Sharia vs non-sharia compliant: which gives much higher financial-based brand equity to the companies listed in the Indonesian stock market?

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Abstract

Purpose – The study aims to examine the difference of financial-based brand equity of Sharia-compliant and non-Sharia-compliant companies listed in the stock market.

Design/methodology/approach – The five-year data were collected from 561 companies listed in the Indonesian stock market (349 Sharia-compliant firms and 212 non-Sharia-compliant firms).

Findings – Based on five years of observations, the study shows that Sharia-compliant companies have much higher brand equity than companies that are not Sharia-compliant. However, the study did not find consistent results when the study examined the differences between brand equity in newly listed Sharia-compliant firms in the short run (two-quarters of the observations). In other words, Sharia-compliant status positively impacted a company’s brand equity only in the long run.

Research limitations/implications – The study examines only the brand equity of Sharia- and non-Sharia-compliant companies in the Indonesian stock market.

Practical implications – The study suggests that companies should list their equity in the Islamic stock market as the empirical evidence shows that the companies listed in the Sharia index have much higher brand equity than companies listed in the non-Sharia index, although this impact can only be seen in the long run.

Originality/value – The study integrates finance and marketing perspectives, which are often disconnected in daily business. In addition, the study provides a piece of empirical evidence on the effect of financial decision to be listed in the Islamic stock market on the establishment of brand equity, which represents the long-term intangible assets of the firm in the eyes of the customers.

Keywords Stock market, Islamic marketing, Sharia, Financial-based brand equity

Paper type Research paper
Introduction

To be listed or not listed on a stock market is one of the strategic financial decisions that many firms should decide (Baker and Johnson, 1990; Carbone et al., 2021; Corwin and Harris, 2001; Ding et al., 2010; Helbing, 2019; Meluzín et al., 2018). Previous studies have investigated the impact of stock market listing on the financial benefits for public companies (Baker and Johnson, 1990; Dambra et al., 2021; Schoubben and Van Hulle, 2011), such as lower cost of equity capital, liquidity improvement (Baker and Johnson, 1990; Dambra et al., 2021) and easier access to debt financing (Fan, 2019; Schoubben and Van Hulle, 2011). Unfortunately, there is a dearth of research that examines the relationship of stock market listings on any other business function, especially the marketing performance (Karniouchina et al., 2009; Ma et al., 2019; Mizik and Jacobson, 2007; Setty et al., 2010; Simon and Sullivan, 1993).

Despite being born from the same mother discipline (economics), marketing and finance have long lived in two different worlds of thought (Zinkhan and Verbrugge, 2000). While marketing scholars tend to focus on establishing the scientific status of marketing using consumer/product and primary data, finance scholars tend to focus on attaining firm objectives using secondary data at the firm level (Hyman and Mathur, 2005). Academic scholars then realized that both fields could not be completely separated as there is a mutual relationship between marketing and finance to enhance the firm’s economic value (Hyman and Mathur, 2005; Porto and Foxall, 2019). Therefore, the Journal of Business Research launched a special issue on the marketing and finance interface in 2000 (Hyman and Mathur, 2005). The Journal of Marketing followed suit by issuing a special issue on the same topic in 2004 (Edeling et al., 2020). The Marketing Science Institute/EMI funded several research projects in 2006 that were later published in a special section of the Journal of Marketing in 2009 (Edeling et al., 2020). The academic articles discussing the interface between marketing and finance surged from 42 to 226 articles in 2009 (Edeling et al., 2020). Despite the growth, Porto and Foxall (2019) argued that the marketing and finance scholars need to examine the impact of marketing investment on financial consequences and vice versa.

In the Islamic business and management field, there is also a dearth of research that discusses the interface between marketing and finance. The existing studies primarily used primary data at the individual or consumer level in the context of Islamic bank, e.g. banking behavior of the Islamic bank customers (Metawa and Almossawi, 1998); strategic marketing of Islamic bank (Naser and Moutinho, 1997); marketing of Islamic banking products (Kamarulzaman and Madun, 2013); mortgages (Tanemee and Asutay, 2012); awareness/loyalty to the Islamic banking (Islam and Rahman, 2017; Wu et al., 2019); consumer migration to the Islamic bank (Hati et al., 2020a); investment intention in the Islamic bank (Hati et al., 2020b). The studies that discuss the interface between marketing and finance at the firm level are minimal. Among the studies is Hussein (2010), which examined bank-level stability factors and consumer confidence of both Islamic and conventional banks. However, almost none of the Islamic business and management studies discusses the interface of marketing and finance at the company level in the non-bank sector.

To fill the gap the current study investigates the marketing and finance interface at the company level in non-financial sectors. Specifically, the study aims to examine the companies’ impact of positioning themselves as Sharia-compliant companies (SCCs) in the capital market on the increase of brand equity.

Why does the study focus more on the capital market, specifically the Islamic stock market? The Islamic capital market is the place where buyers and sellers engage in the trade of financial securities like bonds and stocks with the assertion of Shariah principles, which are free from any elements or activities prohibited in Islam (Dusuki and Abozaid, 2008). It
has a promising future as it is in high demand from investors (Al-Khazali et al., 2014; Climent et al., 2020; Shankar, 2020). The investors of Sharia-compliant financial products are not only Muslims but also non-Muslims who are ethically conscious (Biancone and Shakhatreh, 2015). In response to the high demand, the Dow Jones Islamic Market Index (DJIMI) was launched in Manama, Bahrain, in 1999 (Siddiqui, 2007). The inclusion of companies in the Sharia index positively influences the demand for the company’s stock in the capital market. Investors perceived the Sharia stocks as having a lower risk than their competitors (Jaballah et al., 2018). In addition, a previous study found that the stocks listed in the Islamic index tend to outperform their conventional peers during the global financial crisis (Al-Khazali et al., 2014).

