

## **The Comparison of Soundness Level of Islamic Banks in Indonesia and Malaysia**

**Muhamad Nadratuzzaman Hosen<sup>1</sup>, Syafaat Muhari<sup>2</sup>**

**Abstract.** *This study was conducted to analyze the soundness comparison of Islamic banks in Indonesia and Malaysia to measure the readiness of Islamic banks in both countries In facing of financial integration in the ASEAN Economic Community (AEC) by 2020. The study uses data of annual financial statements in 10 Islamic banks in each country in period 2012-2014 using CAMEL Method. The results of this study indicate that Islamic banks in Malaysia are relatively better prepared compared to Islamic banks in Indonesia. Islamic Banks in Malaysia tend to be more soundness than Islamic Banks in Indonesia during periods of 2012 to 2014. The implication based on finding indicated that the Islamic banks in Indonesia need improvement in the product diversification both on financing or funding to compete in ASEAN Region.*

**Keywords:** *soundness level, Islamic banks, CAMEL method*

**Abstract.** *Penelitian ini dilakukan untuk menganalisis perbandingan kesehatan bank syariah di Indonesia dan Malaysia untuk mengukur kesiapan bank syariah di kedua negara. Studi ini menggunakan data laporan keuangan tahunan 10 bank syariah di Indonesia dan 10 bank syariah di Malaysia pada kurun waktu 2012-2014. Hasil penelitian ini menunjukkan bahwa bank syariah di Malaysia relatif lebih siap dibandingkan bank syariah di Indonesia dengan menggunakan metode CAMEL. Bank syariah di Malaysia cenderung lebih sehat dibanding Bank syariah di Indonesia selama periode tahun 2012 sampai 2014. Hasil dari penelitian ini memberikan implikasi bahwa bank syariah di Indonesia perlu mendivesifikasi produk-produknya baik dalam pembiayaan maupun pendanaan dalam rangka berkompetisi di regional ASEAN.*

**Keywords:** *tingkat kesehatan, perbankan syariah, metode CAMEL*

### **How to Cite:**

Hosen, M.N., & Muhari, S. (2018). The Comparison of Soundness Level of Islamic Banks in Indonesia and Malaysia. *Etikonomi: Jurnal Ekonomi*. Vol. 17 (1): 111 – 122. doi: <http://dx.doi.org/10.15408/etk.v17i1.6711>.

## Introduction

The Islamic banking industry in Indonesia is rapidly growing during period of 2008 to 2013 before the growth have been being stagnant since 2014. The stagnation in Islamic banking growth is to affect on the decline assets of Islamic banks compare to conventional banks 2015. The growth of Islamic banking assets and market share in Indonesia can be seen in Table 1.

**Table 1. Market Share of Islamic Banking in Indonesia**

Total Assets	2011	2012	2013	2014	2015
National (IDR Billion)	3,652,832	4,262,587	4,954,467	5,615,150	6,095,908
Islamic Banking (IDR Billion)	145,467	195,018	242,376	272,343	280,806
Share of Islamic Banking (%)	3.98	4.58	4.89	4.85	4.60
Growth (%)	49.17	34.06	24.28	12.36	3.11

Source: Financial Services Authority 2016, Data Processed.

Islamic banking in Indonesia is expected to achieve to qualification standard of Qualified ASEAN Bank (QAB) to compete with among Islamic Banks in ASEAN Region. Almekinders (2015) stated that the financial integration of ASEAN could work with three-dimensional frameworks that should be completed, namely the equal access, equal treatment, and balanced environment. Banks in ASEAN region have to meet some criteria, such as strong and sound of capital, the prudential regulations at the host country, and having a significant market share in the country of origin. The Implication of financial integration, banking liberalization makes a tight competition in the banking sector among ASEAN Countries following QAB Criteria including Islamic Banks.

