

Comparison of Sensitivity Gap Formation between Maybank Syariah Indonesia and Maybank Malaysia

Puji Sucia Sukmaningrum, Achsanah Hendratmi, Fatin Fadhillah Hasib, and Nisful Laila
Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia
{puji.sucia, achsanah.hendratmi, fatin.fadhilah, nisful.laila}@feb.unair.ac.id

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Abstract: Maybank Malaysia is the top 5 largest bank in Malaysia means that will have an effect on the economy in Malaysia which is currently expanding in Indonesia. The aims of this research are to investigate the factors that affect the sensitivity gap between Maybank Syariah Indonesia and Maybank Malaysia. The methodology using t-test and Mann-Whitney. The data used is maturity profile of both Banks. The results suggest that the formation of the gap period sensitivity of 1 month and 3-12 > months shows the real difference between Maybank Syariah Indonesia and Maybank Malaysia while having no significant difference in the gap period sensitivity of > 1-3 month.

1 INTRODUCTION

The regulation of Bank Indonesia as the central bank must be obeyed by all banks in Indonesia. Therefore, Islamic banks are no exception. According to Karim (2014), even Islamic Bank does not set interest rate on their operation, both in funding and financing side, Islamic banking still cannot avoid the interest rate risk.

Among the many tools of risk management, the anticipation that can be done with regard to the risk of interest rates is a management gap which is part of Asset-Liability Management (ALM). Framework for ALM areas include interest rate risk, liquidity risk, credit risk and exchange risks. ALM is an operation to assess risks actively changing the portfolio of assets-liabilities and strategically taking action to manage risk in order to maximize profits. The main objective of ALM is making Bank is fully prepared to face the challenges that arise (Dash and Pathak, 2016)

The gap is the difference between assets that are sensitive to interest rates (Rate Sensitive Assets/RSA) with a liability that is sensitive to interest rates (Rate Sensitive Liability/RSL). While the management gap aims to narrow the gap between the Rate Sensitive Assets (RSA) and Rate-Sensitive Liability (RSL) (Riyadi, 2006). The position of the gap that is formed due to the mismatch in the RSA and RSL can provide information about the potential risk of Islamic banking in line with interest rate changes so that the

proper gap management will affect the performance of Sharia banking.

This study will compare the formation of the gap that exists in banking have a dual banking system. The Bank is used as a sample of the research is Maybank Islamic Indonesia and Malaysia. The reason for the sampling against Sharia in Maybank Indonesia Malaysia is because the ownership of the bank is the same i.e. Maybank Holding. Thus, this study will compare the banks operating in different countries in the period of 1 month sensitivity, month, and 1-3 > > 3-12 month year 2012 – 2016.

2 LITERATURE REVIEW

2.1 Prior Research on Asset-Liability Management

Sood and Asaray (2017) analyzes the relationship of dependency between the choice of portfolio asset-liability from Islamic Banks (IBs) in developing countries. IBs tend to make decisions on financial resources based on their asset portfolio options. IBs choose more investment financing to reduce risk of the instrument which may share the risks with the client and sale and purchase financing based rather than financial instruments.

Dash and Patak (2016) indicates that ALM on IBs more efficient. Therefore, it can gain more profit. At

the private bank, liquid assets, investments, advances, and fixed assets from the assets side and net worth, deposits, and borrowings from the liabilities side has a significant correlation. There is a positive correlation between, assets, investments and advance smoothly on one side and net worth, deposits and loans. And a strong negative correlation between fixed assets and net worth, deposits, and borrowings.

Bidabad and Allahyarifard (2008) there are dissimilarities between the ALM on Islamic banking and conventional banking. First, the differences in accounting systems in Islamic banking as compared to conventional banking. Second, the prohibition of riba and its specifications shows that not only effective factor in improving equity (capital deposits) return but also share profits and losses from investments in the real sector of the economy which is the basis important in monetary transactions

2.2 Gap Management

Riyadi (2006:133) explains that the gap is the difference between assets that are sensitive to interest rates (Rate Sensitive Assets/RSA) and liabilities that are sensitive to interest rates (Rate Sensitive Liability/RSL). While the purpose of gap management is to narrow the width disparity between the Rate Sensitive Assets (RSA) with a Rate Sensitive Liability (RSL). By definition, the management gap is a gap setting caused by the degree of sensitivity of each post as well as assets liabilities to the post respectively.

Based on the level of sensitivity, asset/liability is divided into two types; rate sensitive assets–liabilities and fixed rate assets–liabilities (Antonio, 2001). Assets classified as rate sensitive assets (RSA) are all assets, including assets with a fixed rate (fixed rate), which have a maturity of less than one (1) year (short-term) or assets with a floating interest rate (floating rate) that should be updated every (1) month, three (3) months, 6 (six) months, and a maximum of 1 (one) year. The classified rate sensitive liabilities liabilities (RSL) is all liability, including liability for fixed rate (fixed rate liabilities), which has a maturity of not more than 1 (one) year, or loans with a floating interest rate that must be updated every (1) month, three (3) months, or 6 (six) months, or not more than 1 (one) year.

