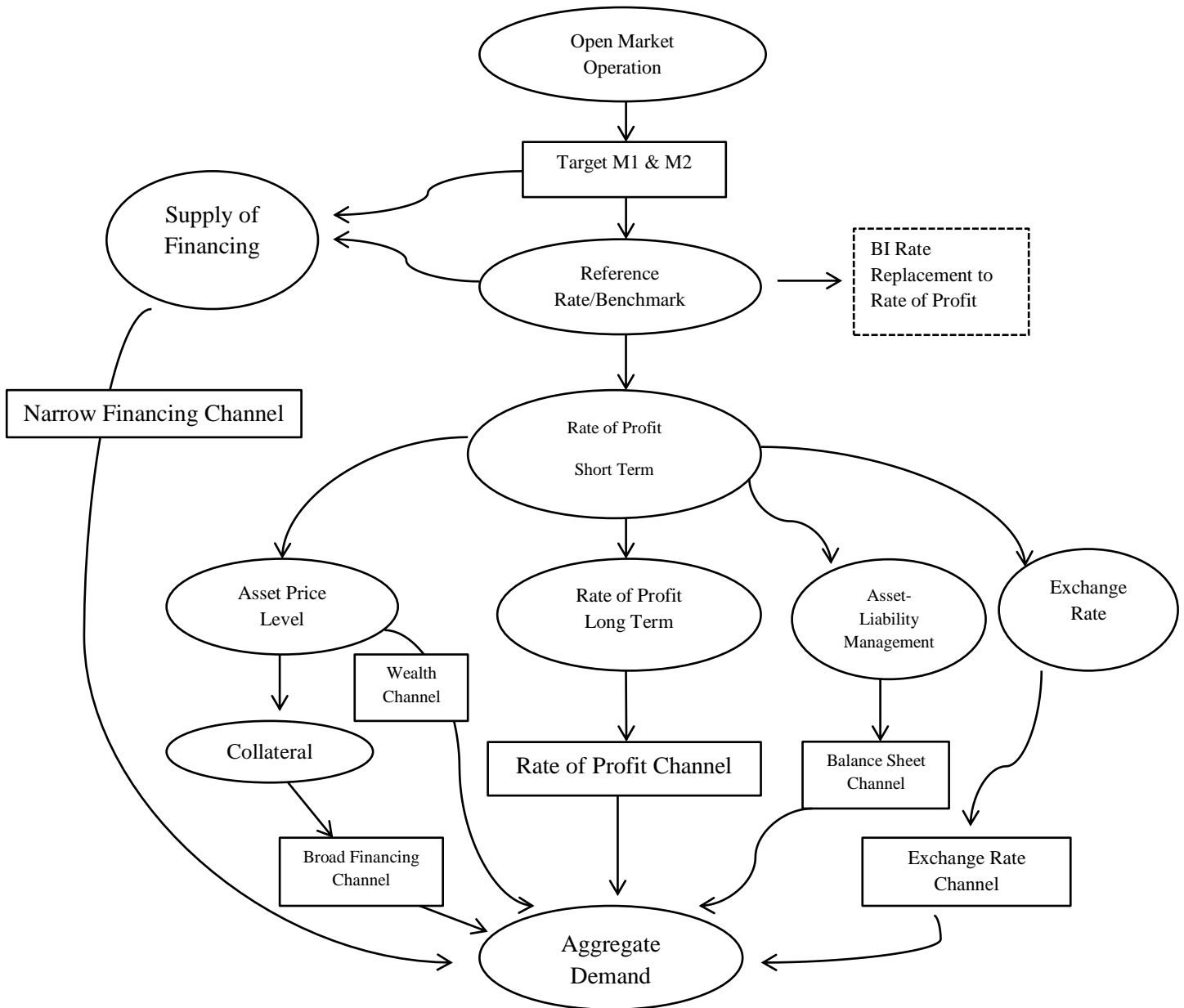FASBIS is deposit facility provided by Bank Indonesia to a commercial bank conducting business based on the sharia principles to place their excess funds in Bank Indonesia. Owners of the FASBIS are recorded in Bank Indonesia Securities Settlement System (BI-SSSS) by not issuing securities (script-less), such as SBIS, so that the FASBIS is not transferable. Auction method and other requirements are the same as SBIS auction.

4. The Impact of The Sharia Monetary Policy Transmission with Repo Transaction and its Implications for the Establishment of Islamic Banking Rate of Profit

If we analyzed the BI monetary policy today, the monetary policy is taken to affect the national aggregate demand made through the monetary policy transmission mechanism by using the interest rate channel and did not take another channel that is: the exchange rate channel, the asset price channel and the credit channel[42]. The BI since July 2005 formally began to use the interest rate as the operational target, by setting the BI-rate as the reference rate target. In the early stages, the BI rate is the reference (benchmark) for the 1-month SBI discount rate with the banks which is done every week with a certain volume so that the 1-month SBI discount rate can be maintain at the level of the BI rate by a certain range. BI rate change means indicate a change in attitude or *stance* of monetary policy is reflected in the discount rate movement around the BI-rate. Problems in Islamic Bank today, the return for the SBI-S is determined by the profit (rate of profit) derived from the real sector which can be categorized as ziyadah (profit without counter-value in the real sector). Therefore either monetary contraction or monetary expansion in Islamic banking is non-productive because it does not have underlying in real sector such as SBSN. SBI-S move around the BI rate and reverse repo SBIS use penalty as a pricing base: SBIS + 3 percent. BI-rate change, in with the banking intermediation process, is expected to affect both deposit bank -interest rate or rate of financing Islamic banks to the public. The big question is whether the interest rate channel is also be able to form the BI rate as a reference rate for the BI monetary operations in Islamic banking. In theory, Islamic monetary policy transmission channel should be based on the Rate of Profit which is the profit coming from the distribution rate that is the right of investor (Islamic Bank Deposit Profit Rate or Profit Rate of Islamic Interbank Bank Money Market-IMA) as shown in the Figure 4 below.