Malaysia has 16 Islamic banks; several of those have big assets and strong capital to qualified as QAB. On the other hand, the government of Malaysia is ambitious for Malaysia to become the world's Islamic Financial Center. Indonesia is one of the potential markets for Malaysian Islamic banks considering the enormous Muslim population. Islamic Banking in Malaysia has more advanced than in Indonesia. Although the growth of Islamic banking in Malaysia is lower than in Indonesia, the market share of Islamic banking in Malaysia at December 2015 has reached 22.77% of the national banking system (Bank Negara Malaysia, 2016). The growth of Islamic banking assets and market share in Malaysia shows in Table 2.

The Expansion of Malaysian Islamic banks to Indonesia derived by several advantages such as larger assets, stronger capital, more experience in Islamic banks, strong support from Government, and big market customer in Indonesia. The Possibility of expansion should be aware by Islamic Banks and Indonesian Government based on Table 2. Therefore, it is necessary to analyze the indicators that can be used as a reference to anticipate the expansion of Islamic banks from ASEAN countries, mainly from Malaysia to Indonesia.

**Table 2. Market Share of Islamic Banking in Malaysia**

Total Assets	2011	2012	2013	2014	2015
National (RM Million)	1,781,863	1,875,773	2,043,367	2,219,371	2,354,287
Islamic Banking (RM Million)	328,649	375,954	426,641	477,055	535,350
Share of Islamic Banking (%)	18.44	20.04	20.88	21.50	22.74
Growth (%)	22.80	14.39	13.48	11.82	12.22

Source: Bank Negara Malaysia 2016, data processed.

At the beginning of the financial integration of the ASEAN Economic Community (MEA) by 2020, Islamic banks in Indonesia must ensure the sustainability of the business and enlarge the market share. Therefore, our research is to analyze and compare Islamic banks soundness between Indonesia and Malaysia. The soundness instruments are to measure capital, assets quality, management, profitability, liquidity, and sensitivity to market risk. The comparison of the sound level of indicators for Islamic banks in Indonesia and Malaysia is expected to be a guide for stakeholders including Islamic banks and Government of Indonesia at ASEAN financial integration in 2020.

One of the methods to measure bank soundness is by using CAMEL method. In general, the international banking authority adopts the CAMEL framework as a variable in estimating the sound of banks (Bank Indonesia 2004). There are a few studies that had conducted to analyze how big the effect of CAMEL in predicting bank soundness. Bobykin (2010) in his research states that the factors which most determine the level of soundness of banks in Ukraine in 2006 -2009 is the capital, asset quality, and liquidity. Bobykin (2010) also added that the predicted rate of CAMELS reached 91% by using multi-period logit and hazard models.

Susyanti et al. (2003) conducted a study on CAMEL ratio analysis along with Economic Value Added (EVA) to predict bank soundness. The results show that CAMEL and EVA have predicted 57.1% for bankrupt banks, 62.5% for difficult banks and 66.7% for sound banks. Whalen & Thomson (1988) tested 58 banks in the United States with 22 CAMEL ratios in the period of 1983-1986 and showed that CAMEL could predict 82% - 90% of bank soundness. Thomson (1991) tested the CAMEL ratio's benefit in predicting bank failures in the 1980s in the United States. The results show that as many as 94% of failing banks can be predicted 6 and 12 months before the date of bankruptcy and as many as 80% of banks fail predictable 42 and 48 months before the date of bankrupt.

There are other studies to measure the level of soundness of Islamic Banks in Indonesia such as an aspect of efficiency by Firdaus and Hosen (2013), Hosen and Rahmawati (2013), Hosen and Muhari (2014). The Five Aspects which included in CAMEL are (1) Capital; (2) Assets Quality; (3) Management; (4) Earning; (5) Liquidity. Based on The Regulation of Bank of Indonesia (PBI) No. 6/10/PBI/2004 there is addition of one aspect: (6) Sensitivity to Market Risk.

The study provides depth and more comprehensive explanation about rivalries

between Islamic banks in Malaysia and Indonesia because we used the in-depth interview to complement research findings. On the other hand, we modified CAMEL method by grouping the performance based on the ratio and rank them by each quartile. This modification allows us to identify the relative competitiveness of each Islamic banks neither in Indonesia nor Malaysia.

