

## Shariah Compliant Asset Pricing Model (SCAPM) The Formula of Risk and Return Modification in Islamic Finance

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### ABSTRACT

Sebagai lembaga keuangan Islam ke pasar modal untuk investasi, panduan di bidang risiko dan tingkat pengembalian dan keamanan di bawah kerangka syariah diperlukan. CAPM tradisional yang dikembangkan di lingkungan berbasis bunga (riba) tidak sesuai dengan sistem keuangan syariah. Sehingga membuat estimasi model risiko dan return yang diterima oleh model syariah tanpa mengubah asumsi model yang ada (CAPM). Penelitian ini diharapkan dapat memberikan kontribusi dalam hal penilaian risiko dan pengembalian investasi syariah, khususnya di Indonesia. Metode dalam penelitian ini adalah eksploratori melalui pendekatan studi pustaka mengenai model Capital Asset Pricing Model (CAPM) dan mengeksplorasi studi mengenai masalah kepatuhan Investment sharia untuk mendapatkan model penilaian risiko dan return dalam kerangka syariah yaitu Model Harga Aset Syariah yang Sesuai (Syariah Compliant Asset Pricing Model) SCAPM). Hasil penelitian ini menunjukkan bahwa Model Harga Aset Syariah Sesuai Permintaan (SCAPM) adalah modifikasi dari model Capital Asset Pricing Model (CAPM), yang telah dijelaskan bahwa salah satu asumsi dasar CAPM adalah tidak ada inflasi. Jadi dalam penelitian ini, peneliti tidak menggunakan inflasi namun mengganti faktor inflasi dengan tingkat pengembalian Sertifikat Syariah Bank Indonesia (SBIS).

**Keyword:** *Capital market, capital asset pricing model, SCAPM*

### INTRODUCTION

Sharia finance is required. Sharia system is required. The traditional CAPM developed in the interest-based environment (riba) is incompatible with the Islamic financial system. Soft Indonesia. The method in this research is exploratory through literature study approach about the model. CAPM model.

This research is expected to contribute in terms of risk assessment and recovery of sharia investment, especially in Pricing Model Pricing Sharia Model Compliant (Sharia Pricing Model Model) SCAPM). Appropriate Syariah Asset Price Model. The results of this study show that Sharia Pricing Asset Pricing Model (SCAPM) is a model model of the Capital Asset

Pricing Model (CAPM), which has been described as one of the basic CAPM basics in which there is no inflation. So in this study, researchers did not use inflation but with the rate of return of Sharia Certificates of Bank Indonesia (SBIS).

The only factor that differentiates conventional economics and Islamic economics is that in Islamic economics all actions, activities, policies, strategies and interactions in the economy does not end with the profit and loss in the world, but was brought up on the final day. Islam is not able and not possible to separate the life of the world to the Hereafter included in Muamalat. Therefore the investment as part of the activities muamalah have provisions that can not be violated (Jusmliani,2008:49-50).

In principle, all decisions made by financial managers both concerning investment decisions, spending decisions and dividend policy have the same goal. All it requires an estimate of expected results and risk or the possibility of not obtaining the expected results. Results are expected to be translated into expected return. while the risk means the probability of not achieving the expected profit rate or the possibility of return received deviate from the expected return. the greater the expected return deviation, the greater the risk levels (Agus Sartono,2010:139).

As an Islamic financial institutions into the capital market, the need guidance in the areas of risk and return and security prices under the framework of Shari'a. Risks are accepted (not gharar) in business allowed by law; and experts in business or finance are in consensus about the positive relationship between risk and return. Allah SWT said:

وما تدري نفس ما ذا تكسب غدا

The verses of the Koran confirms the existence of uncertainty regarding the future and something that no one can

know with certainty what will be earned tomorrow or to be obtained. However, humans are required to keep trying. Mainstream financial confessed this fact. Economic unit when faced with uncertainty to speculate, predict the future or understand the information provided and the information processing apparatus.

