Shariah Compliance Companies (SCC) Investment Efficiency and Non-SCC: Evidence from Indonesia

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Abstract. Corporate investment in the practice deviates from the optimal level due to financing constraints and agency issues. Understanding the primary reasons that cause investment inefficiency will help formulate policies that address the problem. Most prior research emphasizes that any governance mechanism that reduces agency risk and disciplines management enhances investment efficiency, but still lacks attention to Sharia law as another mechanism to mitigate investment efficiency issues. Therefore, we propose examining some attributes of Sharia principles to compare the investment efficiency of Shariah Compliance Companies (SCC) and non-SCC in Indonesia. The results indicate that both SCC and non-SCC invest inefficiently. Our study contributes to the emerging literature on the differences between SCC and non-SCC by demonstrating that the investment efficiency of SCC differs from that of non-SCC. SCC tend to invest at an above-optimal level (overinvestment), and conversely, non-SCC tend to invest at a below-optimal level (underinvestment)..

Keywords: Shariah Compliance Companies (SCC), Investment Efficiency, Company size

1 Introduction

1.1 Research background

There are several significant differences between Shariah Compliance Companies (SCC) and conventional (non-SCC) companies. The religious values inherent in Sharia-based companies are a fundamental aspect that distinguishes SCC from traditional companies. Islamic principles prohibit activities and produce products that are not permitted by Islamic law, such as alcohol, pornography, gambling, and non-halal food products (Usmani, 1999; El-Hawary et al., 2004; Ullah et al., 2018). Additionally, in Islamic economic transactions, there is a principle of prohibition on usury (interest) and gharar. These principles have a significant impact on investment efficiency. Islam emphasizes the profit-loss sharing system and, conversely, prohibits the interest system, both in the form of receiving and paying interest (Derigs and Marzban, 2008). These provisions result in SCC having a low default risk (Pok, 2012).

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The Sharia principles above can enhance investment efficiency by reducing asset substitution or debt overhang problems. On the contrary, both of these problems are possible in non-Sharia companies. The leverage level exemption allows non-Sharia companies to have high default risk. In such conditions, it can create and exacerbate conflicts between managers and shareholders (Jensen and Meckling, 1976; Myers, 1977; Jensen, 1986), as company managers may be tempted to invest in risky projects with negative NPV (Jensen and Meckling, 1976). If the risky project can be executed successfully, the creditor will only receive a regular rate of return, while the company will enjoy all other additional benefits. On the contrary, if the investment fails, the creditor must share the loss with the company (debtor). The higher the default risk, the more positive aspects the company gains, and conversely, the more negative elements the debt holder faces, resulting in a higher shareholder-debt holder agency conflict.

Previous literature reveals that companies facing high default risk also tend to refrain from investing in positive NPV projects (Myers, 1977). This behavior is carried out to avoid transferring funds to bondholders as payment for previous maturity debt, if the investment is successfully implemented. The higher the default risk, the more benefits bondholders obtain, and conversely, the more costs the company incurs. As a result, the company chooses to face the problem of underinvestment. From another perspective, the managerial-optimization hypothesis posits that companies with bankruptcy risk tend to deliberately maintain debt ratios below optimal levels to mitigate risks associated with debt and bankruptcy (Amihud and Lev, 1981). This finding illustrates the behavior of managerial opportunism in non-SCC companies (Katper et al., 2015). Thus, starting from the principle of usury, it is expected that sharia-based companies have different levels of efficiency than non-sharia companies due to other agency problems.