**Method**

The samples of study are Islamic banks in Indonesia and Malaysia from 2012 to 2014. The data obtained from the annual report of each bank in Indonesia and Malaysia in the period of study. We also collect some macroeconomic data from the central bank of Indonesia and Malaysia through their official websites. The numbers of samples in this study were 10 Indonesian Islamic banks and 10 Islamic banks in Malaysia. The Islamic banks, which conducted in this study, can be seen in Table 3.

**Table 3. List of Islamic Banks**

Indonesia		Malaysia	
Code	Banks	Code	Banks
BCAS	Bank of BCA Sharia	AFB	Affin Bank
BNIS	Bank of BNI Sharia	AIB	Alliance Islamic Bank
BRIS	Bank of BRI Sharia	ARB	Al Rajhi Bank
BMI	Bank of Muamalat Indonesia	ASB	Asian Finance Bank
BMS	Bank of Mega Sharia	BMM	Bank Muamalat Malaysia
BSB	Bank of Sharia Bukopin	BIMB	Bank Islam Malaysia Berhad
BSM	Bank of Sharia Mandiri	CIMBI	CIMB Islamic
BVCS	Bank of Victoria Sharia	KFH	Kuwait Finance House
MBSI	Maybank of Sharia Indonesia	MYBI	Maybank Islamic
PNBS	Bank of Panin Sharia	PIBB	Public Islamic Bank Berhad

This paper analyzed Islamic banking soundness using CAMEL Method based on The Regulation of Bank of Indonesia (PBI) No. 9/1/PBI/2007. The components that measured are: capital resilience, assets quality, management’s performance, the level of earning and liquidity, and sensitivity to the market risks. Each component has some indicators. The numbers of indicators for each component shows in Table 4.

**Table 4. CAMEL Indicators**

Components	No	Indicators
Equity	1	Capital Adequacy Ratio (CAR)
	2	Growth Trend of CAR
	3	Internal Bank's ability to add capital
	4	Retained Earnings Ratio
	5	Intensity of Functions of Bank Sharia Agency
	6	Core Capital compared to Mudharabah Fund
	7	Deviden Pay Out Ratio
	8	Access to Capital Resources
Assets	9	Quality of Earning Assets
	10	The amount of Non-Performing Financing
	11	Projected Quality of Productive Assets
	12	Ratio of Asset Trading, Derivatives and FVO to Total Assets
Management	13	Profit Margin Ratio
Earnings	14	Net Operating Revenue
	15	Return on Assets
	16	Operational Efficiency Ratio
	17	Income Generating Ratio
	18	Diversified Revenue
	19	Primary Operating Revenue Projection
	20	Primary Net Margin Operating Ratio
	21	Return on Equity
	22	Composition of Fund Placement on Securities
	23	The amount of Profit Sharing Fund
	24	Efficiency based on DEA approach
	Liquidity	25
26		Sharia Bank Capability in Meeting Short Term Liquidity Needs by Using Short Term Assets, cash and secondary reserve
27		Dependence of Interbank Funds
Sensitivity to Market Risk	28	Sensitive asset to sensitive liability ratio
Social	29	Public Education Function
	30	Zakat Allocation Function

After calculating the financial ratios, the Islamic banking ranked by the score of the ratio at each indicator. The ranking based on quartile deviation that covering 10 Islamic banks in Indonesia and 10 Islamic banks in Malaysia. The quartiles depict the data in a

study divided into four groups separated by a minimal to the maximal number. This rating then summed and showed the final score of Islamic banking soundness. From the indicator of CAMEL's method, we can analyze the strength and weaknesses of each Islamic bank in Indonesia and Malaysia. This result will be useful to prepare the Islamic banks to face ASEAN Financial Integration in 2020. This research will use some financial performance, to examine the soundness of banks in this study. The results of the ratio in this study divided into four quartiles of the average value of the performance of each ratio in the soundness of Islamic banks. The top quartile (best performance) gets 4 points, and the lowest quartile (lowest performance) gets 1 point.