In Indonesia, does not have a calculation of risk and return to the framework of sharia. Muhammad Hanif in research, trying to formulate risk and return in the framework of sharia. He considered that there is a need to analyze the pricing model existing securities in the shariah compliance filter, documenting any incompatibility with the Islamic financial system and suggest alternatives. Muhammad Hanif technically seeks to analyze the asset pricing model (CAPM, APT and multifactor models). Based on the behavior of the stock market and macroeconomic factors, the validity test through filters compliance law (shariah compliance filter) and suggest modifications are needed. because, one component of the Capital Asset Pricing Model (CAPM) which is used not in accordance with Islamic Shari'a is the risk free return ( $R_f$ ), where there are two compositions of this  $R_f$  is real risk free return and cost inflation. Real risk free return represents the time value of money which is the rent of money and this is forbidden in Islamic law. (Muhammad Hanif,2011:285).

Based on the description above, the author tries to redefine the framework of risk and return in accordance with sharia without violating the basic assumptions of the CAPM.

## 1. Question Issues

How the calculation model risk and return within the framework of sharia?

## 2. Research Purposes

To find out how the calculation model risk and return within the framework of sharia.

### 3. Benefits Of Research

In this study is expected to provide benefits to some aspects:

- a. Theoretical aspects, namely as a new paradigm in assessing the risk and return of investment within the framework of Islamic finance, as well as an additional reference for asset pricing model so they no longer use the approach of Capital Asset Pricing Model (CAPM), but using the approach of Shariah Compliant Asset Pricing Model (SCAPM) in accordance with the framework of Islamic finance.
- b. Policy Aspects, which made the DSN-MUI fatwa related to monetary policy implementation based on Islamic principles and as an effort to deal with the excess liquidity of Islamic banks, necessary instruments issued by central banks in accordance with sharia, not ignore one of the main missions of Islamic banking, which is to the real sector which was then known as Bank Indonesia Certificates Sharia (SBIS)

### LITERATURE REVIEW

Yi-Cheng et al conducted a survey of the evolution of Capital Asset Pricing Model (CAPM). They classify the CAPM model in (1) Merton's intertemporal CAPM, (2) Consumption-based intertemporal CAPM, (3) Production-based intertemporal CAPM, (4) CAPM with supply-side effect, (5) International Equilibrium CAPM with heterogeneity Beliefs and Investors, (6) Equilibrium with heterogeneity CAPM Investment Horizon, (7) CAPM with Dividend and Taxation Effect, (8) CAPM with Skewness Effect, and (9) Behavioral Finance, and (10) Liquidity-based CAPM. Yi-Cheng et al explain that the

relationship between theory perspective and CAPM needs further research both theoretically and empirically, and particularly the relationship between the type of skewness CAPM and theoretical perspectives need to be investigated carefully (Yi-Cheng et al, 2014:440-446).

Oghenovo A Obrimah, Jacob Alabi and Blessing Ugo-Harry, find asset pricing model consists of a portfolio of market, bias (skewness) market or co-skewness factor and portfolio volatility factor that describes the risk-return portfolio at the Nigerian Stock Exchange (NSE), and accordance with efficiency study in the Nigerian stock market. they explain that the asset pricing model that consists of a portfolio of market itself tends consistently underestimated the risk of the portfolio which means one factor CAPM specification inappropriate to test the efficiency of Nigerian Stock Market. With respect to the effect of non-synchronous stock trading in risk-return portfolio, it was found that the presence of non-synchronous trading, can induce greater diversification for investors, simultaneously generate higher prices for market risk is a higher level of risk aversion so that it can be a mitigating risks to changes market portfolio risk to portfolio return (Oghenovo A. Obrimah et al, 2014:22-23).