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[42] Frederick S. Mishkin, *The Economics of Money, Banking, and Financial Markets* (New York : Pearson Addison Wesley, 2012), Chapter 24

Figure 4. The Relation between the Sharia Open Market Operation and the Rate of Profit[43]

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                        ┌─────────────────┐
                        │  Open Market    │
                        │  Operation      │
                        └────────┬────────┘
                                 │
                        ┌────────▼────────┐
                        │  Target M1 & M2 │
                        └────────┬────────┘
  ┌──────────────┐               │
  │  Supply of   │◄──────────────┤
  │  Financing   │◄──────┐       │
  └──────────────┘    ┌──▼───────▼──────┐    ┌──────────────────┐
                      │   Reference     │───►│ BI Rate          │
                      │ Rate/Benchmark  │    │ Replacement to   │
                      └────────┬────────┘    │ Rate of Profit   │
  ┌──────────────────────┐     │             └──────────────────┘
  │ Narrow Financing     │     │
  │ Channel              │  ┌──▼──────────┐
  └──────────────────────┘  │ Rate of     │
                            │ Profit      │
                            │ Short Term  │
                            └─────────────┘
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Sharia monetary operations aimed at achieving the operational target of monetary control sharia in order to support the achievement of the ultimate target of monetary policy of Islamic banks (PBI No.10 / 36 / PBI / 2008 regarding Sharia Monetary Operations). The operational target is adequate liquidity in the form of Islamic banking as M1 and M2 (including repo). Then the achievement of monetary policy operations carried out by influencing sharia bank liquidity through monetary contraction or expansion.

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[43] Develop from Abdul Ghafar Ismail, *Money, Islamic Banks and the Real Economy,* (Singapore: Cengage Learning, 2010), 479.

In a further development, in line with the development of the banking industry in the country that is more efficient, since October 2008 BI make adjustments to the BI-rate policy previously as a references discount rate for 1-month SBI (not contractual) which is now converted into a contractual repo rate of Interbank Money Market term 1 day or O / N (over-night). BI-rate determined by the Board of Governors (RDG) BI is done once a month. Monetary operations carried out to maintain the movement of interbank rates O / N remains in BI-rate corridor with a certain margin, for example BI-rate plus minus 100 bps (1 percent). Interbank interest rate is the price that is formed through a mechanism in the interbank money market over the counter (OTC). Interbank time period ranging from 1 day (O / N) up to 1 year, but interbank transactions dominated by transactions with a maturity O / N. Additionally BI-rate, Jakarta Interbank Offered Rate abbreviated JIBOR an indicative interest rate deals in the interbank transactions in Indonesia, which is widely used as a benchmark rate on many financial transactions in Indonesia for transactions denominated in Rupiah. Recent developments, BI policy taken is to remove the use of BI-rate period of 6 months as a reference and replace with an interest rate repo rate between BI and banking for a period of 7 day.

5. The Use of Rate of Profit as a Reference Rate in Islamic Bank through transactions with the Central Bank Sharia Open Market Monetary Operations

Problems of using BI-rate or JIBOR in pricing the sharia asset or investments for short-term liquidity management in the framework of monetary policy have long been controversial. Controversy occurred in the use of BI-rate or JIBOR as a benchmark or reference rate. BI-rate or JIBOR formed by the demand and supply of money in the conventional money market lending and borrowing transaction with interest rate and therefore are not based on profits in the real sector /productive sector. Nevertheless, Islamic banks in some financial - center, are still using the LIBOR (London Inter-Bank Offered Rates) or the average lending rates of the largest banks in London. While in Indonesia, Islamic banks are still using JIBOR (Jakarta Inter Bank Offered Rates) or the average interest rate the largest banks in Indonesia in determining the interest rate of Islamic financing such as mortgages, car financing and other multi -purpose financing. The use of LIBOR as a reference is basically using the interest rate charged by the five (5) largest banks both in financial centers such as London, the loan transactions between banks in the money market (money market) which is determined by forces of supply and demand for money (money supply and demand) as the cost of funds. This means LIBOR is not based on the market price of profits in goods and services transaction. For example in the case of murabaha car financing transaction or ijarah muntahia bit tamlik house financing transaction, the Islamic Bank should use as the profit in the leasing market in real sector transaction and the bank should mark to market the profit to this benchmark.

Mahmoud A. El-Gamal supported the use of conventional benchmark such as LIBOR as a benchmark that is the mark up on buying or selling. According to Mahmoud El-Gamal the use of "Islamic Benchmark" unnecessary and impractical and dangerous because although he admits that the implicit rate (rate subject to actual) in Islamic financial is different- depending on the

quality of the underlying assets, but the Islamic benchmark in the Islamic financial market is not deep enough and did not have a good liquidity to form a uniform rate implicit (uniform) as a benchmark transaction[44]. Mahmoud A. El-Gamal seemed to see the diversity of the contract that have been used in Islamic benchmark such as the sale based product (murabaha), lease base transaction (ijara), profit sharing transaction and others compared to conventional bank that only use debt based contract, make Islamic Benchmark more difficult to be developed.

In contrast to Mahmoud A. El-Gamal, Mohsin S. Khan and Abbas Mirakhor has found that in the Islamic economic system, the rate of profit on financial assets is determined by the rate of return of bank financing which will be used as a benchmark[45]. This means that Mohsin S. Khan and Mirakhor do not agree the use of LIBOR as a benchmark in Islamic financial market. Abbas Mirakhor, Hassan Askari and Zamir Iqbal, develop further thoughts on this benchmark that in the Islamic economic system, the Islamic benchmark for the sale based contract should be coming from the rate of return or profit rate from the real sector.

