ESTIMATING SYNERGY VALUE AND ASSET GROWTH INCREASES ON MERGER SIMULATIONS OF STATE-OWNED ISLAMIC COMMERCIAL BANKS

Benny Oktora and Achmad Herlanto Anggono[*]
School of Business and Management, Institut Teknologi Bandung, Indonesia
[*]Email: achmad.herlanto@sbm-itb.ac.id

Abstract. *The total growth Indonesian Islamic banking assets consisting of BUS, UUS, and BPRS which reached 15.11% CAGR far exceeded the global growth of 5% CAGR. Unfortunately, despite having high asset growth, market share has only reached 5.78% in 2017, which is still below BAPPENAS expectation on the 2015 AKSI Masterplan of 8.3%. One of the difficulties is due to the relatively low business scale. The discourse to merge three state-owned Islamic commercial banks (BSM, BRIS, and BNIS) has been raised for years. Mergers will create a larger business scale, expected synergies, and higher asset growth, that will support the market share growth acceleration. The objectives of the study are to estimate the potential of synergy value and asset growth increases. Financial data for the 2014-2018 period and seven-year multi-scenario projections are used in this quantitative study that applies DCF-FCFE valuation model and PBV. The study resulted in a potential synergy value of IDR 7.76 trillion with a higher PBV ratio of 1.95x and a higher potential asset growth of 13.12% CAGR with an upward trend. These positive results should be followed up by the government as their ultimate shareholder, to support accelerating the Indonesian Islamic banking assets growth.*

Keywords: *Bank valuation; DCF-FCFE; Islamic bank; merger; synergy*

INTRODUCTION

Globally, Islamic banking has established itself as an emerging alternative to conventional interest-based banking, and it has proliferated for the last three decades in both Muslim and non-Muslim countries (Zaher & Hassan, 2002). The total asset of the global Islamic banking industry was reported to be worth US$1.72 trillion in 2017 with a growth of 5% CAGR and is expected to grow by 6% CAGR to reach US$2.44 trillion by 2023 (Thomson Reuters, 2018). When compared to the global asset growth, Indonesian Islamic banking has a quite high asset growth of 15.11% CAGR for the last five years (OJK, 2018). However, this high growth is very unfortunate that it is still unable to compete with conventional banking's market share. With market share reaching only 5.78% (OJK, 2017), it must be admitted that the development of Indonesian Islamic banking consisting of Islamic Commercial Banks (BUS) as the largest portion, followed by Islamic Business Units (UUS), and Islamic Rural Banks (BPRS) has not reflected the potential that exists with the world largest Muslim population. The market share in 2017 is still far from the expectations of the National Development Planning Agency (BAPPENAS) in the 2015 Indonesian Islamic Financial Architecture (AKSI) Masterplan, which is 8.3%. According to this masterplan, it is expected that the Indonesian Islamic banking market share will reach 20.7% by the end of 2024. One of the reasons for the difficulty of Indonesian Islamic banks to achieve these targets is a relatively low scale of business (BAPPENAS, 2015).

According to OJK data in 2018, the majority BUS are still in the category of low business scale (BUKU 1 and BUKU 2), where only one bank is categorized as BUKU 3. One of the main program recommendations by BAPPENAS in 2015 AKSI Masterplan and was also previously encouraged by OJK in the 2015-2019 Indonesian Islamic Banking Roadmap is to strengthen capital and business scale. It can be achieved, among others, by consolidating state-owned BUS through mergers. The discourse to consolidate (merge) several state-owned BUS has been raised for years.