Why does the current study investigate the impact of stock market listing on firms’ brand equity? According to Fornell et al. (2006), one fundamental rationale for scholars to examine the finance and marketing interface is to measure the degree to which markets function well. In addition, on the capital side, companies’ investment decisions must be driven by long-term criteria rather than short-term cash flows (Edeling et al., 2020). Therefore, companies need investment performance metrics that are proven to create long-term value for them. In marketing, one of the concepts used to measure the firm value is brand equity (Simon and Sullivan, 1993). Brand equity is an intangible asset for firms (Chatzipanagiotou et al., 2016; Damodaran, 2007; Kapareliotis and Panopoulos, 2010). According to Aaker (2012), brand equity refers to the set of assets and liabilities linked to a brand, its name and symbols that add to or subtract from the value provided by a product or service to a firm and to the firm’s customers. The higher the brand equity, the better the price, market share and profits obtained by the company. However, de Oliveira et al. (2015) stated that professionals and academics still face challenges in measuring brand equity. Brand equity is a concept that has been defined and measured differently by marketing scholars (Gill and Dawra, 2010; Keller, 1998). De Oliveira et al. (2015) divided brand equity measurements into consumer-based brand equity (CBBE) and financial-based brand equity (FBBE). CBBE is a measure of brand equity that emphasizes the consumer’s perspective on a brand. The higher the consumer’s perception of a brand, the higher the brand equity. The main weakness of CBBE is that it cannot represent the monetary value of brand equity. Therefore, Simon and Sullivan (1993) used information from the stock market and the company’s financial statements to measure brand equity. The FBBE is more objective than CBBE because it integrates all aspects of brand equity. Unfortunately, only a few studies have examined brand equity from a financial-based perspective (Tasci, 2020).

As mentioned earlier, the current study aims to examine the impact of a company joining the Sharia index on its brand equity. The study asks whether consumers respond positively to the company that joins the Sharia index by examining the increase in sales and profitability in the long run, as reflected in its financial report. The study applied the FBBE developed by Simon and Sullivan (1993) to integrate various dimensions of brand equity to answer the questions. The study was conducted in Indonesia, the largest Muslim country in the world, with around 87% or 228.2 million Muslim adherents in 2020. The study is expected to contribute not only to the field of finance but also to the field of marketing as it examined the interface between both areas. Integrating finance and marketing is important as marketing researchers have mainly looked to scholars in psychology and sociology for inspiration rather than its sister discipline, finance (Zinkhan and Verbrugge, 2000). The study linked finance and marketing perspectives, which are often disconnected in daily business (Fischer and Himme, 2017). As the research related to halal and Sharia branding in Islamic marketing and Islamic research is still in its infancy, examining the role of branding across the discipline is very important (Wilson and Hollensen, 2010; Wilson and Liu, 2010).
Integrating marketing research with finance, which was born from the same mother discipline (economics), would enable the marketing scholars to apply more economic principles to solve business problems (Zinkhan and Verbrugge, 2000) and to enhance a firm’s financial health (Fischer and Himme, 2017). 

**Literature review**

**Sharia securities list**

Profit–loss sharing is applied in the current stock market operation. Profit–loss sharing through contractual agreement is a concept applied by the Islamic financial or Sharia-compliant institutions to comply with the religious prohibition on interest on loans to which most Muslims subscribe (Majdoub et al., 2016; Mirakhor and Zaidi, 2009). In other words, the investors are bound to the portion of the profit and also to the portion of the liability in a loss if that occurs (Abdul-Rahman and Gholami, 2020; Khan, 1987). Unfortunately, Muslim scholars and practitioners still found several non-shariah compliant issues in the conventional stock market (Alam et al., 2017; Majdoub et al., 2016).

To ensure the Sharia compliance of the company listed in the Islamic stock market, the companies should pass the screening norms (Alam et al., 2017; Hashim et al., 2017; Hassan et al., 2020). The Sharia compliance of the company listed on the Islamic stock market can be assessed through the company’s general business activity and financial operations (Hashim et al., 2017). In terms of business activities, the company’s main business should be permissible from the Sharia perspective. A company is deemed as not following Sharia principles if its main business is against Sharia principles. A company is considered as non-Sharia compliant if its primary activities are in the following line of business: manufacturing and sale of alcohol; gambling, gaming and casino operations; conventional interest-based finance including insurance; pornography; sale and production of pork-related products and non-halal meat; and other non-permissible activities (including non-Sharia compliant entertainment) (Alam et al., 2017; Izberk-Bilgin and Nakata, 2016). In practice, many different types of business are considered non-Sharia-compliant in some countries. The Dow–Jones Islamic Market includes tobacco, weapons and defense as a list of businesses that are against Sharia (S&P Dow Jones Indices’ Index Committee, 2021). The Dow–Jones Islamic Market also set a threshold of 33% cap for the investment in non-permissible activity, which lacks strong religious theoretical grounding (Elnahas et al., 2020). Meanwhile, MSCI Global Islamic Indices added music, hotels and entertainment, and adult entertainment as businesses that were not in accordance with Sharia (Hussin et al., 2015).

In financial screening, the scholars look at the structure of the company’s financial statements to assess Sharia’s suitability (Alahouel and Loukil, 2020; Aloui et al., 2021). This is done because modern companies usually have assets and liabilities in financial instruments, which may conflict with Sharia. Many companies have income that comes from various sources, not only from the company’s main business but also from other sources. These sources of income may or may not be in accordance with Sharia principles. Apart from sources of income, companies can interact with various prohibitions in Sharia principles (riba, gharar and maysir) through various transactions such as funding through debt instruments containing interest (riba) or speculative transactions in financial markets that contain a lot of uncertainty (gharar). Therefore, assessing a company’s conformity to Sharia principles from its main business is not sufficient. All company activities and transactions should be evaluated (Hashim et al., 2017).