2.3 Gap Position

According to Antonio (2001), the potential interest rate risks arises while the gap between assets and liabilities, where the composition of the RSA does not

match or mismatch with RSL composition. With reference to the mismatch, it can form three types of positions the gap IE (Riyadi, 2006):

- a. Zero Gap ($RSA = RSL$)
Zero gap indicates low risk in variable income support due to the quantity of the asset sensitive to interest rates equal to the quantity of liabilities sensitive to interest rate.
- b. Positive Gap ($RSA > RSL$)
On the position of the positive gap, sensitive to interest rates on assets greater than liabilities sensitive to interest rates ($RSA > RSL$). This value indicates that the RSA portion is financed with funds that are not sensitive.
- c. Negative Gap ($RSA < RSL$)
On the position of the negative gap, Rate Sensitive Assets are smaller than in Rate Sensitive Liabilities ($RSA < RSL$).

3 RESEARCH METHODOLOGY

Research conducted by the writer uses a quantitative approach, that is a gap analysis of sensitivity and difference to see the comparison of gap formation result in Sharia banking and conventional banking that came from the companies' financial report. The difference test is one of the parametric statistical techniques used to test the comparative hypothesis (difference test).

3.1 Variables

Variables in this study refer to the analysis model used by researchers in answering the problem. The analytical model that contains some Variables

Variables in this study refer to the analysis model used by researchers in answering the problem. The analytical model that contains some analytical techniques gives different variables used in each technique. The variables used in this study are as follows:

1. Rate Sensitive Assets (RSA)
Assets classified as rated sensitive assets (RSA) are all assets, including fixed-rate assets, which have maturities of less than 1 (one) year (short-term) or floating rate assets which must be renewed every 1 (one) month, 3 (three) months, 6 (six) months, and maximum 1 (one) year.
2. Rate Sensitive Liabilities (RSL)
Liabilities classified as sensitive liabilities (RSL) are all liabilities, including fixed rate liabilities, which have no maturity of more than 1 (one) year, or floating rate loans which must be

renewed every 1 (one) month, 3 (three) months, or 6 (six) months, or not more than 1 (one) year.

3. Gap Ratio

The ratio is used to measure the gap due to fluctuating changes in interest rates. This ratio shows the sensitivity to the interest rate.

$$\text{Gap Ratio} = \frac{R}{T} - \frac{R}{A}$$

3.2 Types and Data Sources

This study uses secondary data obtained from the annual financial statements of Maybank Sharia Indonesia and Maybank Malaysia in the period of 2012-2015. Secondary data required in this study is Maturity Profile or Maturity Analysis which contains information on the amount of assets and liabilities in each sensitivity period.

3.3 Sample

Samples taken are Maybank Syariah Indonesia as part of Maybank Holding Malaysia and Maybank Malaysia as the parent of Maybank Syariah Indonesia

3.4 Gap Sensitivity Analysis

The steps in this analysis are as follows:

3.4.1 Develop Mismatch Rate Sensitivity

Grouping of repricing/maturity schedules is the preparation of assets and liabilities based on the determination of new interest rates or profit sharing rates and margins and based on maturity, as well as the grouping of assets and liabilities based on their level of sensitivity. Following the approach of Ali (2004), the grouping of the interest rate gap is done by grouping asset-liabilities in groups, namely Rate Sensitive Assets (RSA), Rate Sensitive Liabilities (RSL) and Fixed Rated and Non Rate Sensitive Liabilities (NRSA) & (NRSL). *Risk Analysis*; Analysis of gaps arising from changes in interest rates

3.4.2 Difference Test

The steps are as follows:

1. Determining the operational hypothesis
 - a. H0: $\mu_1 = \mu_2$, there is no significant difference in gap formation between Maybank Syariah Indonesia and Maybank Malaysia

- b. HA: $\mu_1 \neq \mu_2$, there is a significant difference in gap formation between Maybank Syariah Indonesia and Maybank Malaysia
2. Determining the level of significant () of = 5%
3. Determine the test criteria
 - a. H0 is accepted and HA is rejected if Sig. > 0.05 indicates that there is no significant difference in the formation of gaps between Maybank Syariah Indonesia and Maybank Malaysia. (t-test)
 - b. H0 is accepted and HA is rejected if Asymp.sig> 0,05 indicates that there is no significant difference in gap formation between Maybank Syariah Indonesia and Maybank Malaysia. (Mann Whitney test)

4 RESULTS AND DISCUSSION

4.1 Gap Sensitivity Analysis

From the gap analysis of sensitivity that has been done then it can be concluded that the formation of gap position by Maybank Syariah Indonesia during 2012-2016 is a negative gap in 2014 and 2015 while in 2012, 2013, and 2016. The results of the sensitivity gap analysis of Maybank Bank Malaysia show that the establishment of Maybank Malaysia gap position during 2012-2016 is the negative gap that occurred in 2012, 2014 and 2015. In 2013 and 2016 there is a positive gap.