Besides that, this research also uses a qualitative method. The addition of this qualitative method is due to many consensuses that several of the research issues not adequately addressed through quantitative-positivistic methods. The qualitative approach is needed to adapt to the form of new social reality at the society. Structured interviews are the interview method whose interviewers set their issues and questions to ask to find answers to hypotheses.

**Result and Discussion**

Based on Table 5, it can be shown from rank 3rd to rank 9th are Malaysian bank. However, the first and second are Islamic banks from Indonesia, namely Bank of BCA Sharia and Bank of Panin Sharia, while the Bank of Victoria Sharia was ranked tenth. Three Islamic banks with lowest sound performance are Bank of BRI Sharia, Asian Finance Bank, and Bank of Sharia Bukopin. Based on Table 5, it can conclude that the soundness of Islamic banks in Malaysia is better than the Islamic banks in Indonesia in 2012.

**Table 5. The Soundness of Islamic Banks in 2012**

Rank	Bank	Score	Country	Rank	Bank	Score	Country
1	BCAS	74.79	I	11	MBSI	57.83	I
2	PNBS	72.42	I	12	ARB	56.79	M
3	MYBI	71.96	M	13	BMM	55.25	M
4	PIBB	71.33	M	14	BMI	54.04	I
5	KFH	69.38	M	15	BNIS	53.58	I
6	AIB	68.96	M	16	BMS	53.38	I
7	CIMBI	67.25	M	17	BSM	52.96	I
8	BIMB	66.71	M	18	BRIS	51.71	I
9	AFB	62.50	M	19	ASB	50.79	M
10	BVCS	59.29	I	20	BSB	45.88	I

Source: data processed, \*I=Indonesia, M=Malaysia

The sound level of Islamic banks in Malaysia is better because the liquidity and sensitivity to market risks at Islamic banks in Malaysia are much better than the Islamic banks in Indonesia in 2012. The Islamic banks in Malaysia have more derivative assets

products and more diverse. Thus, Islamic banks in Malaysia have liquid instruments that can be used to anticipate the withdrawal of funds or needs of cash with the substantial amount of money.

Regarding sensitivity to market risks, only 3rd of 10th Islamic banks in Malaysia who have a negative relative gap, while in Indonesia all of the Islamic banks have a negative relative gap. The negative relative gap is indicating that Islamic banks are vulnerable to the changes in interest rates. A negative relative difference occurs because of financing that cannot be repricing such as bai' contract based like Murabaha financing which is much higher than the savings that using profit-loss sharing based contract like Mudharaba which is flexible on interest rates. (Hosen and Muhari, 2017). Nowadays, the structure of Assets-Liability in Islamic banks Indonesia is dominated by Murabahah in assets and Mudarabah in Liquidity led to causing a wider negative relative gap in Islamic banks.

**Table 6. The Soundness of Islamic Banks in 2013**

Rank	Bank	Score	Country	Rank	Bank	Score	Country
1	BCAS	73.96	I	11	BNIS	58.17	I
2	PIBB	72.46	M	12	BMI	57.92	I
3	AIB	68.00	M	13	ARB	54.63	M
4	KFH	67.29	M	14	MYBS	54.25	I
5	BIMB	66.71	M	15	BMM	53.50	M
6	MYBI	64.79	M	16	ASB	53.38	M
7	CIMBI	62.38	M	17	BMS	50.13	I
8	BVCS	61.25	I	18	BRIS	49.63	I
9	AFB	58.71	M	19	BSM	46.88	I
10	PNBS	58.21	I	20	BSB	41.29	I

Source: data processed, \*I=Indonesia, M=Malaysia

Based on Table 6, it can be shown from rank 2nd to rank 7th, and rank 9th are Malaysian bank. However, the first rank is an Islamic bank from Indonesia, namely Bank of BCA Sharia, while Bank of Victoria Sharia and Bank of Panin Sharia rank 8th and 10th, respectively. Three Islamic banks with lowest sound performance are Indonesian Islamic banks namely Bank of BRI Sharia, Bank of Sharia Mandiri and Bank of Sharia Bukopin.

