Syari`ah Investment

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Introduction

In Islam, all the decisions, activities, policies, strategies and interactions in economics do not end with profit or loss, but continue to the hereafter where all wrongdoing will be punished. Thus, the syari`ah regulations should be considered in all economic activities, including investment.

By definition, investment means additions to the physical stock of capital. More generally, investment can be thought of as any current activity that increases the economy's ability to produce output in the future; thus it includes not only physical investment but also what is known as investment in human capital (Dornbusch and Fischer, 1990). Traditionally, investment has a correlation with interest rates as the price of money invested; if investment is highly responsive to interest rates, a small decline in interest rate will lead to a large increase in investment.

The problem in Islam is that interest is prohibited but most of the investment opportunities offered are interest-based. Interest is used to calculate future earnings, to predict potential profit and to select the portfolio of investments that will give maximum returns. Not only is interest forbidden, the company selected to invest in must also meet particular criteria; for example, the activities of the companies must not involve gambling, tobacco, alcohol etc. Another obstacle is that a syari`ah secondary market has not yet developed because current secondary markets in the world are dominated by speculation, which is also forbidden in Islam.

On the other hand, the growth of Islamic banking has been relatively very fast, not only in the Middle East but worldwide, particularly in Europe. An increasing number of London banks offer Islamic banking services to borrowers and savers, and more than 20 retail banks in the world offer services that meet Islamic standards. Bridging the normative side of Islamic rules in investment and the demand from the investors and the market, the researchers investigated this topic critically.

Method

Most of the topics in this research use a descriptive analysis method, but some use simply a normative explanation in an effort to describe the difference between conventional investment and syari`ah investment. Empirical evidence is used more in explaining the growth of Islamic investment instruments such as *sukuk* (bonds), insurance, mortgages, or the source of probable funding, such as *zakah* or *waqf*.

Empirical analysis is used to measure to what extent shocks from the previous period persist in affecting the volatility in the current period for each type of investment for the Jakarta Islamic Index (JII), the Jakarta Composite Index (JCI) and LQ45. The JII is used to represent the ethical investment type, while non-ethical investment is represented by JCI and LQ45.

Rules Governing Islamic Investment

As in conventional economics, syari`ah recognises the close relations between investment and economic growth that can be explained by the multiplier effect. In addition, Islam strongly encourages long-term investment with an eye to the distant future. 'If you hold a date-seed in your hand, then comes the doomsday, you still should plant the seed', said the Prophet Muhammad. Based on this *hadis*, it is clear that Islam strongly encourages people to invest, although the return on this investment might not be for them but for their offspring. Empirically, investment in real sectors is distinct from portfolio investment. Investments in real

sectors are those investments that are a part of running a business, and are treated as one of the production factors that transforms raw materials or inputs into goods and services. Conventionally, the reward for this kind of investment is the agreed interest rate between investor (fund-holder) and business owner.

Syari`ah investment rejects all kinds of interest, thus a business should be completely interest-free. The investment should be according to a profit–loss sharing scheme where a high degree of trust between the parties is needed. It is obvious that if the main business of a company is not lawful in terms of syari`ah, so it is not allowed for an Islamic fund to purchase, hold or sell shares. Thus there are certain fields of business that are prohibited under syari`ah (such as gambling businesses or businesses that produce food with non-*halal* materials or ingredients).

In this regard, there are many similarities between Islamic investment and ethical investment or socially responsible investment (SRI), which is a recent development. Both prohibit investment in business activities that are harmful to humans. Both forms of investment require screening processes to decide whether they are ethically acceptable. The difference is that Islamic investment is deeply rooted in the teaching of the Qur'an, but SRI is a recent phenomenon based on the awareness of investors about the damage or the negative externalities from corporations to the people.

Islamic investment means that all the transactions of a company are in full conformity with syari`ah, which includes the requirement that the company neither borrow money on interest nor keep its surplus in an interest-bearing account so the shares can be purchased, held and sold without any hindrance from the syari`ah side. But such companies are very rare in contemporary stock markets. Almost all the companies quoted in the present stock markets are in some way involved in an activity that violates the injunctions of syari`ah. Even if the main business of a company is *halal*, its borrowings are based on interest. On the other hand, they keep their surplus funds in an interest-bearing account or purchase interest-bearing bonds or securities.