The Differences in opinion about the use of LIBOR, whether it can be used as a benchmark in the Islamic financial market in general because LIBOR will be used only as a point of reference to the cost of capital in the Islamic financial market which is currently coexist (co-exist) with conventional financial markets. The importance of benchmark in Islamic financial market product pricing is crucial now, because it is also needed as a reference in determining the investment decisions. In conventional economics, the discount rate which is the concept of ex ante or pre-determined or interest rate play an important role in determining the price of financial assets. For example, in the application, the discount rate is used in determining the price of the bonds in the secondary market. Problems arose when the Islamic financial market that prohibit interest rate are using discount rate to value asset prices based on the concept of time value of money. What is the reference or benchmark that will be used to represent the discount rate in the Islamic Financial Framework? In this respect, Muslim economists have different opinion.

Fahim Khan found that the Islamic discount rate can be benchmarked from the returns on the deposits in Islamic Bank. The reason is as follows: to approach the time value of money, we need a portfolio where the risk is almost non-existent and can be ignored so that only pure risk exists in a reasonable time frame. So only the rate of return of the portfolio that is not risk can represent the discount rate. Only the diversification of the portfolio that can reduce the risk or, in other words, the rate of return on the projects that have been distributed which can be a proxy of the time value of money. Rate of return as it approaches will reflect the risk to be borne associated with uncertain time[46]. Therefore, Fahim Khan proposed rate of profit or equivalent

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[44] Mahmoud A. El-Gamal. *Islamic Finance: Law, Economics, and Practice*, 79

[45] Mohsin S. Khan and Abbas Mirakhor, "The Financial System and Monetary Policy in an Islamic Economy", *Journal of Research in Islamic Economics*, King Abdul Aziz University, Vol. 1, (1989), http://www.kau.edu.sa /Files/320/Researches /51007_21144. pdf (diakses 10 Mei 1013), 50.

[46] M. Fahim Khan. *Essays in Islamic Economy: Time Value of Money and Discounting in Islamic Perspective.* (Leicester, UK: The Islamic Foundation, 1995), 168.

rate of deposits of Islamic banks to be able to represent the Islamic discount rate, because it was obtained after the Islamic bank distributes deposit funds earlier to projects that diversified into various segments and get a return of the project. The return from the project then will paid to deposit holder. This return in some Islamic Bank called Rate of Profit of Mudharaba Deposit.

On The reality of the use of a discount rate in the early days of Islam, Kadim As Sadr also explained in his book "Money and Monetary Policies in Early Islamic Period in Essays on Iqtishad: Islamic Approach to Economic Problems" that in early period, Islam already contained the concept of discount rate in sale based transaction[47]. The price is cheaper if we pay cash but when the goods are purchased by installments within a specified period, the price is more expensive. Furthermore Kadim As Sadr also explained that in the monetary policy in the early days of Islam, in order to increase investment, the profit level of goods sold by installments will be lowered. The Monetary policy operation by raising or lowering the selling price of sharia-based instrument by installment purchase contract that is practiced in the days of the Prophet is thus can be used as a theoretical basis for the Central Bank's monetary policy to conduct monetary control by interest-free system. It also shows that the cash price and the price of delay may be different. Price delay is greater due to the possibility of profit (rate of profit) on the turnover of goods during the delayed time.

Based on this study, the authors come to conclusion that to seek the reference rate of profit as a replacement for the BI -rate which currently has been replaced by BI repo rate 7 day today in Islamic interbank money market, the reference rate or benchmark which is in accordance with the Islamic principles are the equivalent rate of profit of the transaction between BI and Islamic Bank in IMA (Indonesia Interbank Mudharabah Investment) whose profits are revenue sharing in the real sector. The Islamic Bank will offer a profit sharing ratio and give the mudharaba certificate to BI named SIMA (IMA Certificate). This Sharia Productive Open Market Operation (non SBIS) is recommended with the consideration that BI is prohibited to provide loans directly to the government, either using SIMA or Government Sukuk securitization, can be seen in Figure 5 below.

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[47] Kadim As-Sadr. *Money and Monetary Policies in Early Islamic Period in Essays on Iqtisad: Islamic Approach to Economic Problems*, 217.

Figure 5. Recommended Sharia Open Market Operation by The BI to Create Sharia Reference rate
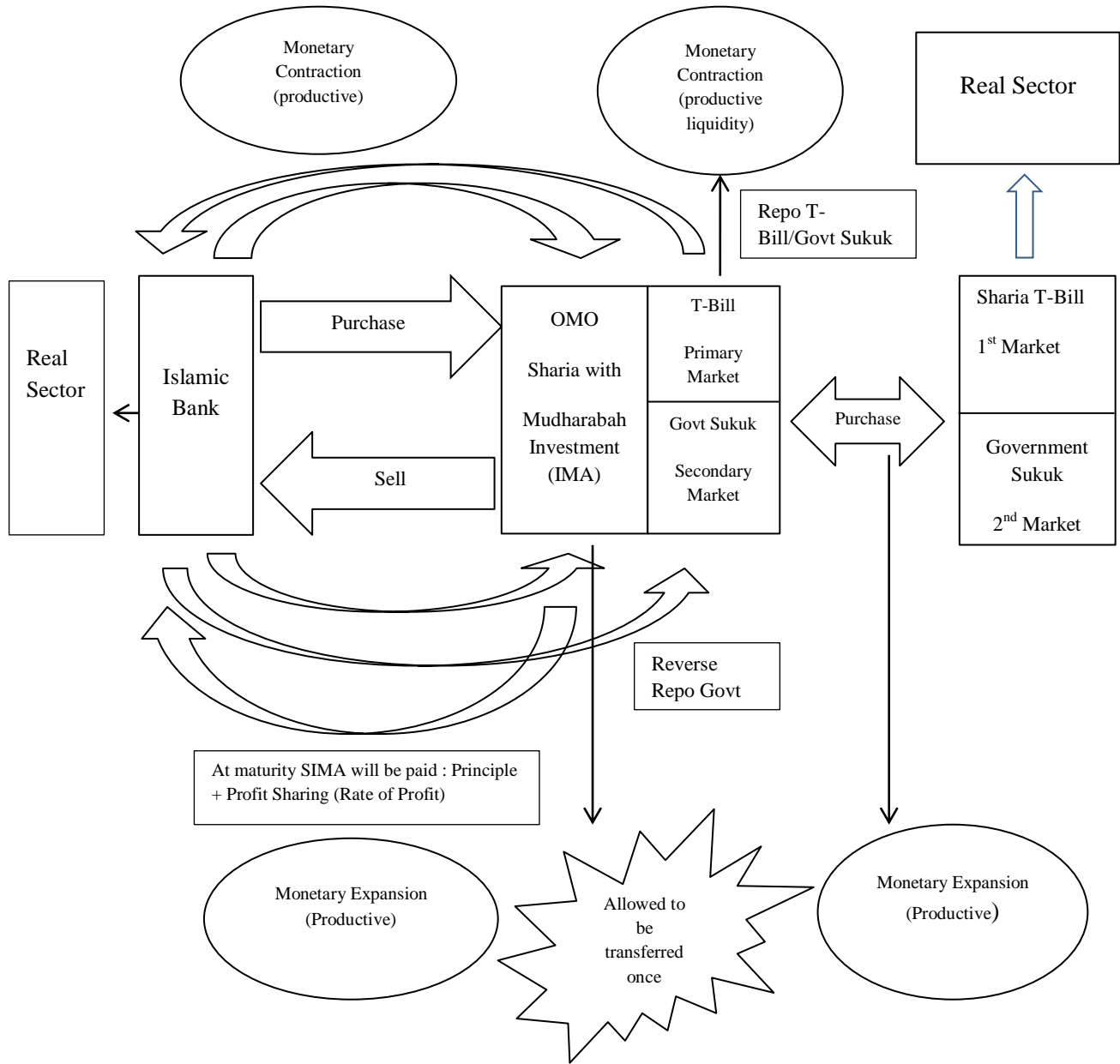
The sharia repo contract with BI that will produce Rate of Profit as a Reference Rate for Islamic Bank explained as below:

(1) The repo transaction (repo or sell outright to maturity) with SIMA will be using mudharabah contract with revenue sharing because the contract is an agreement of direct financing to customers of Islamic banks in which the funds obtained from BI as Rabb al mall (Financier) and the Islamic bank acts as mudharib (Manager).

(2) The repo transaction with Government Sukuk like SBSN will be using musharakah contract between BI and the Islamic Bank. This transaction is basically similar to the Open Monetary Operation conducted in Sudan by the Government Musharakah Certificate (GMC). The consequence of this contract is: if the Islamic or BI want to do the reverse repo agreements, the parties should seek permission from the other party.

Figure 6. Illustration of SIMA Transaction in Islamic Secondary Interbank Money Market

SIMA Repo Transaction

- In The Secondary Market
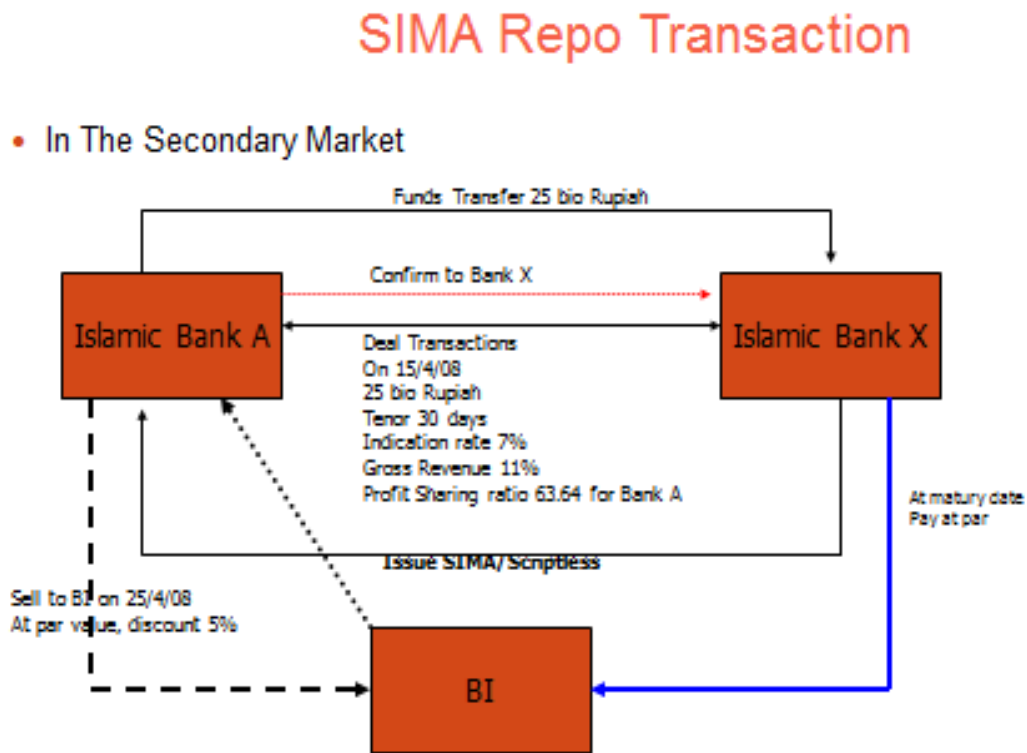
5.1. **Risk in Repo transactions with SIMA/SBSN**

In practice, Repo transactions with SIMA/SBSN have some risk, namely:

(1) The risk of default if at maturity Islamic Bank is unable to pay. Therefore to mitigate this default risk, SIMA Repo transaction must have high-quality collateral such as SBSN (Government Sukuk). This transaction will push Islamic Bank should have at least a portfolio of SBSN about 10% of the total portfolio if the BI requires high quality collateral. This deal will create revenue shared of Rate of Profit as a reference rate for Islamic Bank.