Previous empirical research states that the implementation of leverage ratio requirements on SCCs results in limited access to external funding (Akinsomi et al., 2015; Alnori and Alqahtani, 2019). As a result, SCCs are more conservative compared to non-SCCs (Kutan et al., 2018). Although SCCs can attract external funding through debt issuance (sukuk), the complexity of these instruments, such as the length of issuance time and higher costs compared to conventional debt (Alnori and Alqahtani, 2019; Bugshan et al., 2021), reduces the interest of SCCs, making them less of a priority option (Alnori and Alqahtani, 2019). Therefore, SCCs tend to accumulate cash and rely more on internal funding, resulting in higher cash holdings of SCCs than non-SCCs (Akguc and Al Rahahleh, 2018; Alnori and Alqahtani, 2019). SCCs' more conservative leverage and higher cash holdings compared to non-SCCs indicate that SCCs are more financially flexible than non-SCCs. Financial flexibility theory posits that high financial flexibility enables companies to invest more than those with low financial flexibility (Marchica and Mura, 2010; De Jong et al., 2012; Arslan-Ayaydin et al., 2014). With different levels of financial flexibility, it is expected that SCC will have a different level of investment efficiency compared to non-SCC.

Previous literature reveals that Islam requires the incorporation of ethical and moral values in all economic activities (bin Mahfooz and Ahmed, 2014), Therefore, Islamic finance emphasizes the importance of provide all the necessary information (Maali et al., 2006) related to the price and items exchanged between each party to the transaction. The imbalance of one of them will provide excessive uncertainty (risk) or gharar (Rehman, 2010) to one of the parties to the transaction, which does not reflect justice and is an element strictly prohibited in Islam (Khanfar, 2016).

Therefore, Islamic finance leads to information symmetry. The principle of gharar signifies high transparency in Sharia-based companies. At a high level of transparency, it can reduce agency conflicts and lead to higher investment efficiency (Biddle et al., 2009; Chen et al., 2011a; Cheng et al., 2013) or be able to overcome investment inefficiency (Verdi, 2006; Biddle et al., 2009; Gomariz and Ballesta, 2014). Previous empirical studies have shown that companies within a religious context are less likely to engage in aggressive financial reporting and have higher accrual quality, lower financial statement misstatements, lower accounting risk, and lower forecast error rates (McGuire et al., 2011; Dyreng et al., 2012). Other studies have also reported that religion has a significant influence in restraining unethical behavior. Executives working in Islamic financial institutions are less likely to engage in earnings management (Hamdi and Zarai, 2013). Therefore, religiosity is believed to reduce the tendency towards unethical behavior (Satt et al., 2020).

1.2 Research Gap

Previous empirical studies have demonstrated that lowering managerial opportunism leads to increased investment efficiency (Lai and Liu, 2018). Thus, it is expected that sharia-based companies have different levels of efficiency than non-sharia companies due to other agency problems. Several empirical tests have justified the relationship between religion and business aspects (Cavanagh and Bandsuch, 2002; Giacalone and Jurkiewicz, 2003; Angelidis and Ibrahim, 2004), which generally can be concluded that religion requires companies to have moral and ethical obligations when carrying out economic activities (Azid et al., 2007; Khatkhatay and Nisar, 2007).

Therefore, the objectivity of Sharia-compliant companies differs from that of conventional companies. Islam strongly emphasizes the principles of fairness and justice in business activities, therefore strictly prohibiting the pursuit of economic goals by causing harm. Therefore, Islam views profit maximization as not the main priority, but prioritizes maximizing benefits without harm (bin Nik Yusoff and Nik, 2002; Dusuki and Abdullah, 2007; Adnan Khurshid et al., 2014). This objectivity encourages Sharia companies to consider the element of altruism in their business activities.

In contrast, conventional companies prioritize profit maximization over social accountability (bin Nik Yusoff and Noor, 2002). With such objectivity, Islamic companies have a broader role in society and are sensitive to sustainability practices

(Fathyah et al., 2015). Previous studies have shown that the level of awareness of Islamic companies regarding sustainability practices has increased (Rapiah et al., 2009) and is higher than that of non-Islamic companies (Amran et al., 2011). Islamic compliant companies are more involved in CSR activities than conventional companies and adhere to high moral standards (Garriga and Melé, 2004; Kim et al., 2012). Thus, Islamic companies are more beneficial to society than conventional companies (Abubakar, 2016). Other empirical studies report that firms in religious circles have a greater drive for accumulating social capital (Guiso et al., 2003; Ruan and Liu, 2011) or exhibit a higher frequency and intensity of social responsibility (Brammer et al., 2007; Li et al., 2013; Zhou and Hu, 2014).