4.2 Analysis of Research Results and Hypothesis Testing

4.2.1 Normality test

Table 1: Normality Test Results.

	Kolmogorov-Smirnov ^a		
	Statistic	df	Sig.
GAP SENSITIVITY RATIO <1 MONTH	.219	10	.191
GAP SENSITIVITY RATIO 1-3 MONTH	.217	10	.200*
GAP SENSITIVITY RATIO 3-12 MONTH	.256	10	.062
*. This is a lower bound of the true significance.			
a. Lilliefors Significance Correction			

Table 1. above shows the Gap Ratio of 1 month sensitivity period and > 1-3 months period are normally distributed because it has a 0.05 significance value so that the test uses t-test, while the

Gap Ratio of > 3-12 months sensitivity period is not normally distributed because the value of significance is below 0, 05 so that the test is done using Mann-Whitney test.

4.2.2 Difference Test

1. Mann-Whitney Test

Table 2: Mann-Whitney Test Results.

Test Statistics	
	GAP SENSITIVITY RATIO 3-12 MONTHS
Mann-Whitney U	.000
Wilcoxon W	15.000
Z	-2.611
Asymp. Sig. (2-tailed)	.009
Exact Sig. [2*(1-tailed Sig.)]	.008 ^b
a. Grouping Variable: BANK SAMPLE	
b. Not corrected for ties.	

Based on the results of different test calculations with Mann-Whitney test in Table 2. above can be seen that the value of Asymp. Sig. (2-tailed) Gap ratio sensitivity period > 3-12 months by 0.009. This significance value is smaller than the limit of 0.05 so it can be concluded that the formation of the sensitivity gap between Maybank Syariah Malaysia and Maybank Indonesia sensitivity period > 3-12 months there is a significant difference.

2. t-test

In Table 3. it can be seen that F arithmetic Levene test Gap ratio period sensitivity 1 month and > 1-3 months have significance value of > 0,05 so that the t-test different test analysis must use assumption on the equal variances. From the output, it shows that the Gap Ratio of 1 month sensitivity period has a significance value of less than 0.05 so it can be concluded that the formation of sensitivity gap between Indonesian Syariah Bank and Maybank Malaysia on 1 month gap period of sensitivity there are significant differences. While > 1-3 months gap period sensitivity has a significance value greater than 0.05 so it can be concluded that the formation of sensitivity gap between Maybank Syariah Indonesia and Maybank Malaysia in > 1-3 months sensitivity period that there is no significant difference.

Table 3: T-Differences Test Result (T-Test).

Var.		Leven's Test		Sig.	Ket.
		F	Sig.		
Gap Ratio Sensitivity 1 month	Equal variances assumed	1.411	.269	.032	Ho rejected (There is difference)
	Equal variance not assumed			.045	
Ratio Sensitivity > 1-3 Month	Equal variances assumed	3.088	.117	.185	HA accepted (There is no difference)
	Equal variance not assumed			.195	

4.3 Discussion

4.3.1 Sensitivity Period 1 Month

Based on the test that has been done, it can be stated that the formation of the sensitivity gap between Maybank Syariah Indonesia and Maybank Malaysia in the sensitivity period 1 month seen from the Gap Ratio differ significantly. The position of gap generated by Maybank Syariah Indonesia and Maybank Malaysia is in 2014 and 2015 occur negative gap while in 2013 and 2016 in both banks positive gap occurred and in 2012 in a positive gap while Malaysia Maybank negative gap occurred.

The compositions of RSL and RSA of the 1-month sensitivity period in the two banks showed different patterns, most of which had a maturity in different sensitivity periods where Maybank Syariah Indonesia was always in negative position while Maybank Malaysia fluctuated in 2012 - 2016. This is what causes the formation of gaps in the two banks then became significantly different.

The occurrence of this significant difference is due to the business factors of sharia financial industry model in Indonesia, especially sharia banking, which is more focused on fulfilling the needs of the real sector and maintaining "maqasid syariah". This is in contrast to other countries whose role in the financial sector (money market and capital market) is more dominant although, in essence, the structure of

Islamic financial development in Indonesia will be stronger than other countries. (Alamsyah, 2012)

The lack of instruments in the Islamic financial market has an impact on the management of Maybank Syariah Indonesia's gap for the 1 month sensitivity period so that the number of RSA owned is not able to compensate RSL as in Maybank Malaysia.