(2) Market risk can also occur if the market price of pledged collateral SBSN is lower than the specified SBSN price when the repo agreement is made. However this scheme has lower market risk if Islamic Bank use previous BI reference rate for SBIS reverse repo transaction that charged the Islamic Bank by SBIS rate + 3 %. This reverse repo charged can be higher than the rate of profit on the deposits of Islamic banks depends on the macro economic conditions. In current state when the Islamic Bank is still using the BI Rate as a reference/benchmark to determine the equivalent rate for the deposits in the Islamic Bank, the repo cost by using the SBIS will be higher than the IMA funding with other Islamic Bank. For example when Islamic Bank do the repo using the SBSN instrument like SR 01 (Sukuk Retail 01) with Ijarah contract, the repo cost will be more expensive than the rate of profit on the deposits of Islamic banks.

(3) Liquidity risk can occur if BI purchase as part of the securitization of SBSN with Islamic Bank to solve liquidity problems, the repo contracts should be followed with Wa'ad/promise contract otherwise the BI will have to fine other party to sell the security with lower price.

5.2. The Benefits and the Advantages of Sharia Repo Transactions.

In addition to the risks that may occur, repo transactions can provide advantages in terms if at maturity the debtor is not able to buy back the guarantee or default, then the guarantee will become the property of the creditors. The Creditors could benefit if such securities turned out to be sold at a higher value than the price at the time of the repurchase agreements has been made at the inception. In the trend where interest rates tend to decline further, the majority of SBSN traded at prices above 100% (par) and higher than the previous situation. Of course, this position will be reversed in the circumstances that interest rate tend to increase. The price of the majority of the SBSN will go down considering Ijarah contract that is using fixed coupon. This fixed and long term quoted coupon price will create high duration and convexity or sensitivity of the SBSN price. Rising-rate reference rate SBI will make SBSN prices fall. The price of SBSN thus strongly influenced by the reference rate (BI rate) in accordance with the formula:

$$d \, (VSBSN) = -D. \, dR + C/2. \, DR2 \, / \, (1 + R)$$

Whereby is VSBSN = Price of SBSN, D = Duration, C = Convexity, R = Reference Rate (BI-rate)

For example Government Sukuk Ijarah SR01 Series with 12 percent Ijarah coupon with maturity February 25, 2012 had ever reached the price of 107.7199 or appreciated 7.7199 percent above the cost of Sukuk. While the Government Sukuk Series IF8 price with coupon of 8.8 percent maturing March 15, 2020 had reached 98.50 price or suffer a capital loss of 1.5% of their principal amount. The price movement of financial assets of sharia that can experience a capital loss (the wealth decline) as assessed by the BI reference rate will lead to the instability of the Islamic financial system, due to the instability of the assets and liabilities of Islamic banks, which in turn affects the wealth of the society who invest funds in Islamic banks. The instability in sukuk price could theoretically be overcome if the reference rate used is the rate of profit on the transaction deposits mudaraba which is determined and follow the rate of return of financing in the real sector. This post determined rate of profit based on the revenue sharing will create the "duration and convexity" of the Islamic Bank asset will always be close to zero and the prices of Islamic Bank financial assets will thus be stable at the issuance price (at par). The volatility of Government Sukuk (SBSN) prices can be seen in Figure 7 below.

Figure 7. Government Sukuk Prices as of June 4, 2010[48]

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94<GO> to edit columns. Click on columns to sort. 95<GO> to export to excel.
                        Government Securities          Page        1 / 1
    INDOIS (14 Found)    Cpn Typ  All      Mty Typ  All      Exclude  Matrd/Call/MTN/StrPr
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Issuer	Coupon	Maturity	Series	Rtg	Mty Type	Announce	Curr	Ask Px	PC
1)PERUSAHAAN PENER	7.890	07/24/10	SDHI		BULLET	06/24/09	IDR	100.2730	BV
2)PERUSAHAAN PENER	12.000	02/25/12	SR01	NR	BULLET	01/29/09	IDR	107.7199	BG
3)PERUSAHAAN PENER	7.610	03/03/12	SDHI		BULLET	03/02/10	IDR	100.6490	BV
4)PERUSAHAAN PENER	8.700	02/10/13	SR02		BULLET	01/21/10	IDR	102.7977	BG
5)PERUSAHAAN PENER	9.000	10/15/13	IF4		BULLET	11/04/09	IDR	102.7421	BG
6)PERUSAHAAN PENER	8.800	04/23/14	144A	BB	BULLET	04/16/09	USD	117.0640	BV
7)PERUSAHAAN PENER	8.800	04/23/14	REGS	BB	BULLET	04/16/09	USD	116.6750	BG
8)PERUSAHAAN PENER	11.800	08/15/15	IF1	NR	BULLET	08/14/08	IDR	112.7560	BV
9)PERUSAHAAN PENER	9.250	09/15/15	IF3	NR	BULLET	10/20/09	IDR	102.5860	BV
10)PERUSAHAAN PENER	9.000	01/15/17	IF5		BULLET	01/12/10	IDR	102.0000	BG
11)PERUSAHAAN PENER	11.950	08/15/18	IF2		BULLET	08/14/08	IDR	116.7550	BG
12)PERUSAHAAN PENER	8.800	03/15/20	IF8		BULLET	04/08/10	IDR	98.5050	BG
13)PERUSAHAAN PENER	10.250	01/15/25	IF7		BULLET	01/12/10	IDR	104.2320	BV
14)PERUSAHAAN PENER	10.250	03/15/30	IF6	NR	BULLET	03/30/10	IDR	100.0250	BG

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Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
Japan 81 3 3201 8900    Singapore 65 6212 1000    U.S. 1 212 318 2000    Copyright 2010 Bloomberg Finance L.P.
                                                                         SN 186018 H160-52-0 04-Jun-10  4:21:16
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[48] Bloomberg Company, www.bloomberg.com (accessed on June 4 2010).

Some benefits of using the repo construction SIMA and SBSN instrument include:

(1) The Use of SIMA / SBSN will increase transaction on the secondary Islamic interbank market so that it can contribute to the development and the deepening of the Islamic financial markets sharia as expected by the market participants, the Central Bank and the Ministry of Finance in order to improve the liquidity and the creation of a reference rate such this Rate of Profit or Islamic Bank benchmark.