Based on Table 6 it can be concluded that the soundness of Islamic banks in Malaysia is better than the Islamic banks in Indonesia. The sound level of Islamic banks in Malaysia is better because the liquidity and sensitivity to market risks of Islamic banks in Malaysia are better than the Islamic banks in Indonesia in 2013. Other factors that influence the better sound of Islamic banks in Malaysia in 2013 are the quality of the assets managed by Islamic banks in Malaysia was better than the Islamic banks in Indonesia. This fact is reflected in the level of default rate (NPF) from Islamic banks in Malaysia are lower compared to the level of NPF at Islamic banks in Indonesia.

**Table 7. The Soundness of Islamic Banks in 2014**

Rank	Bank	Score	Country	Rank	Bank	Score	Country
1	BCAS	75.08	I	11	BNIS	58.83	I
2	MYBI	70.92	M	12	KFH	58.79	M
3	PIBB	69.79	M	13	BMM	56.29	M
4	CIMBI	68.71	M	14	MYBS	55.25	I
5	BIMB	68.58	M	15	BSM	55.08	I
6	AFB	66.29	M	16	BRIS	54.08	I
7	ARB	65.71	M	17	BMS	51.50	I
8	PNBS	65.46	I	18	BVCS	51.08	I
9	AFB	65.00	M	19	BSB	48.54	I
10	AIB	63.92	M	20	BMI	47.88	I

Source: data processed, \*I=Indonesia, M=Malaysia

Based on Table 7, it can be shown from rank 2nd to rank 7th, and rank 9th to rank 10th are Malaysian bank. However, the first rank is an Islamic bank from Indonesia, namely Bank of BCA Sharia and while Bank of Panin Sharia ranked at 8th. Three Islamic banks with lowest sound performance are Indonesian Islamic banks namely Bank of Victoria Sharia, Bank of Sharia Bukopin, and Bank of Muamalat Indonesia. Based on Table 7, it can conclude that the soundness of Islamic banks in Malaysia is much better than the Islamic banks in Indonesia. This fact is because the liquidity and sensitivity to market risk Islamic banks in Malaysia are much better than the Islamic banks in Indonesia in 2014. Other factors that influence the sound of Islamic banks in Malaysia is better than in Indonesia was the quality of the assets managed by Islamic banks in Malaysia was better than the Islamic banks in Indonesia.

In 2014, the profitability of Islamic banks in Malaysia showed better performance when compared to the Islamic banks in Indonesia. Because of the decline in macroeconomic in Indonesia and declining quality of assets at Islamic banks in Indonesia, these decline the profitability of Islamic banks. Based on the analysis of the soundness of Islamic banks in Indonesia and Malaysia, it indicates that the performance of Islamic banks in Indonesia has decreased from 2012 to 2014, except bank of BCA Sharia. In the same period, the performance of Islamic banks in Malaysia are also suffer from declination, but the decline experienced by the Islamic Bank in Indonesia is sharper. In 2012 the Islamic banks in Indonesia on average were less performs only in liquidity and market sensitivity variables as compared with Islamic banks from Malaysia. In 2013, the asset quality then less performs too than Islamic banks in Malaysia, until in 2014 the profitability of Islamic banks in Indonesia has lower performance than Islamic bank in Malaysia.

Hosen and Muhari (2017) underlined the high composition of expensive funding such as time deposit and suggest that the need of more Islamic derivative liquidity instruments are essential to anticipate risks from the financial market. This two condition consequently affect the low performance of Islamic banks in Indonesia compared to Malaysia from 2012 to 2014. It is proved when Islamic banks in Malaysia keep their performance because of



sufficient liquidity instruments and low cost of funding. Effendi (2017) found that the risk on debt-based financing in Indonesian Islamic banks is low.

When viewed since 2012 and 2014, the Islamic Bank in Malaysia is sounder because they have more liquidity instruments compared to the Islamic banks in Indonesia. Also, the Islamic Banks in Malaysia are relative strength in the face ASEAN Financial Integration given more diversified financial assets that can be in repricings such as Mudaraba, Ijara and Ijara Muntahiya bit Tamlik (IMBT). On the other hand, all Islamic banks in Indonesia from 2012 to 2014 have assets that cannot be repricings since many use Murabahah in financing, while the funding use Mudharaba contract.