The previous studies show that companies that pass the two aforementioned screenings have relatively low risk and are more resistant to shocks in the financial system (Alahouel and Loukil, 2020; Febrian et al., 2013). From a business perspective, an SCC does not have a
negative effect on the environment, society or civilization as a whole, while something that God prohibits usually has a negative impact on the environment, humans and the world as a whole (Zakir Hossain, 2009).

**Brand equity**

Brand equity is a valuable business asset that consists of brand loyalty, brand awareness, brand association and perceived quality (Aaker, 1991). Brand equity also reflects the differential effect of brand knowledge on consumer response to the brand’s marketing (Keller, 1993). In other words, Aaker’s (2009) definition of brand equity focuses more on recognition, whereas Keller focuses primarily on emotions (Keller vs Aaker customer based brand equity models, 2021). Based on Aaker’s (1991) definition, brand equity represents the added value of a product. The greater the added value in a product, the stronger the brand’s position will be in the eyes of consumers (Winter, 1991). Previous studies showed some advantages for having strong brands, including high customer loyalty, high customer satisfaction, less vulnerability to competitive marketing actions, larger margins, more inelastic consumer response and several other advantages in the long run (Ajour El Zein et al., 2020; González-Mansilla et al., 2019; Narteh, 2018; Pappu and Quester, 2006; Taylor et al., 2004).

While Aaker (1991) and Keller (1993) defined brand equity from the customers’ perspectives, Simon and Sullivan (1993) defined it from the firm’s perspective. Simon and Sullivan (1993) described brand equity as incremental cash flows, which accrue to branded products over and above the cash flow, of selling unbranded products. Simon and Sullivan’s definition of brand equity is closely related to Aaker’s (1991) definition. Incremental cash flow from a product will be more significant when the company can increase the added value of its products. Incremental cash flow will be obtained from high margins, high loyalty, large market share and relatively inelastic customer responses. On the other hand, companies create added value in a product by managing the various costs efficiently (Simon and Sullivan, 1993).

Although there are links between two different levels of brand equity definitions, the different definitions lead to different methods of measuring brand equity. De Oliveira et al. (2015) divided the measurement of brand equity into two groups: CBBE and FBBE. CBBE measures brand equity based on consumer perceptions of the company’s products. Therefore, CBBE measurements are usually carried out using primary data through surveys. Meanwhile, FBBE measures brand equity based on available financial information, information derived from financial reports and information obtained from the stock market. According to Simon and Sullivan (1993), the fundamental weakness of CBBE is that brand equity based on consumer perceptions has no monetary value, so it is difficult to measure its impact on the company’s financial performance. Brand equity can be measured based on consumers’ perceptual or financial focus (de Oliveira et al., 2015; Tasci, 2020). Estimating brand valuation from financial data is useful for mergers, acquisitions and divestiture decisions (Keller, 1993). For example, the decision of the company to acquire a brand can be conducted by comparing the acquisition price with the fixed assets (Keller, 1993).

**Islamic capital market and brand equity.** Previous studies showed a positive relationship between brand equity and customer satisfaction (González-Mansilla et al., 2019; Pappu and Quester, 2006). Customer satisfaction itself can be linked to the financial performance as shown in the company’s accounting data (Golovkova et al., 2019), such as operating margin or return on investment (Anderson et al., 2004). Even though accounting measures may provide valuable insight to the company, the data cannot replace the long-term financial performance, as measured by data from capital markets (Anderson et al., 2004). Therefore,
examining the link between capital market and marketing data will be very useful for the company as it highlights the long-term financial performance and the marketing function performance. The examination also enhances the strength between marketing and the financial function because marketing has a primary task to develop and manage the market-based assets of the firm through customers, channels and partner relationships that increase shareholder and firm value by accelerating and enhancing cash flows, reducing cashflow volatility and vulnerability and growing cash flow residual value (Srivastava et al., 1998). The shareholder and firm value in a capital market can be assessed through tangible and intangible assets (Simon and Sullivan, 1993). Therefore, the capital market capitalizes the brand equity from the profit that reflects the association between the brand’s name and the company’s product and services (Simon and Sullivan, 1993).

Recently, more companies have become SCCs because of the increase of Islamic Index providers and the high captive market of Muslim investors (Wardhani, 2019). In Muslim countries, including Indonesia – the country with the largest Muslim population in the world, investors have a positive perception of Sharia compliance because of religious beliefs (Jaballah et al., 2018). By contrast, in a non-Muslim majority country like the USA, investors react negatively because they have negative perceptions of Islam and of the restrictions associated with Sharia compliance (Jaballah et al., 2018). To date, there have been almost no studies that compare the performance of the SCCs and non-SCCs in the stock market and their association with brand equity. The current research examines the impact of a company joining the Sharia index on the company’s brand equity.

According to Simon and Sullivan (1993), companies with high brand equity probably have higher profit capitalization due to the high sales of products the company offers. Based on this logic, if a company that joins the Sharia index is not accompanied by an increase in its brand equity, it is likely caused by two issues. First, consumers do not consider Sharia-compliant status to be important. Second, information about the status of the company included in the Sharia index is not known by the public, so it has no impact on the company’s brand equity. To answer the research problem, the study applies the FBBE developed by Simon and Sullivan (1993) to integrate various dimensions of brand equity.

Based on the above arguments, the following hypothesis is developed:

Ha. Sharia-compliant companies have significantly higher brand equity than the non-Sharia-compliant companies.

Research methods
Data and samples
The study used the past five years of data from companies listed on the Indonesia Stock Exchange (IDX). In total, 561 were potential to be used for the sample. Still, only 349 of them were listed on the list of Sharia securities as the remaining 212 companies were non-Sharia-compliant firms. The companies in the financial sector were not included in the sample as their business practice does not comply with Sharia principles. Besides, the nature of financial reports is different from that of non-financial companies.