(2) Encouraging the economic activity in the real sector and improve the welfare when (a) SBSN purchased by the Bank, it will help the liquidity of the government to finance the state budget and improve the general welfare (b) when SIMA was bought by the Central Bank, it will increase the liquidity of the Islamic financial market and contribute to the Islamic Bank market depth so that the reference rate in the form of rate of profit for Islamic banking can be established. The reference rate for the long term, can also be taken from the repo transactions BI by using SBSN, so with this two combination of instruments, the Islamic monetary operations is expected to increase the liquidity and market depth of sharia economy.

(3) Improving coordination among government agencies i.e. Ministry of Finance, the central bank and the FSA so as to improve the effectiveness of the monetary operations and budget funding through Islamic financial secondary market.

(4) Increase the participation of Islamic financial participants because with the addition of instruments it will increase the investors base other than Islamic Financial Institutions (Non-Bank Financial Industry) such as Corporate, Insurance, Cooperative and others.

(5) Increase market share of Islamic financial market as more and more investors are investing and the more public funds are absorbed well in the Islamic money market and capital market.

6. Empirical Study of Financial Stability on the Impact of Current Monetary Policy in the Asset Liability Management in Islamic Banking

To support this qualitative research (related to the concept) and to measure financial instability in Islamic Bank net income/margin, the author conducted a quantitative verification by doing an empirical studies on the influence of interest rates on the rate of profit of one of the biggest Islamic bank in Indonesia (a case study).

For the empirical studies, author took the data of rate of profit growth of Bank Syariah Mandiri (BSM) from May 2004 to May 2009. The year 2004-2009 is chosen because at that period there was an interest rate hike from 7.25 % to 12.25 % due to the financial crisis in United State of America. This condition is ideal when we want to look at the effect of interest rate hike on the rate of profit of Islamic Bank. In a study conducted at Bank Syariah Mandiri from 2004 to 2009 author study the bank's rate of profit which is calculated from the portion of a Islamic bank profit apart from the customer portion represented by Net Profit Margin (NM). The model used in this study is multiple regression time series model, because in this study there is only one dependent variable and more than one independent individual variable. In this analysis we will

look on how big the influence of independent variables on the dependent variable. In this study, the independent variable is a numeric variable, since the independent variables were taken from the data of the financial statements of Bank Syariah Mandiri and Bank Indonesia publication data. The type of data is a time series data in the period of May 2004 to May 2009 (5 years).

The model used is a model with multiple regression analysis to determine the effect of 5 Factors i.e. : Balance Sheet Structure of Islamic Bank represented by the ratio of RSA/RSL (Rate Sensitive Assets / Rate Sensitive Liabilities), Islamic Bank Investment in Real Sector represented by the ratio FDR (Financing to Deposit Ratio), Interest Rate represented by the SBI (Bank Indonesia Certificate), Islamic Bank Capital represented by the CAR (Capital Adequacy Ratio) and Islamic Bank Credit Default represented by the NPF (Non Performing Financing) to rate of profit of Islamic Bank represented by the Net Profit Margin to Deposit (NM) of Bank Syariah Mandiri. From the research results shows that the Net Profit Margin of Islamic banks turned out to get affected by the interest rate movement. In this research we are using the interest rate of SBI (Bank Indonesia Certificate) as a comparison. The Research models also illustrate the instability of BSM Net Profit Margin/income to changes in interest rates, represented by the SBI and other independent factors as below:

$$\text{Net Profit Margin} = \alpha + \beta1 \text{ RSA / RSL} + \beta2 \text{ SBI} + \beta3 \text{ FDR} + \beta4 \text{ CAR} + \beta5 \text{ NPF} + \upsilon$$

The result from the statistical analysis shows a relationship of Net Profit Margin (NM) and its independent factors i.e. the Islamic Bank Balance Sheet Structure, SBI (Interest rate) and Capital as below:

The Overall Model F test (ANOVA) conducted with the hypothesis:

H_0: $\beta1 = \beta2 = \beta3 = \beta4 = \beta5 = 0$, meaning that the RSA / RSL, FDR, SBI, CAR and NPF
  Are not significantly affect the Net Profit Margin
H_1: At least one $\beta \neq 0$, meaning that the RSA / RSL, FDR, SBI, CAR and NPF
  Together significantly affect Net Profit Margin
Statistical analysis was performed with the decision criteria: Reject H_0 if the p- value of the F statistic is smaller than 0.05

Table 2. ANOVA Test for Overall Model Validity

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.967	5	4.593	46.694	.000[a]
	Residual	5.411	55	.098		
	Total	28.378	60			

a. Predictors: (Constant), NPF, LDR, SBI, CAR, RSA/RSL

b. Dependent Variable: NM

Source: SPSS Output

Tabel 3. *R Square* Test for Overall Model Validity

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.900[a]	.809	.792	.31365

a. Predictors: (Constant), NPF, LDR, SBI, CAR, RSA/RSL

b. Dependent Variable: NM

Source: SPSS Output

The output according to Table 3 above: p-value statistic F is 0.000 less than 0.05, it can be concluded that reject H_0, which means that the variable RSA / RSL, FDR, SBI, CAR and NPF together significantly affect the Net Profit Margin of Bank Syariah Mandiri . The results of the R - square of 0.809 indicates the strength of relationship between the variables of the five independent variables is: RSA / RSL, FDR, SBI, CAR and NPF to Net Profit Margin of Bank Syariah Mandiri.