High levels of social activity indicate that managers act in the best interests of shareholders, thereby reducing information asymmetry (Freeman, 1984; Jensen, 2002; Harjoto and Jo, 2011; Jo and Harjoto, 2012). The empirical findings are justified by several other studies that conclude that increased stakeholder involvement through CSR will reduce information asymmetry (Cheng et al., 2014), because CSR produces good performance that can reduce information asymmetry (Dhaliwal et al., 2011) and companies with better CSR performance have harmonious relationships with stakeholders, thus limiting opportunistic behavior (Cheng et al., 2014).

The same view is also expressed by other studies, which state that direct stakeholder involvement can limit the possibility of short-term, dysfunctional managerial behavior. This is because CSR requires the allocation of funds that reduces free cash flow, thereby mitigating the impact on self-interested behavior of managers (Ioannou and Serafeim, 2015). The reduction in funds under the control of managers is expected to increase investment efficiency, resulting in higher efficiency for companies involved in socially responsible activities (Attig et al., 2008). Therefore, given the difference in objectivity, it is expected that Sharia-based companies will have a different level of efficiency compared to conventional companies.

2 Literature Review and Hypothesis

2.1 Literature Review

The frequent instability in the conventional financial industry has raised several issues related to governance practices, corporate fairness, ethical principles, transparency, and accountability (Beck et al., 2013; Bitar et al., 2017; Khan and Khan, 2017). As a consequence, there has been an increase in demand for sharia-based financial products, which are not only driven by Muslim investors but also by non-Muslims around the world who are encouraged to seek alternative asset classes as a means to maintain returns and minimize risk (Saiti et al., 2014). From a company perspective, listing as a Sharia company or Shariah Compliance Company (SCC) is an effort to implement business ethics (Alsaadi et al., 2017), promote social values (Elias, 2017), and strengthen corporate governance (Ridwan and Mayapada, 2020). Therefore, issues such as managerial opportunism that often occur in conventional companies can be avoided by implementing Islamic values (Kanagaretnam et al., 2015; Abdelsalam et al., 2016; Mersni and Ben Othman, 2016; Ha-Brookshire, 2017) in business activities. The existing literature suggests that religion is a significant factor influencing individual attitudes and behavior directly, and organizations indirectly (Gait, 2009; Hilary and Hui, 2009; Chen et al., 2013; Du, 2013). Religion is also a tool of social control over individual behavior in an organization. The principles of Islamic ethics, known as the Axioms of Islamic Ethical Philosophy, include Unity, Equilibrium, Free Will, Benevolence, and Responsibility (Naqvi, 1981; Beekun, 1997; Beekun and Badawi, 2005), which have implications for individual opportunistic behavior. As empirical research shows, companies in situations of strong socio-religious norms generally exhibit significantly higher accreditation quality, greater voluntary disclosure of information, and a lower likelihood of restatement or violation of accounting standards (Callen et al., 2011; McGuire et al., 2011; Dyreng et al., 2012; Chen et al., 2013; Du et al., 2014). In contrast, non-SCC firms that engage in CSR are more likely to engage in aggressive earnings manipulation (Chih et al., 2008; Prior et al., 2008) and use CSR as a mechanism to fulfill personal interests (Fritzsche, 1991; Hemingway and Maclagan, 2004; McWilliams et al., 2006; Petrovits, 2006). Thus, religious mechanisms enhance information monitoring and mitigate the risk of financial statement misstatement, thereby reducing information asymmetry (Hu et al., 2018). On the other hand, lower information asymmetry, resulting from improved information quality and transparency (due to reduced managerial opportunism), leads to better investment decisions (Biddle et al., 2009; Chen et al., 2011a). In addition, higher information quality increases transparency and monitoring of managerial opportunistic behavior, thereby reducing agency conflicts and leading to higher investment efficiency (Biddle et al., 2009; Chen et al., 2011a; Cheng et al., 2013).