IDX and the Financial Services Authority (OJK) have implemented two screening methods (business and financial screening) to select companies that are included in the Indonesia Sharia Stock Index (ISSI). However, the financial screening used by IDX and OJK is slightly different from the detailed screening used by DJIMI, AAOIFI and other Sharia indexes in several countries. IDX and OJK use two ratios in conducting the financial screening. First, the ratio of interest-based debt to total assets is a maximum of 45%.
Second, the ratio of total interest income and other non-halal income compared to total business income and other income is a maximum of 10%.

IDX and OJK conduct screening twice a year, in May and November. In both months, IDX and OJK published a list of companies that are constituents of the ISSI. To compare brand equity before and after companies are listed in Sharia, the study only used companies listed in the Sharia stock index that did not exit the index for five years (2014–2018). Companies that entered, left and re-entered the Sharia stock index were not included in the sample.

The study used financial statement data for public companies in Indonesia. The study took the data from Bloomberg. In addition, the study also used stock market data (share price and the number of shares outstanding) obtained from Datastream.

Brand equity estimation
The method of measuring brand equity used in this study refers to the technique used by Simon and Sullivan (1993). The study modified the method used by Simon and Sullivan (1993) due to differences in the characteristics of companies in the US (sample) and public companies in Indonesia. Simon and Sullivan (1993) measured brand equity indirectly by combining information from the company through financial reports and information from the stock market. Market information represents investors’ expectations of the company.

Firm value is a combination of the market value of tangible and intangible assets that the company owns. Tobin (1969; 1978) created a measure that can estimate the market value of a firm’s intangible assets. Tobin’s Q is the ratio between the company’s market value to the company’s replacement cost. Simon and Sullivan (1993) stated that a company that has Tobin’s Q of more than 1 indicates that the company has an intangible asset value. Several previous studies (Smirlock et al., 1984; Hirschey and Weygant, 1985) have shown a strong association between the Q ratio and operational expenditures for marketing and research and development (R&D). From this study, the value of the intangible assets that the company owns is the output of the company’s marketing (advertising) and R&D activities in making quality products and marketing them to consumers. A study conducted by Lindenberg and Ross (1981) showed that companies with a high Q ratio value usually have differentiated products, which indirectly indicates a strong relationship between Q and brand equity.

Mathematically, the explanation of the company’s market value above can be written with the following mathematical equation:

\[ V^* = V_T + V_I \]  

\( V^* \) is the company’s market value, \( V_T \) is the value of tangible assets and the value of \( V_I \) is the value of intangible assets. For a public company, \( V^* \) is the sum of the market value of the common stock, the market value of the preferred stock and the market value of the company’s debt. Meanwhile, \( V_T \) is the replacement value of the company’s tangible assets, which can be defined as the current cost of purchasing an asset of equivalent productive ability. Equation (1) above can be changed to \( V_I = V^* - V_T \). Intangible asset \( V_I \) consists of three components as follows:

\[ V_I = f(V_b, V_{nb}, V_{ind}) \]
Equation (2) shows that the value of the company’s intangible assets ($V_1$) is a function of the value of brand equity ($V_b$), the value of non-brand factors that can reduce production and operational costs of the company through R&D activities ($V_{nb}$) and the value of industry factors that affect market structure and the level of competition in the market ($V_{ind}$). Furthermore, Simon and Sullivan (1993) divided brand equity into two components:

$$V_b = V_{b1} + V_{b2}$$  \hspace{1cm} (3)

The $V_{b1}$ component is a factor that increases the brand’s perceived quality due to advertising activities carried out by the company. Successful advertising will increase the price premium of the company’s product relative to its competitors’ products in the market. Meanwhile, $V_{b2}$ is the marketing costs the company has managed to save from the economies of scale that it has achieved.

Empirically, $V_{b1}$ can be estimated by looking at the effect of advertising expenses incurred by the company in the current period and the previous period. Meanwhile, $V_{b2}$ has a more complicated empirical definition considering the many marketing activities of companies that have an influence on brand awareness. Following Boulding and Staelin (1990), $V_{b2}$ can be explained empirically by looking at the effect of advertising costs relative to the firm’s market share. Meanwhile, $V_{nb}$, which represents the intangible value of the non-brand factor, can be obtained from the company’s R&D activities (R&D costs), the relative R&D costs compared to other companies in the industry, the relative patents value held by the company and the conditions of industry competition.

The combination formulation of brand- and non-brand factors related to market share can be seen in the following equation:

$$S = S_{b2} + S_{nb}$$  \hspace{1cm} (4)

$$S_{b2} = f(adshr)$$  \hspace{1cm} (5)

$$S_{nb} = f(patshr, rndshr)$$  \hspace{1cm} (6)

To separate market share derived from brand and non-brand factors, the regression analysis was performed:

$$S_i = b_0 + b_1 adshr_i + b_2 patshr_i + b_3 rndshr_i + u_i$$  \hspace{1cm} (7)

$$E(S_{b2}) = \hat{b}_1 adshr_i$$  \hspace{1cm} (8)

$$E(S_{nb}) = \hat{b}_1 adshr_i$$  \hspace{1cm} (9)

where $\hat{b}_1$ is the regression coefficient, and $u_i$ is the residual of the regression.