Because almost all companies engage in some way or another with interest, *ijtihad ulama* agreed to formulate screening financial ratios to enable such companies to receive Islamic investment funds. These are:

1 **Revenue received from activities engaged with interest is not** more than 15 per cent (for Indonesia's Islamic stock market, and not more than 5 per cent for Dow Jones Islamic Market (DJIM) Index.

2 Debt to equity ratio must be less than 30 per cent for Indonesia's Islamic stock market and less than 33.3 per cent for DJIM.

3 Liabilities less than 50 per cent for Indonesia's Islamic stock market and less than 45 per cent for DJIM.

These ratios are used for what is called the *purifying process*.

Some Empirical Evidence

Indonesia welcomes foreign investment, either direct or portfolio, but foreign direct investment (FDI) from Middle East countries still very small. Furthermore, on a wider global scale investment flows among Islamic countries also very small. As the textbooks suggest, money goes to where returns are highest. The empirical study tried to model the three stock markets in Indonesia: the Jakarta Islamic Index (JII), LQ 45 index (45 most liquid stocks) and the Jakarta Composite Index (JCI). The objective was to examine whether these three markets show similar or different patterns of returns, and which reflects a more stable market with regard to market shocks. Models of univariate and multivariate conditional volatility were employed to achieve the objective. Univariate models of GARCH(1,1) and AGARCH(1,1) were used to analyse shock persistency for each market. Moreover, multivariate conditional models of VAR(1)-GARCH(1,1) and VAR(1,1)-AGARCH(1,1) will be used to investigate how volatility spillover runs among these three markets.

The three markets observed for this study show similar patterns of movement.[1] The JII has the highest and the lowest returns compared with the two other markets even though in a very short time. However, JCI tends to have higher fluctuations.

Figure 1
Volatility of JII, LQ45 and JC
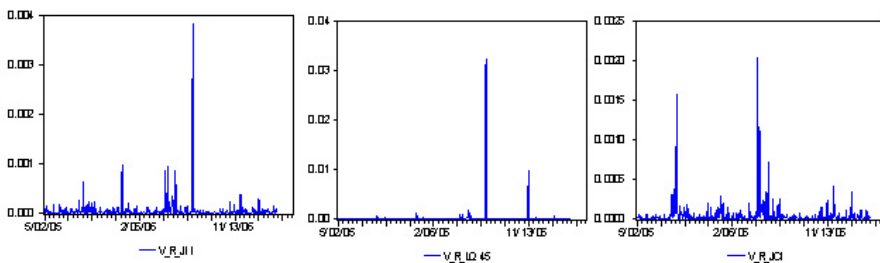
Source: Jakarta Stock Exchange (2007)

Results

Univariate Conditional Volatility

Table 1 summarises the return estimation of univariate model of AR(1)-GARC(1,1) from each market examined. The estimation shows that each market has followed ARCH process. The coefficient of autoregressive (θ_1) in the conditional mean affects significantly the return from the following period. The result from the mean equation shows that JCI had the highest own-lagged compared to the other two markets and JII has the least own-lagged effect. This means that JII market is more persistent in coping with shocks from the previous period than the other markets. The magnitude of previous shock is quite moderate, in which a shock would be followed by an increase of the index by 0.139 point.

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1   JII is the Jakarta Islamic Index; LQ45, the 45 most liquid stocks; and JCI, the Jakarta Composite Index

Table 1

Return Estimation of AR(1)-GARCH(1,1) for JII <LQ45 and JCI

Variable	Conditional mean		Conditional Variance			Log moment	Second moment
	θ_0	θ_1	ω	α	β		
JCI	**0.0024**	**0.1480**	**2.78E-05**	**0.2717**	**0.6328**	-0.1893	0.9045
LQ45	-0.0015	-0.1038	**0.0007**	**0.2998**	-0.0207	NC	0.2791
JII	**0.0022**	**0.1392**	**9.48E-05**	**0.1862**	**0.5068**	-0.2710	0.6930

Note: Entries in bold are significant at the 5% levels.