The state-owned BUS discussed are Bank Syariah Mandiri (BSM), Bank BRI Syariah (BRIS) and Bank BNI Syariah (BNIS). Established in 1999, BSM, which is the subsidiary of Bank Mandiri, is the largest BUS with a market share of 31% and is the only BUS that presents in all 34 provinces in Indonesia. As a subsidiary of Bank Rakyat Indonesia, the largest bank in Indonesia, BRIS which began operations in 2009, is currently the fourth largest BUS with a market share of 12%. Both of these BUSs were established together with the conversion of conventional banks to Islamic banks. While the establishment of the BNIS in 2010 came from a spin-off from the Islamic Business Unit (UUS) of Bank Negara Indonesia, the fourth largest bank in Indonesia. Currently, BNIS is the third largest BUS with 13% market share. They all together represent 56% of the Islamic commercial banks (BUS) with a total assets of IDR 177.2 trillion. These three big players have a considerable potential to follow the footsteps of Bank Mandiri, which is an example of the successful state-owned bank's consolidation in Indonesia.

According to OJK data for the period 2014 to 2018, the asset growth rate (CAGR) of BUS is relatively high at 11.49%. However, if we look in actual year-on-year growth, there has been a downward trend in 2017 and 2018 of 13.31% and 9.95% respectively after previously reached peak growth of 19.10% in 2016 due to the conversion of the BPD Aceh to become an Islamic bank. As the largest part of the Islamic banking industry, BUS need to be encouraged to become the asset growth locomotive of the industry.

Merger simulations can directly increase their business scale, and with positive synergy, the asset growth rate can be increased to support the growth of Islamic banking industry in general. To prove this hypothesis, several calculations will be carried out including the synergy valuation and the potential increase in the asset growth rate after the merger simulation. In this regard, this paper aims to estimate the potential synergy value of merger simulation of BSM, BRIS, and BNIS, as well as its potential increase in asset growth rate. This paper continues to discuss simulated merger & acquisition plan that had been carried out previously by Kartika & Rofi (2015) in the banking industry and also by Ahdizia *et al.* (2018) in the establishment of government-owned Islamic bank.

This quantitative study only focusing on the financial aspect especially the equity valuation model using Discounted Cash Flow – Free Cash Flow to Equity and relative valuation of PBV ratio. The other aspects such as legal, human resources, information technology, government capital injection mechanism will not be covered. The secondary data financial statements of 2014-2018 periods are used in preparing a seven-year multi-scenario projection.

LITERATURE REVIEW

A company can grow its business scale internally by expanding its operations by using profits from its business activities, also known as organic growth. Another way is to grow externally or inorganically through takeovers including merger and acquisitions (M&A). According to Ross *et al.* (2015), a takeover is a general term that refers to the control transfer of a firm from one group shareholders to another. Takeovers can occur with acquisitions, proxy contests, and going-private transactions. Thus, takeovers include a broader set of activities than merger and acquisitions. If the takeover is achieved by acquisition, it will be through a merger (or consolidation), acquisition of stock, and acquisition of assets.

According to Law No.40 of 2007 concerning Limited Liability Companies, there are differences in the definitions of merger and consolidation. It is called a merger if a combined of two or more companies ultimately produce one company that survives while the other company is terminated legally after transferring assets and liabilities to the surviving company. Meanwhile, it is called consolidation when two or more companies consolidate themselves by stopping their operations legally and combining all their assets and liabilities into the newly formed company. Although merger and consolidation have different definitions, in general practice these two terms are sometimes used interchangeably. The study conducted by Rahman & Ayorinde (2013) on the Nigerian banking sector showed that merger and acquisition had been used as strategic tools to improve bank performance. Bank merger resulted in increased in ROE, ROA, and profit margin. Merger and acquisition have increased both operational and financial efficiency.