From the BLUE (Best Linier Unbiased Estimator) test, the FDR and NPF are proved to have a multi collinear problem as shown by high condition index of 79.489 which is larger than 30, so the author has to do VIF test with the result as Table 4 below:

Table 4. RSA/RSL, SBI and CAR Variable Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	11.270	.372		30.285	.000		
	RSA/RSL	-.015	.004	-.210	-3.272	.002	.847	1.180
	SBI	-.228	.023	-.596	-10.072	.000	.996	1.004
	CAR	-.225	.027	-.538	-8.405	.000	.850	1.176

a. Dependent Variable: NM

Source: SPSS Output

The results in Table 4 SPSS output shows only three variables: RSA / RSL, SBI and CAR have VIF smaller than 10, so from this VIF test these three variables do not have a multi collinear problem. To further provide satisfactory results, the researcher did another test with Condition Index Test with the results as shown in Table 5.

Table 5. Collinearity Diagnostics RSA/RSL, SBI and CAR Variable Test

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	RSA/RSL	SBI	CAR
1	1	3.921	1.000	.00	.00	.00	.00
	2	.048	9.002	.01	.68	.25	.00
	3	.023	12.950	.07	.29	.58	.22
	4	.007	23.279	.92	.02	.17	.78

a. Dependent Variable: NM

Source: SPSS Output

The end result as shown in Table 5 is the value of Condition Index of 23.279 less than 30 indicates that the multi collinear symptoms can be addressed and the research to test the overall model and the individual testing with these three variables can be done to get the exact model.

Testing the overall model of the three variables do with the hypothesis:

H_0: RSA / RSL, SBI and CAR has no effect on Net Profit Margin
H_1: RSA / RSL, SBI and CAR has effect on Net Profit Margin

With the testing criteria: Reject H_0 if the p-value test statistic F in the ANOVA table > 0.05. The results of the overall test models such as the Table 6 below:

Table 6. The Overall Model RSA/RSL,SBI and CAR Test

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.741	3	7.580	76.647	.000^a
	Residual	5.637	57	.099		
	Total	28.378	60			

a. Predictors: (Constant), CAR, SBI, RSA/RSL
b. Dependent Variable: NM

Source: SPSS Output

Table 7. R-Square Overall Model (RSA/RSL, SBI and CAR) Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.895^a	.801	.791	.31448

a. Predictors: (Constant), CAR, SBI, RSA/RSL

Source: SPSS Output

Because in Table 7 p-value of 0.000 <0.05 , then reject H_0 means that together the three variables, namely RSA / RSL , CAR and SBI has effect on Net Profit Margins.

Testing the hypothesis of individual partially performed by t test with a hypothesis:

The results of the t test output to variable RSA / RSL , SBI and CAR as shown in Table 8 below:
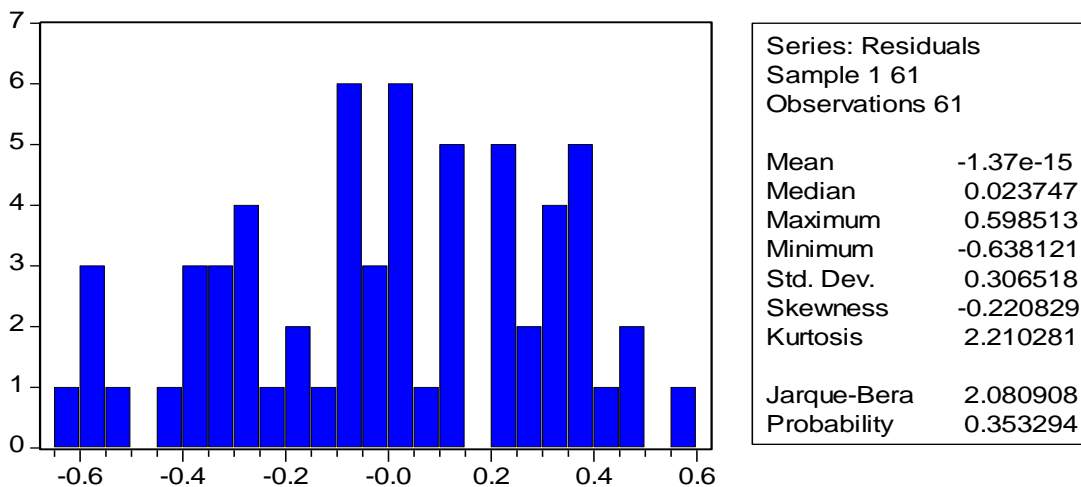
Table 8. RSA/RSL, SBI and CAR Variable t-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.270	.372		30.285	.000
	RSA/RSL	-.015	.004	-.210	-3.272	.002
	SBI	-.228	.023	-.596	-10.072	.000
	CAR	-.225	.027	-.538	-8.405	.000

a. Dependent Variable: NM

Source: SPSS Output

From the Examination on the final model with 3 variables: RSA / RSL , CAR and SBI , which is freed from the multi collinear problems, the research continued by testing the remaining BLUE test namely : Normality Data Test with Jarque Berra Test, Homoscedasticity Test with White Heteroscedasticity Test, Autocorrelation Test with Breusch-Godfrey Serial Correlation LM . The results from Eviews output is as follows:

Table 9. Jarque Berra (RSA/RSL, SBI, CAR) Normality Data Test

Series: Residuals	
Sample 1 61	
Observations 61	
Mean	-1.37e-15
Median	0.023747
Maximum	0.598513
Minimum	-0.638121
Std. Dev.	0.306518
Skewness	-0.220829
Kurtosis	2.210281
Jarque-Bera	2.080908
Probability	0.353294

Source: Eviews Output

The results in Table 9 Eviews output as shown above indicate normal distribution for residual with a p-value 0.353294 is greater than 0.05 .

Tabel 10   Uji White Heteroscedasticity (RSA/RSL, SBI, CAR)

White Heteroskedasticity Test:

F-statistic	1.654022	Probability	0.150345
Obs*R-squared	9.470162	Probability	**0.148812**

<div align="right">Source: Eviews Output</div>

Output results from Table 10 shows that the p-value $0.148812 > 0.05$, so it can be concluded that the residual is homoscedastic.