In equation (2), there is a $V_{ind}$ component, an external (industry) factor that affects the value of the company’s intangible assets. Based on the industrial organization literature, price setting and strategy development policies are strongly influenced by the industry’s market structure. Industries with a highly concentrated market (monopoly) allow companies to have high market power and get maximum profit. Therefore, the study used the
concentration ratio (CR4) as a proxy for market structure. Thus, the empirical model of the firm’s intangible asset value is as follows:

\[ V_{it} = \beta_0 + \beta_1 CR_4 + \beta_2 adv_i + \beta_3 age_i + \beta_4 E(Sb_{it}) + \beta_5 E(Sb_{it}^2) + u_i \]  

(10)

where CR4 is the four-firm concentration ratio, \(adv\) is the company’s advertising costs (current and past expenditure), \(age\) is the company’s age. To estimate equation (10), the variables were normalized by dividing all the dependent and independent variables by the company’s replacement cost. If equation (10) has been estimated, the company’s brand equity can be calculated using the structural equation as follows:

\[ \hat{v}_{bi} = \hat{\beta}_2 adv_i + \hat{\beta}_3 age_i + \hat{\beta}_4 E(Sb_{it}) \]  

(11)

Equations (7) to (11) are cross-section regression estimated by the ordinary least squares (OLS) method. Equations (7) to (11) are estimated periodically to examine the dynamics of brand equity value. It is also relevant with the next part of this study, which will observe the difference of brand equity before and after being included in the Sharia index.

**Test of different brand equity for Sharia companies**

After the brand equity of all companies in all periods has been successfully estimated, the next step is to test the brand equity difference on companies that have just entered the Sharia index during the study period. A different test is done by using the estimation results of brand equity for each company that is newly included in the Sharia index for the period before and after the entry announcement. For example, ABC company was included in the Sharia index in May 2015. The study compared the brand equity for the period March 2015 (first quarter) and June 2015 (second quarter). If there is a significant positive difference in brand equity before and after the company is included in the list of Sharia securities, it confirms that being categorized as Sharia securities strengthens brand equity. In other words, being listed as Sharia index has a positive effect on the company’s profitability.

**Result and discussion**

Following the explanation in the methodology section, the study used a sample of public companies listed on the IDX. The total number of companies that can be used as a sample was 561 companies, of which 349 companies were included in the list of Sharia securities. The remaining 212 companies are non-Sharia-compliant firms. Table 1 displays the characteristics of all samples, the sample of SCCs and the sample of non-Sharia-compliant. Based on the firm value variable, public companies in Indonesia have highly varied firm values. It can be seen from the very high standard deviation of firm value, which is much larger than the average and median. The result shows that some companies have a very high firm value, while others have a low firm value. These characteristics indicate that the stock market can perform its role well as both company types have equal opportunities to get capital from the stock market.

In Tobin’s Q ratio variable, the average Q ratio of all samples used in this study was 1.5013, with a median of 1.0895. Based on the data, some companies have a low Q ratio of 0.4385, while others have a very high Q ratio of 6.2366. If the sample of companies is divided into two groups, Sharia- and non-Sharia-compliant, the Q ratio of non-SCCs is slightly lower than that of SCCs. In addition, Table 1 also shows that company expenditure for marketing activities (advertising) on firm value is relatively low, 1.9% on average, with the highest expenditure being 49.7% of firm value. This figure is lower than advertising costs of public
companies in the USA, which reached an average of 3.6% in 1993. The low portion of advertising costs to firm value in companies in Indonesia also occurs in SCCs and non-SCCs. Table 1 also shows the facts related to the company’s R&D activities. The average R&D costs incurred by companies is 0.006% for all sample companies, 0.007% for SCCs and 0.006% for non-SCCs. The low R&D costs incurred show that the level of invention and product innovation in Indonesia is still very low, especially when compared to companies in developed countries.

Regarding the value of the firm’s intangible assets, the low R&D costs that the company incurs indirectly indicate the low contribution of the company’s R&D activities to the value of the intangible assets. Therefore, the study modifies the approach used by Simon and Sullivan (1993) by removing the R&D costs from equations (2) to (11). Due to the low R&D costs of public companies in Indonesia, Table 2 shows the estimation results of equation (7) based on periodical cross-sectional regression from Q1 2014–Q2 2018.

Equation (7) is modified by eliminating the rndschr variable (relative R&D costs) and the patents variable (relative patents value). Thus, equation (7) becomes simpler using only one independent variable called relative advertising expense (adshr). The estimation results shown in Table 2 show that advertising expense has a relatively significant positive effect on the company’s market share throughout the estimated period. The result shows that the marketing activities carried out by companies in Indonesia are proven to significantly increase their market share in their respective industries. In addition, when viewed from the perspective of the goodness of fit, the estimation results for each period have relatively high $R^2$ and adjusted $R^2$, which are between 0.570 and 0.658. These findings are in line with the study results by Simon and Sullivan (1993), which concluded that marketing or advertising activities carried out by companies have a positive impact on sales, thereby increasing the company’s market share.