Hoberg & Philip (2010) in Ahdizia, Masyita, & Sutisna (2018) stated that one of the critical drivers in the merger is synergy in products, where companies that have a similar product can complement each other (horizontal merger). Also, a horizontal merger will create higher value, which is done by fellow competitors in the same industry, as stated by Bernile *et al.* (2011) in Ahdizia *et al.* (2018). Kenkel (1993) stated that sources of synergy include combining duplicate functions, better-utilizing excess capacity in one or both organizations, achieving economies of scale, risk-spreading, reducing the cost of capital, better cash and inventory management, and increased market power. Ross *et al.* (2015) stated that synergy occurs if the firm value after the merger is greater than the sum of the value of the acquiring firm and the value of the acquired firm before the merger.
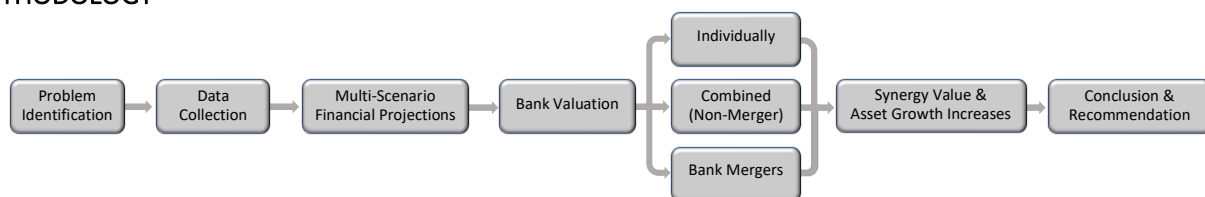
METHODOLOGY

Figure 1. The Conceptual Framework

With a conceptual framework as described in Figure 1, this quantitative descriptive research is to estimate the potential synergy value of merger simulations of BSM, BRIS, and BNIS, as well as its potential asset growth improvement. Here are the steps; the first step is determining the business problem. The second step is data collecting mainly in the form of secondary historical financial data of each BUS for 2014-2018 period and additional data such as a risk-free rate, beta references, and equity risk premium. The third step is forecasting financial projections. This forecasting is based on data collected in the previous step. Seven-year multi-scenario projections are used for each BUS as well as for non-merger and merger simulation condition. The fourth step is bank valuation for each condition and scenario based on the discounted cash flow (DCF) approach through free cash flow to equity (FCFE) model for the banking industry and also Relative Valuation approach through PBV ratio. The fifth step is calculating the potential synergy value and the potential asset growth increases. The final step is conclusion and recommendation, where based on the study results, some conclusions and recommendations will be provided.

According to Damodaran (2012), given all the uniqueness of the bank, he suggested several broad rules that could enable us to deal with these problems. The first, it is more sense to value equity directly, rather than the entire firm. Now it can be understood the main reason why the most suitable valuation method for banks is to use the equity valuation method, and this argument will be extended to the use of the equity value multiples as well. The second, we need a measure of cash flow that does not require us to estimate the reinvestment needs (i.e., dividends as the cash flows), or we need to redefine a more meaningful reinvestment to the bank.

Since the banks operate under a capital ratio constraint, it can be said that they must reinvest equity capital from profits in order to increase their ability to make more financing in the future. In this case, we can use the capital adequacy ratio (CAR) constraint as a type of reinvestment that banks must meet to comply with the OJK regulation.

FINDINGS AND ARGUMENT

Before conducting the valuation, the financial forecast is prepared, where a key assumption used is revenue growth. It will be calculated based on the Compound Annual Growth Rate (CAGR) of revenue for the period of 2014 to 2018. Also, this forecast is based on historical data on the proportion of costs compared to revenue, the percentage of each account used, and growth in financing and funding. The forecast is prepared for seven years period in three different scenarios (best, most likely, and worst). To determine the final value of a multi-scenario analysis, the probability is assumed for each scenario as follows, 30% for the best scenario, 50% for the most likely scenario and 20% for the worst scenario.

As pointed earlier, bank valuation makes more sense by using direct valuation on the equity rather than the entire firm. In the equity valuation model of DCF-FCFE, the discount rate used is the cost of equity that will be calculated using the Capital Asset Pricing Model (CAPM) consisting of three inputs. The first is a risk-free rate which will use the Government Sukuk (SBSN PBS-017) with a yield rate of 8.24752%. The second is the risk premium that will use the total equity risk premium as of January 2018 from Damodaran for Indonesia, which is 7.62%. The third is beta which is calculated by the bottom-up method.

The potential synergy value can be calculated by subtracting the bank mergers valuation with the combined (non-merger) valuation, as shown in Table 1. The relative valuation of PBV ratios are obtained by dividing the equity value with the total shares outstanding and book value per share.