David Blitz, Eric Falkenstein and Pim van Vliet, explained if the effects of volatility due to the biased behavior of investors then it is likely to be thinking about how we can overcome the influence of irrational behavior of investors. It may have started with creating more awareness that we need to invest more simply, getting good information, more systematic and more holistic (David Blitz et al, 2013:20).

### Theoretical View of Concentration Market Risk

Market risk is facing an investment instrument that is caused by market

factors such as economic factors, political and others. Beta ( $\beta$ ) is a measure that is popular in assessing the risk of a security in relation to the securities market itself. beta used to measure market risk (Suharto and Fadillah Qudsi, 2009: 87-88).

Beta coefficient can be searched by distributing the covariance between the rate of profit share and profit levels with the market portfolio variance of the market portfolio gains,  $r_{im}\sigma_i\sigma_m/\sigma_m^2$ . Thus beta coefficient is determined by three main factors: the first, First, the correlation between the level of dividend with a margin of market portfolio,  $r_{im}$ . Second, volatility or variability in the level of dividend indicated by the standard deviation of the rate of profit shares,  $\sigma_i$ . The third is the variability of the profit rate market portfolio,  $\sigma_m$ .

$$\beta_i = \frac{\text{Covarian}(R_i, R_m)}{\sigma_m^2} = \frac{r_{im}\sigma_i\sigma_m}{\sigma_m^2}$$

Beta value describes how much share risk of the portfolio. There are three conditions of the beta ( $\beta$ ), namely (Toto Prihadi, 2013: 274):

- a.  $\beta = 1$ , then the stock risk level is equal to the level of portfolio risk.
- b.  $\beta < 1$ , then the stock risk level is lower than the stock portfolio. For example, a The beta stock X 0.8, then when IHSG moved up 10%, X shares will rise by 8%.
- c.  $\beta > 1$ , then the stock risk level is higher than the portfolio. For example, beta stock X has a beta value of 1.3, then when IHSG moved up 10%, then the X stock will move up 13%.

### Risk and Return

Return is a result from investments. Return may be a return realization has occurred or in the form of expected return that has not happened, but that is expected

to occur in the future (Najmudin, 2011:130). Risks often associated with irregularities or deviation received with the expected. To calculate the risk, the method used is the standard deviation measures the absolute deviation values that have occurred (Jogiyanto Hartono, 2013: 227-228).

#### a. Stock Returns

$$R_i = \frac{P_t - P_{t-1}}{P_{t-1}} = \frac{P_t}{P_{t-1}} - 1$$

Explanation:

$P_t$  = Price of investment now

$P_{t-1}$  = Price of investment last period

While the expected return can be measured by:  $E(R_i) = \sum_{j=1}^n (R_{ij} \cdot p_j)$

Explanation:

$R_{ij}$  = the expected return of an asset / security  $j$  to  $-i$

$p_j$  = the probability of future result to  $j$  for the securities to  $-i$

#### b. Stock Risk

Variance of a share is defined as follows:

$$\text{Var}(R_i) = \sum_{j=1}^n ([R_i - E(R_i)]^2 \cdot p_j)$$

The standard deviation is the root of the variance:

$$\sigma = \sqrt{\text{Var}(R_i)}$$

### Capital Asset Pricing Model (CAPM)

The main objective of asset pricing model is to explain how and to which the various factors that affect asset prices. Based on this information, investors should be able to make decisions better investment. For example, the Capital Asset Pricing Model (CAPM) of Sharpe and Lintner stated that securities prices are determined only by how its links with the stock return of the market portfolio return consisting of all security risks. In addition, if investors can borrow and lend at the risk-free interest rate, CAPM shows that investment decisions can be reduced to

decide the level of risk that is willing to accept. Investors reached a level of risk acceptable to divide the investment between market portfolio and the risk-free asset in the right amount (James Turner, 2010: 43).

CAPM teaches us that investors (both active and passive) can benefit from holding a diversified portfolio of assets. It also has taught us to expect higher yields, on average, for the portfolio contains a higher proportion of the asset beta of the market portfolio (Peter C Dawson, 2015:48).