The estimation results shown in Table (2) were used to estimate the expected market share as a result of marketing activities ($E(S_{b2})$) so that equation (10) can be estimated. Table 3 shows the results of the estimation of equation (10).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>St. deviation</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: all sample</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm value (million Rupiah)</td>
<td>15,646,116</td>
<td>2,080,953</td>
<td>64,666,892</td>
<td>6,478</td>
<td>1,403,389,648</td>
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<tr>
<td>Tobin’s Q</td>
<td>1.5013</td>
<td>1.0895</td>
<td>1.1596</td>
<td>0.4385</td>
<td>6.2366</td>
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<tr>
<td>Adv/firm value</td>
<td>0.0161</td>
<td>0.0036</td>
<td>0.0409</td>
<td>0.0000</td>
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<tr>
<td>R&amp;D/firm value</td>
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<td>0.0001</td>
<td>0.0038</td>
<td>0.0000</td>
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<tr>
<td>Market share</td>
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<td>0.0057</td>
<td>0.0771</td>
<td>0.0000</td>
<td>0.7336</td>
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<tr>
<td><strong>Panel b: Sharia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm value (million Rupiah)</td>
<td>10,482,528</td>
<td>2,042,580</td>
<td>33,656,967</td>
<td>10,460</td>
<td>551,680,200</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>1.5517</td>
<td>1.1216</td>
<td>1.2083</td>
<td>0.4385</td>
<td>6.2366</td>
</tr>
<tr>
<td>Adv/firm value</td>
<td>0.0191</td>
<td>0.0050</td>
<td>0.0433</td>
<td>0.0000</td>
<td>0.4970</td>
</tr>
<tr>
<td>R&amp;D/firm value</td>
<td>0.0007</td>
<td>0.0001</td>
<td>0.0041</td>
<td>0.0000</td>
<td>0.0693</td>
</tr>
<tr>
<td>Market share</td>
<td>0.0284</td>
<td>0.0062</td>
<td>0.0731</td>
<td>0.0000</td>
<td>0.7203</td>
</tr>
<tr>
<td><strong>Panel c: Non-Sharia</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm value (million Rupiah)</td>
<td>30,657,627</td>
<td>3,267,490</td>
<td>107,133,182</td>
<td>4,899</td>
<td>1,403,389,648</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>1.4201</td>
<td>1.0642</td>
<td>1.0714</td>
<td>0.4385</td>
<td>6.2366</td>
</tr>
<tr>
<td>Adv/firm value</td>
<td>0.0106</td>
<td>0.0015</td>
<td>0.0353</td>
<td>0.0000</td>
<td>0.4165</td>
</tr>
<tr>
<td>R&amp;D/firm value</td>
<td>0.0006</td>
<td>0.0003</td>
<td>0.0007</td>
<td>0.0000</td>
<td>0.0035</td>
</tr>
<tr>
<td>Market share</td>
<td>0.0344</td>
<td>0.0047</td>
<td>0.0829</td>
<td>0.0000</td>
<td>0.9478</td>
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</tbody>
</table>

Table 1. Characteristics of the firms in the sample
<table>
<thead>
<tr>
<th>Measure</th>
<th>Q1-2014</th>
<th>Q2-2014</th>
<th>Q3-2014</th>
<th>Q4-2014</th>
<th>Q1-2015</th>
<th>Q2-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.0007 (2.0447)</td>
<td>0.0008 (2.2001)</td>
<td>0.001 (2.5593)</td>
<td>0.0011 (2.7973)</td>
<td>0.001 (3.2014)</td>
<td>0.001 (2.8704)</td>
</tr>
<tr>
<td>asdh</td>
<td>0.1229 (25.313)</td>
<td>0.1158 (22.99)</td>
<td>0.1063 (19.844)</td>
<td>0.1115 (20.323)</td>
<td>0.0965 (22.343)</td>
<td>0.1052 (21.659)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.658</td>
<td>0.623</td>
<td>0.564</td>
<td>0.570</td>
<td>0.596</td>
<td>0.591</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.657</td>
<td>0.622</td>
<td>0.562</td>
<td>0.569</td>
<td>0.595</td>
<td>0.590</td>
</tr>
<tr>
<td>$F$-stat</td>
<td>640.735</td>
<td>528.551</td>
<td>393.377</td>
<td>413.035</td>
<td>499.231</td>
<td>469.123</td>
</tr>
<tr>
<td>Intercept</td>
<td>Q3-2015 Q4-2015 Q1-2016 Q2-2016 Q3-2016 Q4-2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>0.0006 (1.5729)</td>
<td>0.0009 (2.7663)</td>
<td>0.0007 (2.1561)</td>
<td>0.0006 (1.9806)</td>
<td>0.0006 (2.0072)</td>
<td>0.0006 (2.2074)</td>
</tr>
<tr>
<td>asdh</td>
<td>0.1154 (18.837)</td>
<td>0.1033 (23.245)</td>
<td>0.1061 (21.499)</td>
<td>0.1097 (21.282)</td>
<td>0.1036 (21.681)</td>
<td>0.1193 (24.438)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.513</td>
<td>0.630</td>
<td>0.57</td>
<td>0.57</td>
<td>0.574</td>
<td>0.632</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.511</td>
<td>0.629</td>
<td>0.569</td>
<td>0.569</td>
<td>0.573</td>
<td>0.631</td>
</tr>
<tr>
<td>$F$-stat</td>
<td>354.817</td>
<td>540.349</td>
<td>461.939</td>
<td>452.939</td>
<td>470.06</td>
<td>597.202</td>
</tr>
<tr>
<td>Intercept</td>
<td>Q1-2017 Q2-2017 Q3-2017 Q4-2017 Q1-2018 Q2-2018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>0.0006 (2.1621)</td>
<td>0.0007 (2.1855)</td>
<td>0.0008 (2.7606)</td>
<td>0.0008 (2.8634)</td>
<td>0.0008 (2.6451)</td>
<td>0.0007 (2.228)</td>
</tr>
<tr>
<td>asdh</td>
<td>0.1091 (23.543)</td>
<td>0.1104 (22.604)</td>
<td>0.1062 (21.989)</td>
<td>0.1209 (25.585)</td>
<td>0.1086 (21.721)</td>
<td>0.1083 (21.404)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.612</td>
<td>0.601</td>
<td>0.574</td>
<td>0.657</td>
<td>0.57</td>
<td>0.587</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.61</td>
<td>0.6</td>
<td>0.573</td>
<td>0.656</td>
<td>0.569</td>
<td>0.585</td>
</tr>
<tr>
<td>$F$-stat</td>
<td>554.288</td>
<td>519.927</td>
<td>479.145</td>
<td>654.602</td>
<td>471.789</td>
<td>458.137</td>
</tr>
</tbody>
</table>