Table 1. The Potential Synergy Value Calculation

	Equity Value (in IDR million)	PBV Ratio
Bank Merger Valuation	19,172,183	1.95x
Combined (Non-Merger) Valuation	11,406,584	1.16x
Potential Synergy Value	7,765,599	

Obtaining these results of positive potential synergy value with a higher PBV ratio also confirms the results of the previous study by Ahdizia *et al.* (2018) on the merger plan of BSM, BRIS, and BNIS. Another study by Kartika & Rofi (2015) regarding the analysis of the synergy value from the acquisition simulations of Bank Mandiri and Bank BTPN also showed a synergy value. These two previous studies come up with a consistent result of synergy value existence although they used a different type of reinvestment when applying the DCF-FCFE model. In their study, they used a general type of reinvestment in the form of net capital

expenditure and working capital changes. In this case, we rather use the regulatory capital ratio requirement as a type of reinvestment as recommended by Damodaran (2012).

The results show that in non-merger condition, the asset CAGR in the seven-year projections reached 11.65%, which is slightly higher than the actual asset CAGR in 2018 of 11.49%. While in merger condition, the asset CAGR reaches a higher result of 13.12%. By looking at further details in a year-on-year growth rate, it can be seen that in non-merger condition, the growth rates show a downward trend every year. On the contrary in the merger condition, the seven-year projections show an increasing trend in year-on-year growth rates. This increasing trend shows that the merger simulation can increase the growth of Islamic bank assets. These findings are increasingly supportive of accepting the previous hypothesis that bank merger can directly increase business scale, and with positive synergy, the asset growth rates can be improved to support the growth of the Islamic banking industry as well as its market share.

Regarding the discourse of merging these three state-owned Islamic banks, some risk areas may arise in the process and for that to be anticipated. The implementation phase of integration requires the most time and resources and also has the most considerable risk. The most significant risks to achieving the expected results are typically a loss of customers, business interruptions, loss of key personnel, failure to unite the culture, poor communication, lack of transparency, and underachievement on performance expectations. Strong governance provided by a centralized project management office (PMO) is needed to keep everyone focused on minimizing the risks and staying on track.

CONCLUSIONS

From the study findings and argument, it can conclude that DCF-FCFE bank valuation model resulted in a potential synergy value of IDR 7.76 trillion for merger simulations of BSM, BRIS, and BNIS. This synergy value represents 68.0% higher than the non-merger condition valuation of IDR 11.41 trillion. This positive synergy value is also followed by a 1.95x PBV ratio which is higher than the 1.16x non-merger condition and the banking industry average 1.65x. The higher PBV ratio indicates that Islamic bank merger has the potential to generate extra profits from its asset size. The occurrence of this potential synergy value with higher PBV ratio also confirms the results of the previous similar research by Ahdizia *et al.* (2018). Another study by Kartika & Rofi (2015) regarding the analysis of the synergy value from the acquisition simulations of Bank Mandiri and Bank BTPN also showed a synergy value. These two previous studies consistently resulted in synergy value although they used a different type of reinvestment when applying the DCF-FCFE model.

From the seven-year financial projections for merger simulations of BSM, BRIS, and BNIS resulted in 13.12% CAGR as the potential increase in asset growth. This growth rate is higher than the non-merger condition of 11.65% and also higher than the average of the Islamic Commercial Banks (BUS) at 11.49%. This high asset CAGR in merger condition also shows the increasing trend in year on year asset growth rate. It indicates that the magnitude of year on year asset growth in the following years will be even higher so that it can support the expansion of Islamic bank market share.

With the positive results obtained in this study, the recommendation that can be given to the government as the main shareholder is to immediately follow up on the discourse of merging BSM, BRIS, and BNIS because it can accelerate the growth of Indonesian Islamic bank assets. Since this study is only cover a part of financial aspects, so it needs to be supplemented by further research in a broader financial perspective such as merger costs, taxes, as well as other issues including legal, human resources, information technology, government capital injection mechanism, associated risks, and so forth.