The standard form of the CAPM first developed separately by Sharpe, Lintner and Mossin in the mid 1960s. So this model is often called the CAPM Sharpe-Lintner-Mossin model.

The form of the CAPM (Capital Asset Pricing Model) is as follows (Jogiyanto, 2010: 84-85):

$$E(R_{i,t}) = R_{BR,t} + \beta_{i,t} \cdot [E(R_{M,t}) - R_{BR,t}]$$

Explanation:

$E(R_{i,t})$  = the level expected return of eligible for the securities to -i in the estimation period to -t

$R_{BR,t}$  = the level of investment risk-free profit to -t

$\beta_{i,t}$  = beta (a measure of risk) of securities to -i in the period to t

$R_{M,t}$  = profit rate portfolio market in the period to -t, which can be calculated by the formula:

$$R_{M,t} = (IHSG_t - IHSG_{t-1}) / IHSG_{t-1}$$

Explanation:

$IHSG$  = Indeks Harga Saham Gabungan.

With this formula, then the expected return of a portfolio or an individual securities can be determined.

As well as the theories of other financial, some of the assumptions required to develop the model. These

assumptions are used to simplify the problems that actually occur in the real world. The assumptions used in the CAPM model are as follows (Jogiyanto Hartono, 2013: 488-489):

- a. All the investor has the same time period. Investor maximize wealth by maximizing the satisfaction of expectations in the same time period.
- b. All investors making an investment decision based on the consideration of the value of the expected return and returns standard deviation of the portfolio.
- c. All investors have homogeneous expectation of the input factors used for portfolio decisions. Input factors used are the expected return, variance of return and covariance.
- d. All investors can lending some funds or loan (borrowing) amount of funds in an amount not limited to the risk-free interest rate.
- e. short selling allowed. Individual investors can sell short any desired.
- f. All assets can be broken down into smaller parts with unlimited. This means that the value of the smallest investor can invest and conduct sales and purchases of assets at the prevailing price.
- g. All assets can be marketed perfectly liquid.
- h. There are no transaction fees. The sale or purchase of property not transaction fees.
- i. No inflation.
- j. There is no personal income tax. then the investor has the same option to obtain dividends or capital gains.
- k. Investor is the recipient of the price (price-taker).
- l. Capital markets in equilibrium.

## METHODOLOGY

The method used is the method of explorative approach carried out through

the study of literature about the model Capital Asset Pricing Model (CAPM):

$$E(R_{i,t}) = R_{BR,t} + \beta_{i,t} \cdot [E(R_{M,t}) - R_{BR,t}]$$

As well as through studies on sharia compliance issues in investment. Therefore, This paper is expected to contribute in calculating risk and return in investing sharia, especially in Indonesia.

## FINDINGS

### Shariah Compliant Asset Pricing Model (SCAPM)

The Islamic financial system is not limited to banking, but also includes capital formation, capital markets, and all kinds of financial intermediation. The system interprets as "interest-free" tend to create confusion. The philosophical foundation of the Islamic financial system beyond the interaction of factors of production and economic behavior. While the conventional financial system focuses mainly on economic and financial aspects of the transaction. The Islamic system focuses on the dimensions of ethical, moral, social, and religious, to promote equality and justice for the good of society as a whole.

Mona A. Elbannan explained, CAPM has been criticized in many studies limited to assumptions regarding risk-free loans, investors maximize the investment of the period and focus only on the risk and return of the portfolio period, whether the market Beta describes the expected returns, and proxy market portfolio of all assets at risk (Mona A. Elbannan, 2015: 222). Furthermore, Fama and French found evidence that the estimated cost of equity capital for specific industries using the CAPM right with a standard error of more than 3% every year, due to uncertainty about the expected risk premium correct and incorrect estimates of beta industries. They argue that the estimated cost of equity is certainly not appropriate for the individual companies

and projects. Fama and French describe that CAPM equation measures the relationship between the expected return on assets and the market portfolio returns. However, the market portfolio has been criticized as based on unrealistic assumptions such as investment in one period. Fama and French concluded that most of the models are built on unrealistic assumptions must be tested in practice.