Good governance indicates that a company has the intention to gain trust from investors through transparency, fairness, accountability, and ethical behavior (Demidenko and McNutt, 2010). In addition, corporate governance is a set of mechanisms that limit companies (Claessens, 2006) from agency problems due to the separation of ownership and control (Fama and Jensen, 1983). Thus, companies with good governance are believed to be able to reduce agency risk and thus increase investment efficiency (Ullah et al., 2020). Previous empirical studies have also reported that companies with good governance can reduce the risk of investment inefficiency (Guedhami and Mishra, 2009). This is because companies with strong governance lead to greater transparency, lower financial reporting manipulation, and provide more reliable information (Li et al., 2013). Governance is a series of monitoring mechanisms that function to ensure that business activities are carried out correctly and expectedly (Hamid et al., 2016). In this context, the activities of shariah-compliant companies are continuously monitored by the Shariah Supervisory Board (SBB), which acts as an internal governance structure (Fathyah et al., 2015) in addition to the Board of Directors (BoDs) (Abdullah Saif Alnasser and Muhammed, 2012; Nomran et al., 2017). Therefore, SCC is subject to 2 (two) internal mechanisms (Nomran and Haron, 2020) or has a “multi layer” governance structure (Mollah and

Zaman, 2015; Abdelsalam et al., 2016; Almutairi and Quttainah, 2017; Shibani and De Fuentes, 2017; Safiullah and Shamsuddin, 2018).

BoD is the first-layer governance mechanism that oversees the legal aspect, and SBB is the second-layer governance mechanism that oversees the moral aspect. Previous empirical studies have demonstrated that SBB can influence and shape managerial behavior, thereby reducing agency problems (Quttainah and Almutairi, 2017). Therefore, SBB plays a crucial role in mitigating agency problems by serving as an additional monitoring mechanism (Abdelsalam et al., 2016; Quttainah and Almutairi, 2017; Shibani and De Fuentes, 2017). With such SBB capacity, it can be argued that companies that prioritize moral and religious values can suppress fraudulent opportunistic behavior (Dyreng et al., 2012; Ha-Brookshire, 2017).

Previous empirical research reported that opportunistic behavior in SCC is lower compared to non-SCC companies (Farooq and AbdelBari, 2015; Lassoued, 2018). Therefore, SCC is believed to have a better ability to limit opportunistic behavior compared to non-SCC (Quttainah et al., 2013; Abdelsalam et al., 2016). Based on the results of these studies, it is predicted that SCC companies have a different level of investment efficiency compared to non-SCC companies.

Other factors that distinguish SCC from non-SCC include financial characteristics. SCC can be viewed as a financially constrained company due to its unique financial characteristics (Farooq and AbdelBari, 2015), specifically low leverage, a low level of receivables, and minimal cash and cash equivalents (Satt et al., 2020). Previous empirical research has shown that the financial characteristics of a company can reduce information asymmetry (Farooq and AbdelBari, 2015), as they provide a lower opportunity for managers to engage in earnings management (Satt et al., 2020). Specifically, the cash ratio and interest-bearing securities to total assets are set at a company of less than or a maximum of 33%.