In accordance with conditional variance estimation, it is shown that ARCH and GARCH components are significant in explaining JII and JCI data movement, unless for LQ45 in the long term. The JII market is the market most resistant in the short term because it has the lowest own shock magnitude (0.18), but LQ45 has the highest market resistance to the short-term shock (0.347). In the long run, the result is very different in which JII is the most persistent market while JCI is the least persistent market of shocks.

Even though all the data show that ARCH process takes place or the behaviour of the data is time varying, however the model of AR(1)-GARCH(1,1) does not consider asymmetric effects between positive and negative effects. Generally, both shock at the same magnitude may have different effects. The model to capture this asymmetric effect is AR(1)-GJR(1,1).

Table 2

Return Estimation AR(1)-GJR(1,1) for JII, LQ45 and JCI

Variable	Conditional mean		Conditional Variance					
	θ_0	θ_1	ω	α	γ	β	Log moment	Second moment
JCI	0.0014	**0.1810**	**3.62E-05**	-0.0099	**0.4382**	**0.6353**	-0.4733	0.8445
LQ45	-0.0011	-0.0856	**0.0007**	0.2347	0.0311	-0.0225	NC	0.2278
JII	0.0018	**0.1544**	**9.79E-05**	**0.1146**	**0.2879**	**0.4489**	-0.5225	0.7075

Table 2 shows the regression results of AR(1)-GJR(1,1) for JII, LQ45 and JCI. The own-lagged is significant for all the markets as shown by the AR ($\square_1$) coefficients. JCI is consistently having the largest effect of own lagged in GJR model similar to the GARCH model. Furthermore, LQ45 also shows consistent results with the least own-lagged impact. Long term and short term persistency is applied for JII and LQ45 in which JII is more persistence to any shocks compared to LQ45.

In terms of conditional variance equation, the asymmetric effects apply for JCI and JII markets. It follows that a negative shock has a greater impact than positive shock even though they are the same magnitude. The largest asymmetric effect is experienced by JCI where a negative shock would be followed by an increase in return by 0.438 point while for the case of JII, a negative shock would be responded by a decrease of 0.2888. Consequently, return volatility for JCI and JII markets are better modelled by AR(1)-GJR(1,1) model while return volatility in LQ45 is better explained by AR(1)-GARCH(1,1) model.

Because the asymmetric effect is significant for JII and JCI, therefore, the GJR model is more representative than the GARCH model to explain volatility movements in both markets (JCI and JII), while GARCH model is preferred to explain volatility in LQ45 market.

Multivariate Conditional Volatility

In order to analyse volatility spillover among the three markets, multivariate conditional volatility model is applied. The model allows the analyses of contagion effects and the direction of volatility. Therefore, it is important for investors' portfolio decision making.

Table 3

Return Estimation of VAR(1)-GARCH(1,1) for JII, LQ45 and JCI

	Conditional mean		Conditional Variance								
			Own Effects			Spillover Effects					
	θ_0	θ_1	ω	α	β	α_{Jci}	β_{jci}	α_{LQ45}	β_{LQ45}	α_{Jil}	β_{Jil}
JCI	**0.0023**	**0.1383**	**3.71E-05**	0.2232	**0.6579**			**0.0023**	**-0.0012**	**0.0384**	**-0.0516**
LQ45	-0.0016	-0.0885	0.0008	0.2509	-0.0278	**-0.0684**	0.0104			0.0063	**-0.1265**
JII	**0.0019**	**0.1307**	**7.68E-05**	0.1337	0.2331	0.0439	0.1643	**-0.0010**	0.0138		

The model of AR(1)-GARCH(1,1) allows the analyses of contagion effects among the markets without considering the existence of asymmetric effect. The model only explains the direction and contribution of shocks between the markets. The estimation results on Table 5 suggests that there is dynamism in the conditional mean where the stock returns are affected by the news (shocks) from the own-market (θ) especially for JCI and JII.

As for conditional variance equation, own-lagged significantly affects the JCI market in the long run. Moreover, multivariate spillover effects are true for the markets. In general, long-run shock from JII affects the other two markets, and shocks from LQ45 affect returns for JII but does not apply to JCI. Meanwhile, JII and LQ45 shock affect the JCI market's return in the long and the short run.