REFERENCES

Abdul-Rahman, O. A., & Ayorinde, A. O. (2013). Post-merger performance of selected Nigerian deposit money banks: An econometric perspective. *International Journal of Management Sciences and Business Research,* Vol. 2, No. 8, pp.49-59.

Aggelopoulos, E. (2017). Understanding bank valuation: an application of the equity cash flow and the residual income approach in bank financial accounting. *Open Journal of Accounting*, Vol. 6, pp.1-10. doi: http://dx.doi.org/10.4236/ojacct.2017.61001

Ahdizia, K., Masyita, D., & Sutisna. (2018). Business valuation of Islamic banks in the merger plan to become Indonesia's state-owned bank. *Etikonomi: Jurnal Ekonomi*, Vol. 17, No. 2, pp.223-236. doi: http//dx.doi.org/10.15408/etk. v17i2.7238

Badan Perencanaan Pembangunan Nasional. (2015). Masterplan arsitektur keuangan syariah Indonesia. Viewed 20 March 2019 at https://www.bappenas.go.id/files/publikasi_utama

Bernile, G., Lyandres, E., & Zhdanov, A. (2011). A theory of strategic mergers. *Review of Finance*, Vol. 16, No. 2, pp.517-575.

Damodaran, A. (2018). Country risk update: January 2018 data update 5. Viewed 20 March 2019 at http://people.stern.nyu.edu/adamodar/pdfiles/blog/dataupdate5for2018.pdf

Damodaran, A. (2012). *Investment valuation: tools and techniques for determining the value of any asset* (3rd ed.). New Jersey, U.S.A.: John Wiley & Sons.

Government of the Republic of Indonesia. (2007). Law No.40 of 2007 concerning Limited Liability Companies.

Hoberg, G. & Philips, G. (2010). Product market synergies and competition in mergers and acquisitions: A text-based analysis. *The Review of Financial Studies*, Vol. 23, No. 10, pp.3773-3811.

Indonesia Stock Exchange. (2018). IDX Annual Statistics 2018. Viewed 20 March 2019 at https://idx.co.id/media/4842/idx-annual-statistics-2018.pdf

Kartika, L. & Rofi, M.A. (2015). Simulasi strategi akuisisi bank di Indonesia: Akuisisi Bank Mandiri terhadap Bank Tabungan Pensiunan Nasional. *Finance and Banking* Journal, Vol. 17, No. 2, pp.26-51.

Kenkel, P. (1993). Basic step to merger: A planning tool for cooperatives. *Oklahoma State University Extension Facts No.893*.

Otoritas Jasa Keuangan. (2018). Statistik Perbankan Indonesia – Desember 2018. Viewed 20 March 2019 at https://www.ojk.go.id/id/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Documents/Pages/Statistik-Perbankan-Indonesia---Desember-2018/SPI%20Desember%202018.pdf

Otoritas Jasa Keuangan. (2015). Roadmap Perbankan Syariah Indonesia 2015-2019. Viewed 20 March 2019 at https://www.ojk.go.id/id/kanal/syariah/berita-dan-kegiatan/publikasi/Pages/Roadmap-Perbankan-Syariah-Indonesia-2015-2019.aspx

Pemeringkat Efek Indonesia. (2018). PEFINDO beta stock edition 28 December 2018. Viewed 20 March 2019 at https://pefindo.com/index.php/fileman/file/722

Ross, S.A., Westerfield, R.W., Jaffe, J.F., & Jordan, B.D. (2015). *Corporate finance* (11th ed.). New York: McGraw-Hill Education.

Thomson Reuters. (2018). State of the global Islamic economy report 2018/19. Viewed 17 March 2019 at https://ceif.iba.edu.pk/pdf/GlobalIslamicEconomyReport20182019.pdf

Zaher, T.S. & Hassan, M.K. (2002). A comparative literature survey of Islamic finance and banking. Financial Markets, Institutions & Instruments, Vol. 10, No. 4.