2.2 Hypotheses

Existing empirical research indicates that these criteria limit managers from manipulating free cash flow (Guizani, 2017) and encourage the use of cash solely for the company's potential growth (Siddiqui, 2007). Therefore, companies with sharia compliance tend to have a low level of agency conflict severity because managers tend to behave less opportunistically (Katper et al., 2015). This situation affects the optimality of investment decisions (Jensen and Meckling, 1976; Chen et al., 2011b; Lai and Liu, 2018). Conversely, the absence of special provisions for cash ownership allows moral hazard behavior to arise in non-SCC (Park and Jang, 2013; Jibril and Shehu, 2015; Zhang et al., 2016; Kadioglu et al., 2017; Lê, 2017), in the form of deviations from optimal investment /overinvestment (Cheng et al., 2013). Based on the results of these studies, it can be predicted that SCC has a different level of investment from non-SCC.

From the above, the following hypotheses can be formulated:

H1 : There is a difference in investment efficiency in Shariah Compliance Companies (SCC) and Non-SCC.
H2 : Over and Under Investment conditions affect the level of Investment Inefficiency (IEI)
H3 : The control variables of company size (SIZE), cash (CASH), and TANGIBILITY affect the level of Investment Inefficiency (IEI)

To measure investment inefficiency (IEI), this study adopts a model developed in several literatures, specifically as a deviation from the predicted investment level based on sales growth. Thus, both overinvestment and underinvestment are considered inefficient investment decisions (Bushman & Smith, 200; Biddle et al., 2009).

The mathematical equation to measure investment inefficiency is expressed by the following equation:

$$IEI_{i,t} = \beta_0 + \beta_1 FT_{i,t} + \beta_2 OU_{i,t} + \sum control_{i,t} + \varepsilon_{i,t} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ 1$$

where investment is the total investment in company i in year t and is defined as the increase in tangible and intangible assets measured by total assets. While the previous period sales growth (is the rate of change in sales from the previous 2 periods to the previous 1 period. The deviation between the actual value and the predicted investment value will indicate the level of investment inefficiency.

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$$INV_{i,t} = \beta_0 + \beta 1 SalesGrowth_{i,t-1} + \varepsilon_{i,t} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

Where investment is the total investment in company i in year t, and is defined as the increase in tangible and intangible assets measured by total assets. The previous period’s sales growth is the rate of change in sales from the previous two periods to the current one. The deviation between the actual value and the predicted investment value will indicate the level of investment inefficiency.

3 Research Method

3.1. Sample Selection

This study utilizes data from companies listed on the Indonesian Sharia Stock Index (ISSI), comprising 118 companies, spanning the period from 2012 to 2021. The selection of sample companies was made because several variables had values that could not be collected.

3.2. Data Analysis Technique

Estimation is carried out using panel data regression with random effects. Random effects are used because it is assumed that the residuals have a relationship over time. The advantage of using a random effects model is that it can also eliminate symptoms of heteroscedasticity from the data.

3.3. Variable Measurement

Based on equation (2), if the deviation value from the expression (2) is positive or the estimated investment level predicted from sales growth is greater than the sales growth in the previous period, it will be stated as an over-investment condition. Likewise, suppose the deviation value is negative or the estimated investment level predicted from sales growth is smaller than the sales growth in the previous period. In that case, it will be stated as an under-investment condition.

The absolute value of the residual from equation (2) is used as a measure of investment inefficiency (IEI), indicating that both over- and under-investment situations are characterized by investment inefficiency (IEI).

By adopting the previous empirical approach (Satt et al., 2020), Shariah Compliance Companies (SCC) and Non-SCC or FT variables are measured based on the weighted average of 3 (three) quantitative screening criteria, namely a maximum debt ratio of 45%, a maximum non-permissible income ratio of 10% (Indonesian Criteria), and a maximum cash ratio of 33% (International Criteria) for each period. Based on the weighted index of the three criteria, companies with an index value greater than 0.5 are considered SCC and are assigned a score of 1. Conversely, an index value less than 0.5 is considered non-SCC and is scored with a value of 0 for that period.