Then, Islamic banks in Indonesia need to gradually diversify their financing product by a shift to the contracts of financing to profit-loss sharing or lease contract because these two contracts are more resilience than sale/bai' contract in term of pricing respond to interest change (Hosen and Muhari, 2017). Thus, if the interest rate increases, the Islamic banks the revenue sharing for deposit fund is increase as well. Because, it is peers to the conventional banks, while at the same time financing based on Murabaha contract cannot be in repricing so that it increases the risks and can lower the level of Net Operating Margin (NOM) of Islamic banks in Indonesia. At the end of 2014, five Islamic banks have a definite relative gap in the sample namely Maybank Islamic, KFH Bank, Affin Bank, Alliance Islamic Bank, and Asian Finance Bank, which is the fifth bank has resistance to the market is quite substantial.

Regarding liquidity, Islamic Banks in Indonesia is still a shortage of liquidity instruments when compared with Islamic banks in Malaysia. It can see from the liquidity scores of Islamic banks in Malaysia were higher than the Islamic banks in Indonesia. Islamic banks in Malaysia have more diversified liquidity instruments rather than Islamic banks in Indonesia. One of the instruments that are often using in Malaysia as a liquidity instrument is a Murabaha commodity which is not currently used in Indonesia. With this Murabaha commodities stocks, Islamic banks in Malaysia have sufficient liquidity instruments to anticipate business risks that might occur. Mun et al (2017) shows that there is a positive relationship between asset liability management and the financial performance of the banks.

Regulator in particular the Financial Services Authority (FSA/Otoritas Jasa Keuangan), Bank of Indonesia (BI) and the Ministry of Finance must accommodate the needs of the Islamic financial industry. This need can solve by providing incentives such as down payment discount or tax incentives. Liquidity instruments of Islamic banks in Indonesia are still low compared to Malaysia. Commodity stocks which have been stated by the fatwa of Indonesian Council of Ulama (MUI) were not allowed to operate by the Regulator, but the Islamic finance industry urgently needs it. As a comparison, Islamic banks in Malaysia benefited greatly from the liquidity instrument, such as sharia commodities stocks. Therefore, the regulator is expected to allow this liquidity instruments because it is an innovative product to develop Islamic financial industries. Widigdo et al (2016) stated that the Islamic banks should reengineering the business process.

Policy makers should not a contra productive regulation such as spin-off policy. Haribowo (2017); Al Arif et al (2017) said that the spin-off policy had an adverse impact

to the performance of Islamic banks in Indonesia. Miftah and Wibowo (2017) show that merger can be alternative strategies to strengthen the Islamic banks in Indonesia. Besides that, the Islamic banks in Indonesia should increase the service quality. The increases in service quality it will increase the loyalty of the customers (Khan, 2016;

Islamic Banking in Malaysia relatively more prepared rather than Islamic banks in Indonesia. Islamic banks in Malaysia have more derivative and liquidity instruments. Besides that, the regulation is very supportive and accommodative, the Non-Performing Financing is Low, and the public of Malaysia has high attention and interest. This fact makes Islamic banks in Malaysia are ready to compete in the era of financial integration in the ASEAN Economic Community (AEC) in 2020. Rodoni et al (2017) stated that the efficiency rate of Islamic banks in Malaysia is better than Islamic banks in Indonesia.

Based on the empirical results of the study, liquidity, and sensitivity to market risk identified as the main factors that affect bank soundness. Sumantri and Jumali (2010) stated that there is a significant difference between the liquidity factors of sound and default banks. On the other hand, Aryati and Balafif (2007); Widiharto (2008) show a different result that there is significant difference between the liquidity factors of sound and default banks. Zahra et al (2018) found that the Islamic banking system in Indonesia is more stable rather than the conventional banking system.