Mike Dempsey found CAPM fails as a paradigm for asset prices. He showed, first, how the re-examination of the study of Black, Jensen and Scholes are not much to lay the empirical basis for the CAPM, revealed that the data does not really give a justification of CAPM as claimed, rather it is a confirmation of the null hypothesis, namely that investors impose a single expectation of the return on assets. Mike Dempsey did not want to leave the core paradigm of market rationality. This paradigm, is justified financial status as a subject worthy of "scientific investigation". Second, we show that although the evidence now requires academics acknowledge the ineffectiveness of beta (Mike Dempsey, 2013: 3-8).

However, the return on stocks with a higher beta systematically less than predicted by the CAPM. While stocks with lower beta systematically. Responding, Black proposed a two-factor model (with weights on the market and its portfolio of zero-beta). Thus, the claim was made that the CAPM can be fixed by changing the risk-free rate in the model portfolio return stock with a beta of zero.

The easiest way to make CAPM which data is to replace the risk-free rate,  $R_f$  (usually short-term returns of US Treasury bonds) with some of the larger value  $R_z$ , because it will adjust intercepts and explain the lower slope of a cross-sectional regression. In fact, BJS use the data to calculate the required level of

replacement  $R_z$  the best offer. Thus, Black proposed the CAPM version as:

$$E(R_j) = E(R_z) + \beta_j[E(R_m) - E(R_z)]$$

Where  $R_z$  represents a portfolio return that has zero covariance with the market portfolio return. Black opinion that this model is consistent with the assumption of easing risk-free lending and loan opportunities.

Jan F. Jacobs criticized the CAPM that the discrete levels used in CAPM is not a "level". Consequently, if not all the calculations made (the risk) the addition of discrete rates do not match (Jan F. Jacobs, 2004:1). CAPM proved invalid. Roger Dayala also criticized the CAPM irrational for investors risk-averse (Roger Dayala, 2012: 24), Graham Bornholt also criticized that empirically CAPM fails when applied in industry in estimating the cost of equity industries (Graham Bornholt, 2012: 2-3).

Traditional CAPM is developed in an environment based on the interest (riba) is not in accordance with Islamic financial system. Under Shari'a (Islamic law), the risk and the return mechanism is slightly different from the conventional business environment, because in a risk-free investment is not allowed in Islam, then the original equation of risk and return can not be applied.

Therefore, there must be a minimum compensation (such as  $R_f$  in a conventional) for investors under Shari'a compliant financial system. Nominal  $R_f$  consists of two things: (1) is real  $R_f$ , (2) is the cost of inflation. Real  $R_f$  represent the time value of money. This is a lease to use the money (interest) (Muhammad Hanif, 2011: 288).

According Keynes's theory of liquidity preference,  $R_f$  is compensated for sacrificing liquidity by investors. within the framework of Sharia, money exchange tool and not a commodity. Money can be

used in the manufacturing process utilities (production and delivery of goods and services) and a decent return on profit and loss. The time value of money included in the category of Riba (interest) is forbidden in all religions, including Judaism, Christianity and Islam.

It is clear from the above quotations that  $R_f$  risk (interest) is Riba is prohibited by law then there is no question of its existence in the financial system Shari'a compliant.