3.4. Research Model Estimation

The following are the results of the model estimation using the Panel EGLS (Period random effects) method:

Dependent Variable: INVEST
Periods included: 10
Cross-sections included: 118
Total panel (balanced) observations: 1180

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.09E+13	9.77E+11	-11.19948	0.0000
FT	2.59E+11	1.29E+11	2.004621	0.0452
OU	-0.009605	0.013475	-0.712820	0.4761
SIZE	3.93E+11	3.36E+10	11.69110	0.0000
CASH	-4.52E+11	4.81E+11	-0.939403	0.3477
TANGIBILITY	2.84E+08	2.77E+09	0.102519	0.9184

Weighted Statistics

Root MSE	1.77E+12	R-squared	0.108583
Mean dependent var	5.88E+11	Adjusted R-squared	0.104787
S.D. dependent var	1.88E+12	S.E. of regression	1.78E+12
Sum squared resid	3.72E+27	F-statistic	28.60086
Durbin-Watson stat	1.362236	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.108583	Mean dependent var	5.88E+11
Sum squared resid	3.72E+27	Durbin-Watson stat	1.362236

According to the results of the research model estimation, it can be inferred that there is a significant difference in investment inefficiency between SSC and non-SSC. Sharia companies tend to over-invest compared to non-SSC companies, as they have a positive cutoff point. In contrast, non-SSC companies tend to under-invest due to a negative cutoff point. Additionally, the overinvestment and underinvestment conditions of the current period do not significantly impact the investment inefficiency of the next period. The empirical results indicate that the over- and underinvestment (OU) coefficient is -0.009605, with a corresponding probability of 0.4761. In other words, this result can be interpreted as indicating that the OU of the current period has a positive effect on the investment efficiency of the next period, but it is not statistically significant.

Company size (SIZE) has a significant effect on the level of investment inefficiency, with a unidirectional relationship, indicating that the larger the company size, the greater the level of deviation from optimal investment. In other words, the larger the company, the lower its optimal investment level. Conversely, the control variable CASH does not significantly affect investment inefficiency, as indicated by a coefficient that is negative. In other words, CASH has a positive but not significant effect on investment efficiency. These results suggest that CASH, as the primary source of investment inefficiency, is not a factor contributing to investment deviations from the optimal level. Likewise, TANGIBILITY does not have a significant effect on the level of investment inefficiency, with a positive coefficient.

5. Results and Discussion

The primary finding of this study is that there is a difference in investment inefficiency between SCC and non-SCC, where SCC tends to overinvest and non-SCC tends to underinvest. Based on these findings, it can be concluded that both SCC and non-SCC tend to invest inefficiently. SCC management tends to invest in unprofitable projects and is more concerned with personal interests, often ignoring the interests of shareholders. The results of this study support agency theory and indicate that the application of Islamic values in business activities is unable to mitigate managerial opportunism and investment efficiency issues. These findings contradict previous studies that have shown the implementation of Islamic values in business activities can reduce managerial opportunism (Kanagaretnam et al., 2015; Abdelsalam et al., 2016; Mersni and Ben Othman, 2016; Ha-Brookshire, 2017). Likewise, non-SCC management tends to behave in a manner that does not maximize the company's value under underinvestment conditions.

6. Conclusion

This research finds that there are significant differences in investment efficiency between Shariah Compliance Companies (SCC) and non-SCC in Indonesia. SCC tend to overinvest, that is, invest more than the optimal level, while non-SCC tend to experience underinvestment, or invest below the optimal level. This shows that both groups of companies both invest inefficiently, only the direction of the inefficiency is different.

The research results also show that over- and underinvestment conditions in the previous period did not have a significant effect on the level of investment inefficiency in the following period. In addition, company size (SIZE) has a positive and significant effect on the level of investment inefficiency, meaning that the larger the company size, the greater the deviation from the optimal investment level. On the other hand, the cash variables (CASH) and tangible assets (TANGIBILITY) do not have a significant effect on investment inefficiency.

These findings support agency theory that agency problems still occur in companies, including companies that apply sharia principles. Thus, the application of Islamic values has not been fully able to reduce opportunistic managerial behavior which triggers investment inefficiency.

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