Table 2. Regression model

Brand equity
Equation (10) uses the intangible asset value as the dependent variable. CR4 is replaced with the Herfindahl Hirschman Index (HHI) variable as a proxy for market structure based on a measure of market concentration. CR4 is a simple measure of market concentration because it only uses the data of four companies with the largest market share. Meanwhile, HHI is a more precise measure because it uses market share data for all companies in the industry. In addition, the study uses advertising costs incurred by companies in the current period and advertising costs in the previous period as independent variables. The $R^2$ and adjusted $R^2$ indicators from the estimation results of equation (10) (Table 3) are lower than equation (7) (Table 2). The $R^2$ in Table 3 ranges from 0.047 to 0.101. The result indicates that the ability of the independent variables to explain the value of the company’s intangible assets is relatively low. The value of the company’s intangible assets is not sufficient only to be explained by the company’s current and previous marketing activities, market share, age and level of competition in the industry. The coefficient of each independent variable has a different sign and level of significance for each estimation period. For example, the advertising expense variable had a negative but insignificant impact in Q4 2014. In Q2 2015, this variable had a positive and statistically significant effect. The result shows that the effects of company activities on the value of the company’s intangible assets depends on other factors, such as the company’s internal and external dynamics that occur in each period. However, like Simon and Sullivan (1993), the regression coefficient in Table 3 can still be used to estimate the brand equity of each company. Figure 1 shows the estimation results of brand equity based on the regression coefficients in Table 3. It presents the average brand equity calculated from the companies’ brand equity in each industry.

Based on Figure 1, the consumer goods industry (food, beverage, pharmaceuticals and several other businesses) has the highest brand equity compared to other industries. The trade, service and investment industries also have higher brand equity than other industries. Various industries have the lowest brand equity during 2017–2018. Figure 1 shows that brand equity is very much influenced by industry characteristics. Two industries, namely (i) consumer goods and (ii) trade, services, and investment, are industries that have a business-to-customer (B2C) characteristics in which companies have products that are consumed almost every day by individual consumers. In addition, companies classified in the consumer goods sector actively carry out marketing activities to inform their products and engage with their customers through various media. The result supports the findings of Simon and Sullivan (1993), which found that B2C industries such as food products, tobacco, apparel and printing and publishing have the highest brand equity compared to other industries.

Aside from dividing the companies based on their sector, this study also classified them into SCCs and non-SCCs (Figure 2). With the existence of business and financial screening, several large companies with high profits, such as cigarette companies and conventional banks, were not included in the list of SCCs due to their non-Sharia compliance.

To examine the significant difference between the brand equity of Sharia- and non-Sharia-compliant firms, the $t$-test was applied (Table 4). The results of the different tests indicate that there is a significant difference between the average brand equity for Sharia- and non-Sharia-compliant firms. Therefore, the research hypothesis, which tested the difference of brand equity between the Sharia- and non-sharia-compliant, is supported. The study shows that the market responds positively to the company’s Sharia-compliant status, especially if the company has a sound business and financial performance.

In addition, the study also examines brand equity in industries that are more sensitive to halal and non-halal issues. The halal status of the consumer goods sector (e.g. food and beverage products, medicines, cosmetics and pharmaceuticals) is more critical to the public/consumers than other industries. Therefore, the study examines the average difference in
<table>
<thead>
<tr>
<th>Measure</th>
<th>Q1-2014</th>
<th>Q2-2014</th>
<th>Q3-2014</th>
<th>Q4-2014</th>
<th>Q1-2015</th>
<th>Q2-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.4955 (2.747)</td>
<td>0.454 (3.099)</td>
<td>0.6141 (4.002)</td>
<td>0.4769 (3.385)</td>
<td>0.4726 (3.52)</td>
<td>0.4434 (3.164)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.454 (3.029)</td>
<td>0.4153 (3.012)</td>
<td>0.6141 (4.002)</td>
<td>0.4769 (3.385)</td>
<td>0.4726 (3.52)</td>
<td>0.4434 (3.164)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.4153 (3.012)</td>
<td>0.4153 (3.012)</td>
<td>0.6141 (4.002)</td>
<td>0.4769 (3.385)</td>
<td>0.4726 (3.52)</td>
<td>0.4434 (3.164)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.4153 (3.012)</td>
<td>0.4153 (3.012)</td>
<td>0.6141 (4.002)</td>
<td>0.4769 (3.385)</td>
<td>0.4726 (3.52)</td>
<td>0.4434 (3.164)</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.4153 (3.012)</td>
<td>0.4153 (3.012)</td>
<td>0.6141 (4.002)</td>
<td>0.4769 (3.385)</td>
<td>0.4726 (3.52)</td>
<td>0.4434 (3.164)</td>
</tr>
</tbody>
</table>

Regression model for the intangible assets of Brand equity.
brand equity between various industries and the consumer goods industry. The results of the different tests are shown in Table 5.

The results in Table 5 show that the average brand equity in the consumer goods industry is consistently higher than the average brand equity in other industries. Several
things may cause this. First, the consumer goods industry products are consumed directly by individual consumers and are closely related to their daily needs. Therefore, the market size of the consumer goods industry is very large. If the company is able to build a good product image, the company will get strong brand equity. Second, the level of competition in this market is higher than in other industries. Thus, companies in the consumer goods industry are more active in conducting marketing efforts to deliver their products to consumers. Third, consumers in the consumer goods industry are very sensitive to the halal issues of the products (food, beverages and pharmaceuticals).

Furthermore, the study looks specifically at the change in brand equity from a previously non-Sharia to an SCC. Therefore, the study filtered companies that changed status from non-Sharia to Sharia-compliant during the Q1 2014 to Q2 2018 period. The study only included SCCs that did not drop off the list of SCCs during the same period. Of the 349 companies on the Sharia securities list, only 44 companies entered and remained in Sharia securities during the Q1 2014 to Q2 2018. The study identified brand equity of 44 companies before and after joining the list of SCCs. If the company was announced as an SCC in May 2016, the brand equity being compared would be brand equity in Q1 2016 and Q2 2016. The researchers use the mean difference test to test for differences in brand equity before and after companies have Sharia-compliant firm status.