The second component of  $R_f$  is the cost of inflation. Inflation reduces the purchasing power of the currency and the owner lost some wealth. It is the primary responsibility of the Islamic state to protect its citizens along with a wealth of life, faith, generation and honor or that we are familiar with the term maqasid sharia. Wealth will be reduced as a result of excessive inflation in the economy and the government of the Islamic state should not allow this phenomenon occurs. In the financial system that adherence to sharia, CAPM modifications required. In order to accommodate for the study, the following equation established by Muhammad Hanif for Shariah Compliant Asset Pricing Model:

$$[R_j = N + (R_m - N)\beta_j]$$

Explanation:

$R_j$  = securities return;

$N$  = cost inflation;

$R_m$  = the average return of the market portfolio,

$\beta_j$  = beta securities,

inflasi = Consumer Price Index (IHK).

Shariah Compliant Asset Pricing Model (SCAPM) is a modification of the Capital Asset Pricing Model (CAPM), and the above has been explained that one of the basic assumptions of CAPM is no inflation. In this study, the researchers did not use inflation but replacing these factors with the rate of return on Bank Indonesia Sharia Certificates (SBIS).

Randolph B. Cohen, Christopher Polk, and Tuomo Vuolteenaho explained that CAPM is considered to have failed when using the inflationary implications of the hypothesis proven by a combination of inflation illusion and CAPM is that the securities market line (SML), which describes the relationship between the return on average assets and CAPM beta steeper than predicted by the Sharpe-Lintner CAPM when inflation is low or negative. Conversely, when inflation is high, shallow securities market line of predictions CAPM Sharpe-Lintner. This means that the failure to precisely control the risk compensation required by investors. If the omitted variables correlated with the risk of inflation, aggregate tests will mistakenly attribute the expected variation in the time series of inflation-linked mispricing (Randolph B. Cohen et al, 2004:16).

### **The Bank Indonesia Sharia Certificate (SBIS)**

#### **a. Definition of Bank Indonesia Sharia Certificates (SBIS)**

Bank Indonesia Sharia Certificate replaces Wadiah Bank Indonesia Certificates (SWBIs) which has been in force. The central bank publishes SBI syariah to anticipate the increase transactions in Islamic banking. Proposed SBI Sharia issuance originated from a complaint Islamic banks. Islamic banking assess the placement of funds Wadiah Bank Indonesia Certificates (SWBIs) lower compared with the conventional placement of funds in Bank Indonesia Certificates.

According to Bank Indonesia Regulation No.10/11/PBI/2008 about Bank Indonesia Sharia Certificates explained Bank Indonesia Sharia Certificates or SBIS are securities short-term based on Sharia Principles in rupiah currency issued by Bank Indonesia. SBIS issued by Bank Indonesia as one of the

instruments in open market operations in the framework of monetary policy implementation based on Sharia Principles. SBIS issued by Bank Indonesia using Ju'alah contract.

National Sharia Board Fatwa No: 64/DSN-MUI/XII/2007 describes SBIS Ju'alah, Bank Indonesia as ja'il (employer); Bank Syariah as maj'ullah (recipient of the work); and object / underlying Ju'alah (mahallul-'aqd) is the participation of Islamic Bank to assist the Bank Indonesia in monetary control through the absorption of liquidity from the public and placing it in Bank Indonesia in the amount and time period specified (Fatwa DSN No.64/DSN-MUI/XII/2007).

SBIS Instruments issued by Bank Indonesia through an auction mechanism and has the following characteristics:

- 1) Unit of Rp.1.000.000,00 (one million rupiah);
  - 2) A term of at least 1 (one) month and a maximum of twelve (12) months;
  - 3) Published without warkat (scripless);
  - 4) Can be used as collateral to Bank Indonesia; and
  - 5) Can not be traded in the secondary market.
- b. Function of Bank Indonesia Sharia Certificates (SBIS)

SBIS is an instrument that can be used as an alternative Islamic banking fund management. This instrument has the function of maintaining the liquidity and profitability of Islamic banking. Meanwhile, from point of view the central bank (Bank Indonesia), Bank Indonesia Sharia Certificates (SBIS) has a function to enhance the effectiveness of monetary policy implementation through open market operations based on Islamic principles.