Table 4

**Return Estimation of VAR(1)-AGARCH(1,1) for JII, LQ45 and JCI**

	Conditional mean		Conditional Variance									
			Own Effects				Spillover Effects					
	θ_0	θ_1	ω	α	γ	β	α_{Jci}	β_{jci}	α_{LQ45}	β_{LQ45}	α_{Jil}	β_{Jil}
JCI	0.0016	0.1766	**4.15E-05**	-0.0329	0.3393	**0.6969**			**0.0021**	**-0.0011**	**0.0377**	**-0.0538**
LQ45	**-0.0033**	**-0.1736**	0.0008	**0.0101**	0.1265	**0.3468**	**-0.0757**	**-0.0237**			-0.0281	**-0.1416**
JII	0.0012	**0.0798**	**6.27E-05**	**-0.0589**	**0.2647**	**0.4402**	0.0232	0.0974	**-0.0008**	0.0098		

The estimation for spillover effects by taking into account asymmetric effect is conducted by adopting VAR(1)-AGARCH(1,1) model. Table 4 shows that, in general, own lag in conditional mean influences each market unless for JCI.

Based on statistical significance in conditional variance equation, there is return volatility between the markets or volatility spillover is true for them. In terms of own effect, volatility in JII markets is affected by its own lag either in the long run or in the short run. Similar result applies also applies for LQ45 market, while as for JCI is only affected by short run news from previous period. News from JII market affect the return for JCI and LQ45, and news from LQ45 also affect the return for JII at the other way around. JCI returns are affected by the news from JII and LQ45. The asymmetric effects are significantly true for JII, which shows a decrease in return by 0.265 points when the markets are subject to negative news. To sum up, JII market is has a dominant effect on the two other markets. This relationship is consistently proven by AR(1)-GARCH(1,1) model. This relationship can be illustrated as follow:

Figure 1

Volatility Spillover between JII, LQ45 and JCI for AR(1)-GARCH(1,1) and AR(1)-AGARCH(1,1) models
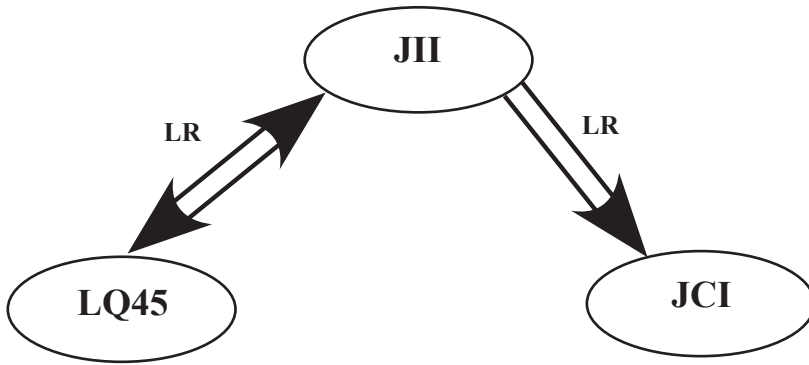
Syari`ah Investment Instrument

The institution of *waqf* originated during the time of the Prophet (peace be upon him) and entails the use of cash, land and real estate for charitable purposes. There are certain conditions governing *waqf*, but the objective is to serve the poor and the community. This kind of instrument should be developed more innovatively, not just charity to use land for cemetery or mosque (which is common) but to empower the poor.

Takaful or syari`ah insurance is not a new concept, in fact it had been practised by the *Muhajirin* of Mecca and the *Ansar* of Medina following the *hijrah* of the prophet. *Takaful* is based on the idea that what is uncertain with respect to an individual may cease to be uncertain with respect to a very large number of similar individuals. By combining the risks of many people through *takaful*, enables each individual to enjoy the advantage provided by the law of large numbers.

Sukuk (Islamic Bond) market worldwide is growing significantly, it is estimated that this year this market could reach US$ 20 billion. Muslim investors from the Middle East, reluctant to invest in conventional bonds because this form of investment does not conform to syari`ah,

are willing to buy *sukuk*. Indonesia's global *sukuk* last April attracted demand from 230 investors with total value US$4.7 billion

In mortgage transaction, instead of lending the buyer money to purchase the item, a bank buys the item itself from the seller, then re-sells it to the buyer at an agreed profit. The buyer will pay the bank in instalments. Funds collected from *zakah* can be used as an investment for poor people, while at the same time these people are trained to do business.

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