However, many researchers have proved that CAMEL method has a certain precision to predicting banking failure. Susyanti et al. (2003) are predicting that 57,1% of the low level of soundness about to fail during 1998 crisis and 1980s financial crash in the United States, Whalen, and Thomson (1988) are predicting that 82% of low-level soundness about to fail. The improvement of liquidity instruments and affordable funds to Islamic banks in Indonesia should be fixed to improve the overall performance of Islamic banks in Indonesia to compete for foreign Islamic banks.

## **Conclusion**

The finding of the study shows that Islamic Banks in Malaysia tend to be more soundness than Islamic Banks in Indonesia during periods of 2012 to 2014. Islamic bank in Malaysia shows better improvement than Indonesia during the period of study. It showed the growth of Malaysia's CAMEL scores which represent bank's soundness, on the contrary, CAMEL scores from Islamic banks in Indonesia decline at the same period. This results indicated that Islamic banks in Indonesia are less competitive in ASEAN region than their counterparts in Malaysia.

The implication based on finding indicated that the Islamic banks in Indonesia need improvement in the product diversification to compete in ASEAN Region. Islamic banking stakeholder such as Government, Islamic Banking Industry, Academics, and Scholars in Indonesia need to develop more innovative derivative products and liquidity instruments. Also, the government should give the Islamic banks ease of regulation to stimulate Islamic banking growth. If Islamic banks Indonesia can create more innovative products and the government can issue more ease regulations, then Islamic banks in Indonesia would be better to compete in the ASEAN Region.

## Acknowledgement

This research supported by Puslitpen-LP2M, State Islamic University (UIN) Syarif Hidayatullah Jakarta, Indonesia. We thank our colleagues, Amat Taap Manshor (FAA Malaysia), Delil Khairat (Swiss Re Malaysia), Azzudi Jamaluddin and Mohd Faysal Bin Mohammed (Maybank Islamic Malaysia), Shamim Adam and Janoerto Alamsyah (Bloomberg Malaysia) who provided insight and expertise that greatly assisted the research.

## References

- Abdillah, R., Hosen, M.N., & S., Muhari. (2016). The Determinant Factor of Islamic Bank's Profitability and Liquidity in Indonesia. *Knowledge Horizons-Economics*. Vol. 8 (2): 140-147.
- Al Arif, M.N.R., Nachrowi, N.D., Nasution, M.E., & Mahmud, T.M.Z. (2017). The Islamic Banking Spin-Off: Lessons from Indonesian Islamic Banking Experiences. *JKAU: Islamic Economics*. Vol. 30 (2): 117-133. DOI: <https://doi.org/10.4197/Islec.30-2.11>.
- Almekinders, G., Fukuda, S., Mourmouras, A., Zhou, J., & Zhou, Y.S. (2015). ASEAN Financial Integration. *IMF Working Paper No. WP/15/34*. Washington DC: IMF.
- Aryati, T. & S. Balafif. (2007). Analisis Faktor yang Mempengaruhi Tingkat Kesehatan Bank dengan Regresi Logit (The Factors that Affect The Bank Soundness with Logit Regression). *Journal The Winners*. Vol. 8 (2): 111-125.
- Bobykin, L. (2010). Ukrainian Bank Failure Prediction Using Efficiency Measures. (*Unpublished Thesis*). Kiev: Kyiv School of Economics.
- Effendi, K.A. (2017). Risk of Debt-Based Financing in Indonesian Islamic Banking. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 9 (2): 203-212. DOI: <https://doi.org/10.15408/aiq.v9i2.4821>.
- Ehrhardt, M.C., & Brigham, E.F. (2011). *Financial Management: Theory and Practice*. Mason, Ohio: South-Western Cengage Learning.
- Firdaus, M.F., & Hosen, M.N. (2013). Measurement of Efficiency and Soundness of Islamic Bank Using Two-Stage Data Envelopment Analysis and Modified CAMELS. *Journal of Islamic Banking and Finance*. Vol.30 (3): 32-48.
- Haribowo, I. (2017). The Indonesian Islamic Bank's Spin-off: A Study in Regional Development Banks. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 9 (1): 53-68. DOI: <https://doi.org/10.15408/aiq.v9i1.4308>.
- Hosen, M.N., & Muhari, S. (2014). Analysis of The Efficiency Level of Shariah Rural Bank in Indonesia using DEA and its correlation with CAMEL. *Journal of Islamic Banking and Finance*. Vol. 31 (4): 80-102.
- Hosen, M.N., & Muhari, S. (2017). Indicator of Islamic Banking Competitiveness in the ASEAN Economic Community Era: Case Study of Indonesia and Malaysia. *International Research Journal of Finance and Economics*. Issue 163: 17-35.
- Hosen, M.N., & Rahmawati, R. (2014). Analisis Efisiensi, Profitabilitas dan Kesehatan Bank