#### **c. Legal Foundation Bank Indonesia Sharia Certificates (SBIS)**

the legal foundation for Bank Indonesia Sharia Certificates (SBIS)



was issued on March 31, 2008, characterized by the issuance of Bank Indonesia Regulation (PBI) No.10/11/2008 on Bank Indonesia Sharia Certificates (Gazetted in 2008 Number 50, Gazette of the Republic of Indonesia Number 4835) by Bank Indonesia. With the enactment of the above, Bank Indonesia Regulation Number 6/7/PBI/2004 dated February 16, 2004 on Wadiah Bank Indonesia Certificates revoked and declared no longer valid.

So Bank Indonesia issued Circular (SE) BI No.10/16/DPM on the Procedure for Issuance of Bank Indonesia Sharia Certificate through Auction and Circular (SE) Bank Indonesia No.10/17 /DPM on Procedures for Bank Indonesia Sharia Certificates by Bank Indonesia.

In addition, Bank Indonesia Certificates Sharia (SBIS) it also has a National Sharia Board Fatwa, Indonesian Ulema Council (DSN-MUI), namely the DSN-MUI Fatwa No.63/DSN-MUI/XII / 2007 on Bank Indonesia Sharia Certificates (SBIS) and Fatwa 64/DSN-MUI /XII / 2007 on Bank Indonesia Sharia Certificates Ju'alah (SBIS Ju'alah ). Both Fatwa above is the latest Fatwa regarding Bank Indonesia Certificates Sharia (SBIS) where, before the existing Fatwa DSN-MUI Fatwa No. 36/DSN-MUI/X/2002 on Bank Indonesia Wadiah Certificates.

In SBIS Ju'alah, Bank Indonesia as Jamil (employer), Bank Syariah as maj'ullah (receiver job), and object / underlying Ju'alah (mahallul-'aqd) is the participation of Islamic Bank to assist in the task of Bank Indonesia monetary control through the absorption of liquidity from the public and placing it in Bank Indonesia in the amount and time period specified.

Bank Indonesia in its monetary operations through the issuance of SBIS announced a target absorption of liquidity to banks sharia control efforts and promises of monetary rewards (reward / 'iwadh / ju'l) specific for participating in its implementation. Referring to the explanation of Islamic monetary instruments above the equation to approach the Shariah Compliant Asset Pricing Model (SCAPM) the researchers propose is as follows:

$$[R_j = rSBIS + (R_m - rSBIS)\beta_j]$$

Information:

$R_j$  = Return securities;

$rSBIS$  = Rate of return on Bank Indonesia Certificates Sharia (SBIS);

$R_m$  = The average return of the market portfolio;

$\beta_j$  = beta securities.

## CONCLUSION

Investment growth in the capital market in Indonesia is very attractive to investors. Capital market products out of stock also now glimpsed the community. Evidently, in the event titled Feast of Mutual Funds in 2016 was able to record 800 new investors. Along with the increasing number of investors, prompting the authors to construct a model of refinement of the model that has nothing to do with risk and return within the framework of sharia.

In the model that has been developed by Muhammad Hanif, the traditional CAPM converted into SCAPM by eliminating the risk free rate and include the cost of inflation. Meanwhile, one of the basic assumptions of the CAPM is no inflation so that the model that the authors offer  $[R_j = rSBIS + (R_m - rSBIS)\beta_j]$  with utilizing existing Islamic monetary instrument in Indonesia, moreover Indonesia will serve as a center

of Islamic capital market in the world in 2020 so it is important to frame the risk and return in accordance with sharia.

### SUGGESTION AND LIMITATION

This research is rarely done and is a new finding in assesment risk and return under shariah framework, certainly has its

limitations. So we need more studies or further research using other elements that do not violate the assumption of CAPM.

For future studies, the researchers propose suggestions for further research can be tested in real terms in the measurement of risk and return. So that results are not biased.

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