Table 6 shows the results of the average difference test between brand equity before and after the company obtained the status as a Sharia-compliant firm.

The different test results in Table 5 show that the average brand equity before and after the entry of a company into a Sharia-compliant firm is not significant. Before the company’s announced entry, the average brand equity was 0.516, and the average brand equity was 0.521. The t-test shows no significant difference in the average brand equity before and after the company gets the status as a Sharia-compliant firm. The result further indicates that the changes in brand equity could not be seen in the short run, e.g. within the first two quarters only or right after the company was listed on the Sharia index. The changes in brand equity are more significant in the long run or after five years, as seen from the hypothesis testing, which examined five years of data observation (Table 4).

Discussion, conclusions and implications
The study applied FBBE to measure the brand equity of both Sharia- and non-Sharia-compliant public companies in Indonesia. In the long run (five years), the results showed that Sharia-compliant stock had much higher brand equity than the non-Sharia-compliant stock. This research supported a previous study by Jaballah et al. (2018) that found that investors have a positive perception of Sharia stocks because the products comply with the teachings of the Islamic religion. The study also enhanced the role of marketing in managing and developing the long term market-based assets of the firm (Edeling et al., 2020)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Mean</th>
<th>Mean difference</th>
<th>St. deviation</th>
<th>t-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.513</td>
<td>−0.336</td>
<td>0.058</td>
<td>−19.191</td>
<td>0.000</td>
</tr>
<tr>
<td>Mining</td>
<td>0.617</td>
<td>−0.231</td>
<td>0.090</td>
<td>−19.411</td>
<td>0.000</td>
</tr>
<tr>
<td>Basic industry and chemicals</td>
<td>0.568</td>
<td>−0.281</td>
<td>0.071</td>
<td>−23.849</td>
<td>0.000</td>
</tr>
<tr>
<td>Miscellaneous industry</td>
<td>0.412</td>
<td>−0.437</td>
<td>0.081</td>
<td>−12.539</td>
<td>0.000</td>
</tr>
<tr>
<td>Infrastructure, utilities and transportation</td>
<td>0.482</td>
<td>−0.000</td>
<td>0.057</td>
<td>−19.012</td>
<td>0.000</td>
</tr>
<tr>
<td>Property, real estate and building construction</td>
<td>0.505</td>
<td>−0.366</td>
<td>0.068</td>
<td>−25.215</td>
<td>0.000</td>
</tr>
<tr>
<td>Trade, service and investment</td>
<td>0.716</td>
<td>−0.344</td>
<td>0.103</td>
<td>−9.890</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 5. T-test between consumer goods industry vs other industries
through customers, channels and partner relationships that increase shareholder and company value by accelerating and enhancing cash flows, reducing cash flow volatility and vulnerability, and growing cash flow residual value, as suggested by Srivastava et al. (1998).

When the brand equity differences among numerous Sharia-compliant companies were examined in the short run, the study did not show consistent results. Therefore, the study supports the study of Ajour El Zein et al. (2020), which shows that brand equity is an intangible asset that must be built in the long term. In other words, the positive impact of Sharia-compliant status on a company can only be seen in the long run. Thus, the marketing and finance departments should work together to integrate both functions, which usually work separately in their daily business activities (Fischer and Himme, 2017).

Theoretically, there is a dearth of research examining the interface between finance and marketing disciplines, especially in the field of Islamic finance and Islamic marketing. Hence, this study provides empirical evidence on the interaction between marketing and financial metrics in the Islamic research context. In practice, the finance and marketing fields tend to work independently as they focus on different objectives and stakeholders. Therefore, the study that integrates both the finance and marketing perspectives has three immediate practical implications. The results:

1. can motivate companies to list their equity in the Islamic stock market as the empirical evidence shows that the companies listed in the Sharia index have much higher brand equity than companies listed in the non-Sharia index. However, it is worth noting that the impact can only be seen in the long run;
2. offers valuable information about the estimation of brand valuation based on the financial data for mergers, acquisitions and divestiture decisions of the SCCs. The information is essential since decisions that do not incorporate the interplay between finance and marketing metrics may produce suboptimal decision-making; and
3. inform investors about the companies listed in the Sharia and non-Sharia index based on financial brand-based equity dimensions and types of industry.

Limitations and future research directions
Our study has several limitations. First, our research is limited to Indonesia. Future researchers should examine the impact of being listed in the Sharia-compliant index on a

<table>
<thead>
<tr>
<th>Measure</th>
<th>Brand Equity before</th>
<th>Brand Equity after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
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<td>0.521</td>
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<td>Variance</td>
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<td>0.033</td>
</tr>
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<td>Observations</td>
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<td>27</td>
</tr>
<tr>
<td>Pearson correlation</td>
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<td></td>
</tr>
<tr>
<td>Hypothesized mean difference</td>
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<tr>
<td>df</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>$t$-stat</td>
<td>-0.371</td>
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</tr>
<tr>
<td>P($T &lt; = t$) one-tail</td>
<td>0.357</td>
<td></td>
</tr>
<tr>
<td>$t$-critical one-tail</td>
<td>1.706</td>
<td></td>
</tr>
<tr>
<td>P($T &lt; = t$) two-tail</td>
<td>0.714</td>
<td></td>
</tr>
<tr>
<td>$t$-critical two-tail</td>
<td>2.056</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Mean of difference before and after gaining status as Sharia-compliant firm
company’s brand equity in other stock markets that have an Islamic Index. Second, future researchers should compare the impact of the Sharia-compliant index on brand equity across several Muslim-majority countries to provide empirical evidence on the robustness of the research model. Finally, the study only examined the impact of strategic financial decisions of the company to be listed on the Islamic stock market on FBBE. Future studies should examine a company’s financial decision impact on the CBBE.

References


Brand equity


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