4.3.2 Sensitivity Period > 1-3 months

Based on the tests that have been done, it can be stated that the creation of a sensitivity gap between Maybank Syariah Indonesia and Maybank Malaysia in the > 1-3 months sensitivity period seen from the Gap Ratio differs significantly.

The cumulative position of the gap formed in the sensitivity period > 1-3 months in both banks is negative, but Maybank Syariah Indonesia is able to generate positive gap positions during 2012 and 2013 while in Maybank Malaysia almost as a whole is negative except in 2012 a positive gap. Differences in the resulting gap position caused the calculation of statistical tests for gap formation showed significant differences.

The structure of RSL Maybank Malaysia in the sensitivity > 1-3 months period consists of deposits from customers, deposits from other banks and loans received. While RSL on Maybank Syariah Indonesia only consists of Temporary Syirkah Fund (DST) which includes Mudharabah Deposit and Mudharabah Deposit from Other Banks.

Depositors (customers) of sharia banking in Indonesia is divided into several market segmentation. Karim and Affif (2005) stated that in Indonesia there is three market segmentation, namely sharia loyalist (consisting of adherent religion), floating segment (combination of religion and market power) and conventional loyalist. Research conducted by Khairunnisa (2001) found that depositors in Indonesia are eyeing profit maximization. Research Mangkuto (2004) also confirmed that the factors that become the public's consideration of investing funds in sharia banking are the profit-sharing return factor.

4.3.3 Sensitivity Period > 3-12 Months

Based on the test that has been done, it can be stated that the formation of sensitivity gap between Maybank Syariah Indonesia and Maybank Malaysia in the sensitivity period > 3-12 months seen from Gap Ratio that there is a significant difference.

The formation of the gaps of both banks for the sensitivity period > 3-12 months indicates the same positive position but if seen in nominal terms, there

are big differences on 2012-2016. This then causes the results of statistical tests seen from the Gap Ratio-which is the percentage of gap positions against total assets-shows there are significant differences.

The Gap position of sensitivity > 3-12 months period in Maybank Syariah Indonesia and Maybank Malaysia shows that the results did not differ significantly due to the similarity of RSA and RSL allocations of both banks in this sensitivity period. Based on the Maturity Profile of Maybank Indonesia and Maybank Malaysia, the > 3-12 months sensitivity period is generally the period of sensitivity with the second largest number of RSAs after the sensitivity period of 1 month and on the other has the smallest number of RSLs compared to the other two sensitivity periods (1 month and > 1-3 months).

The number of RSA sensitivity periods of > 3-12 months greater than the sensitivity period of > 1-3 months is caused by longer periods of time, but the smaller number of RSLs compared to the previous two sensitivity periods was a limited indicator of fund accumulation products in the sensitivity > 3-12 months both in Maybank Indonesia and in Maybank Malaysia. Although the basic principles are different, fundraising products in Maybank Indonesia and Maybank Malaysia consists of three main structures, namely demand deposits, savings accounts, and time deposits. Deposits have different characteristics compared to demand deposits and savings because there is a grace period of storage. The existence of this grace period makes the main purpose of the use of deposit products is an investment rather than a precautionary motive. The grace period also causes the RSL-forming structure in the longer sensitivity period to be ultimately dominated by deposits.

Conventional banks tend to avoid this by preferring to use short-term funding sources to finance long-term credit to minimize the negative effect of interest rate volatility on profitability. Maybank Syariah Indonesia as a Syariah bank should not have to worry about the cost of these funds because deposits with mudharabah Akad using profit sharing approach so that the cost of funds that arise is tailored to the performance rather than the promised interest. However, as in the previous explanation, the character of Islamic banking depositors, as well as the level of profit sharing, is a critical bargaining power for Maybank Syariah Indonesia. Socialization and performance improvement by Maybank Syariah Indonesia is necessary so that the quality of fund sources from third parties and the gap setting for the longer period of sensitivity will be better than Maybank Malaysia.

5 CONCLUSION

The conclusion of the different forms of the gap on Maybank Syariah Indonesia and Maybank Malaysia Period 2012-2016 are:

1. Based on difference test ($\alpha = 0,05$) gap formation in the period 2012-2016 for the 1 month sensitivity period and $> 3-12$ month there is a significant difference, whereas in the sensitivity period of $> 1-3$ months there is no significant difference.
2. The recommended suggestion is:
 - Maybank Syariah Malaysia should make adjustments to the maturity of assets and liabilities.

Maybank Syariah Indonesia should reduce dependence on RSA components such as Murabahah Financing and increase the volume of profit sharing-based components such as Mudharabah and Musyarakah Financing to reduce risk due to fluctuations in the benchmark of interest rate changes..

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