Table 11. (RSA/RSL, SBI, CAR) Variable Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.710304	Probability	0.495947
Obs*R-squared	1.535911	Probability	**0.463961**

<div align="right">Source: Eview Output</div>

Output results in Table 11 shows the p-value testing from Breusch Godfrey Serial Correlation LM Test is: 0.463961 then it means there is no problem of autocorrelation.

So from the overall test, it can be concluded:

1. The Significance value/ t statistical p-value for the variable RSA / RSL (Balance Sheet Structure) is $0.002 < 0.05$, then RSA / RSL has effect on Net Profit Margins.
2. The Significance value/ t Statistics p-value for the variable SBI (Interest Rate Benchmark) is $0.000 < 0.05$, then SBI has effect on Net Profit Margins.
3. The Significance value/ p -value for the variable CAR t-statistic is $0.000 < 0.05$, then CAR has effect on Net Profit Margins.

So that the final model is:

$$
\begin{array}{l}
\textbf{NM = 11.270 - 0.015 RSA/RSL – 0.228 SBI – 0.225 CAR} \\
\textbf{t} \quad \textbf{(30,285)} \quad \textbf{(-3,272)} \quad \textbf{(-10,072)} \quad \textbf{(-8,405)} \\
\textbf{se} \quad \textbf{(0.372)} \quad \textbf{(0.004)} \quad \textbf{(0.0023)} \quad \textbf{(0.027)} \\
\textbf{R}^2 \ = \ \textbf{0.801}
\end{array}
$$

From the resulting research model above, the model can be interpreted as follows:

1. When the other variables are constant, the increase of 1 % in RSA/ RSL would decrease the Net Profit Margin value of Bank Syariah Mandiri to 0.015 %

2. When the other variables are constant, the SBI rise of 1% would reduce the value of Bank Syariah Mandiri Net Profit Margin to 0.228 %
3. When the other variables are constant, the increase in CAR of 1% would reduce the value of Bank Syariah Mandiri Net Profit Margin to 0.225 %.

The value of R square shows 0.801 which means the variables of RSA / RSL, SBI and CAR are all able to explain with the same behavior amounted to 80.1 % Net Profit Margin at Bank Syariah Mandiri, while 19.9 % is explained by other variables

From the above model it can be interpreted that every 1% increase in the SBI rates will cause a decrease in the rate of profit of BSM amounted to 0.228%. From this empirical data it can be concluded that the nature of the instability of Islamic banks to interest rates hike with the balance sheet structure (RSA / RSL) below zero (negative gap), will produce the same risk with conventional banks, namely the decline in the rate of profit of Islamic banks. In other words that the rate of profit character of Islamic banks is the same as the character of NIM (Net Interest Margin) of Conventional Banks with the Interest Rate System. Therefore the rate of profit in Islamic banks and Islamic bonds in the capital market should refer to the Islamic Benchmark referring to the profits in the real sector with mark to market methodology which inherently have low duration (volatility) as it will bring stability to the economy both in the banking system as well as the Islamic capital market.

7. CONCLUSIONS

In conclusion, the stability on Islamic Financial Market which is measured from the equitable distribution of income and the wealth of financial asset in Islamic Bank Net Profit Margin will be determined by:

a. As shown by the research result, the net gap arising from Islamic Bank balance sheet structure (RSA/RSL < 0) due to the dominant long term and fixed Murabahah asset has bad impact on Islamic Bank Net Profit Margin in a rising interest rate condition. In order to have a more stable Asset-Liability Management, Islamic Banking should follow the concept of an Islamic Rate of Profit whereby the profit will always be marked to the market with profit in real sector and this will result in the net duration of the Islamic Bank balance sheet will be approach to zero or risk neutral so that it will be immune to the changes in market variables such as interest rates. The rate of profit in Islamic Bank that creates an equitable distribution of income as measured by the stability of the Net Profit Margin on Asset-Liability Management of Islamic banks, can be achieved by structuring the Islamic banks rate of profit repricing profile based on short-term assets (*Murabaha*, *Istisna* and *salam*), medium term investment (*Ijara*, *Istisna*) and long-term partnerships (*Mudaraba*, *Musharaka*).

b. The rate of profit that creates an equitable distribution of wealth in the Islamic capital market also can be seen from the volatility of financial assets such sharia Islamic bonds (sukuk). From the economic analysis, we can see the main factor is a component of risk and term premium for long term being added in the pricing structure of Islamic financial assets such as Islamic bonds which is basically the same additional charged on the loan pricing structure for compensation due to the credibility of the borrower's. This risk premium together with the long term premium structure creates price volatility which comes from the high duration

factor. With the concept of rate of profit which is accordance with Islamic principles, the rate of profit will be corresponding to the profit in the real sector and has always adjusted to the changes in the price in the real market (mark to the market methodology) so that the price of the *sukuk* will be more stable.

c. The current Repo SBI-S transaction in Islamic banking practice does not create Islamic banking intermediation in the real sector because it is intended only for monetary operations, namely in the framework of monetary contraction and expansion in the absence of underlying transactions in the real sector. The Islamic Repo Transaction that can create Islamic banking intermediation can be done through SIMA with *mudharaba* profit shared scheme and the securitization of SBSN. With a market share of Islamic Banking currently is still small (about 5%), then the monetary policy will not be effective done through the Repo transaction with Islamic Bank, so the repo transaction should be directed to the Islamic banking intermediation purposes to real sector as a source of liquidity to the money market and capital market.

d. The use of the rate of profit as a reference rate through mudharabah profit sharing system which is determined by gains in the real sector will create a cash basis reference rate that produces stability on financial markets.

e. Islamic repo transaction particularly in Islamic Interbank Market should be supported by the BI (Indonesian Central Bank) to contribute the development and the deepening of the Islamic financial market. In many countries such as Japan and the United States, the repo market is the back bone of the market share which reaches 40% of all debt transactions.

f. The Islamic repo transactions with the instrument of SIMA and SBSN in large-volume will create Rate of Profit as a reference rate for Islamic banks, as an alternative of current BI 7 day repo rate.

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