- Umum Sharia di Indonesia Periode 2010-2013 (Analysis of the Efficiency, Profitability and Health of Islamic Full-fledge Banks in Indonesia for the 2010-2013 Period). *Finance and Banking Journal*. Vol.16 (2): 207-227.
- Khan, T.N. (2016). Islamic Banks Service Innovation Quality: Conceptual Model. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 8 (2): 287-306. DOI: <https://doi.org/10.15408/aiq.v8i2.3161>.
- Miftah, K., & Wibowo, H. (2017). Merger and Industrial Acceleration: Study at Indonesian Islamic Banking Industry. *Signifikan: Jurnal Ilmu Ekonomi*. Vol. 6 (1): 29-48. DOI: <https://doi.org/10.15408/sjie.v6i1.4728>.
- Mun, Y.L., & Thaker, H.M.T. (2010). Asset Liability Management of Conventional and Islamic Banks in Malaysia. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 9 (1): 33-52. DOI: <https://doi.org/10.15408/aiq.v9i1.3334>.
- Rodoni, A., Salim, M.A., Amalia, E., & Rakhmadi, R.S. (2017). Comparing Efficiency and Productivity in Islamic Banking: Case Study Indonesia, Malaysia, and Pakistan. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 9 (2): 227--242. DOI: <https://doi.org/10.15408/aiq.v9i2.5153>.
- Sumantri & Jumali, T. (2010). Manfaat Rasio Keuangan dalam Memprediksi Kepailitan Bank Nasional (Benefits of Financial Ratios in Predicting Bankruptcy of National Bank). *Jurnal Bisnis dan Akuntansi*. Vol. 12 (1): 39-52.
- Susyanti, J., Triyuwono, I., & Burhan, M.U. (2003). Indikasi Potensi Economic Value Added dan Analisis Rasio CAMEL dalam Memprediksi Kesehatan Bank yang Listing di Bursa Efek Jakarta (Indication of Economic Value Added Potential and CAMEL Ratio Analysis in Predicting Bank Soundness that Listing in Jakarta Stock Exchange). *Jurnal Aplikasi Manajemen*. Vol. 1 (3): 460-484.
- Thomson, J.B. (1991). Predicting Bank Failures in 1980s. *Economic Review*. Vol. 27 (2): 9-20.
- Whalen, G., & Thomson, J.. (1988). Using Fianancial Data to Identify Changes in Bank Condition. *Economic Review*. Issue II: 17-26.
- Widigdo, A.M.N., Marimin., Fahmi, I., & Beik, I.S. (2016). Business Process Reengineering of Funding on Indonesia's Islamic Banks. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 8 (1): 19-32. DOI: <https://doi.org/10.15408/aiq.v8i1.2506>.
- Widiharto, R., C. (2008). Analisis Pengaruh Rasio Keuangan terhadap Prediksi Kondisi Bermasalah Bank Perkreditan Rakyat (Analysis of Influence of Financial Ratio to Prediction of Problematic Condition of Rural Banks). (*Unpublished Thesis*). Semarang: Universitas Diponegoro.
- Zahra, S.F., Ascarya., & Huda, N. (2018). Stability Measurement of Dual Banking System in Indonesia: Markov Switching Approach. *Al-Iqtishad: Jurnal Ilmu Ekonomi Syariah (Journal of Islamic Economics)*. Vol. 10 (1): 25-52. DOI: <https://doi.org/10.15408/aiq.v10i1.5867>.