

A COMPARATIVE ANALYSIS OF ISLAMIC AND NON-ISLAMIC BANKING USING FINANCIAL ASSET-QUALITY RATIO AND LIQUIDITY RATIO

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Abstract. The core objective of this research is to compare and examine financial performance of Islamic banks against Non-Islamic banks. The research observes that Islamic banking has made unprecedented progress over recent years. In Indonesia specifically, they had been increasing their assets by an average of 43% annually since 2007, and their share of the banking sector's total assets is growing fast. Focusing on those asset growth, this research aims to compare it to the main banking system used, which is Non-Islamic banks or Conventional banks, by focusing on the asset side of the financial performance. The financial performance measurement were expressed in six financial ratios in which were categorized into Asset-Quality and Liquidity. These six ratios are: Provision to Earning Assets (PEA), Loan Ratio (LR), Loan to Deposits (LTD), Cash to Assets (CTA), Cash to Deposits (CTD), and Return on Asset (ROA). The data was based on balance sheets and income statements of Islamic and Non-Islamic banks from year 2004 to 2014. To test the hypotheses, Mann-Whitney was utilized to compare those financial performances. In general, the research found significant difference in all six ratios, with each bank had their own better performance in some ratios.

Introduction

The banking sector is one of the leading role in aiding a country's economic growth. Banking was always deemed to be one of the most vital sectors for the economy to be able to function. Its importance as the lifeblood of economic activity, in collecting deposits and providing credits to the country, people, and businesses is undisputable. In all economic systems, banks hold the leading role in maintaining and improving the financial activity. The difference lies with prioritizing goals and their way of achievement. Therefore, it is divided into two categories; Conventional Banking and Islamic Banking (Syariah Banking). Islamic Banking is not a new phenomenon. It has been practised since the Middle Ages, but has risen in prominence over the past 30 years or more. In Indonesia, although it has only been practised since 1991, Islamic banks in Indonesia are growing in importance. Evidently with the share of the banking sector's total assets held by Islamic banks nearly tripling from 1.6% in 2007 to 4.4% in 2012. Not only in Indonesia, their global importance has been increasing rapidly, as from 2006 to 2011, total assets in Islamic financial institutions have doubled to USD 900 billion. (Beck, Kunt, and Merouche, 2013).

Bank Muamalat Indonesia, founded in 1992 by *Majelis Ulama Indonesia* (MUI), was the first which applied Sharia principal in their banking operations. Ever since, there has additionally been rapid growth in the quantity of Islamic bank branches, ascending from 568 branches of 29 banks in 2007 to 2,290 branches of 35 banks in 2012. Much of this expansion has taken place in rural areas. Sharia-compliant banks represent about 25% of the total number of new bank offices opened in the period,

not accounting for the fact that many conventional banks also offer sharia-compliant services. This increase in the accessibility of Islamic banking has been one variable behind the rapid asset growth recorded by Islamic banks. All things considered, in a country of nearly 240 million inhabitants this equates to just one Islamic banking branch per 110,000 people.

Formulated in 2008, Bank Indonesia's Grand Strategy of Islamic Banking Market Development (GSIBMD), set out three phases for the development of the sector. Phase I, set to be met by 2009, was to make Indonesia's Islamic banking sector the most attractive in the Association of South-East Asian Nations (ASEAN) by achieving total assets of Rp50 trillion with a growth rate of 40%; aimed to be growing further to Rp87 trillion by phase II; and phase III, in 2010, was to transform it into the leading sector in ASEAN by having assets of Rp124 trillion. Although all of these aggressive targets for asset growth have been met, these asset targets alone would not be enough to ensure Indonesia's Islamic banking to be the leading sector in ASEAN. Nonetheless, Islamic banking in Indonesia, being an industry still in the infancy stage of branding, has been going through a remarkable growth. Outpacing conventional banks, Islamic banks carries a significant message to the world that Islamic banking has indeed proven a worthwhile alternative to that of conventional finance (Khaliq, Ghulam, Dent, 2011). The purpose of this research is to determine whether Islamic and conventional banks in Indonesia are distinguishable from one another on the basis of financial characteristics alone. Specifically, considering whether the researcher could correctly categorize a bank as Islamic or conventional using Asset-quality indicators.

Literature review

Development of Islamic Banking in the World

The conceptual development of Islamic banking gained momentum after the mid-1940s. The huge influx of petrodollars from the late 1970s provided a strong impetus to the development of several Islamic banks in the Middle East. Other Muslim countries established their own Islamic financial institutions over time. Islamic banking has made steady progress over recent decades. In recent years it has emerged as the fastest-growing segment of global finance due to consistently high oil prices in international markets and other favourable socio-political factors. It is flourishing in Africa, Asia, Europe and North America. There are about 300 Islamic financial institutions across 70 countries, holding capital investments worth US\$500-800bn, with an average annual growth of 15 per cent (Areakat, 2006). It has been estimated that Islamic banking will have a market value of US\$4 trillion by 2010 (Cader, 2007). It is expected to capture about 40-50 per cent of the total savings of 1.3 billion Muslims worldwide within the next eight to ten years (Alam, 2006). There has been promising growth in the Islamic bank infrastructure over recent years. In 2007, there were already more than 300 Islamic financial institutions and over 250 mutual funds complying with Islamic principles in over 51 countries.

Development of Islamic Banking in Indonesia

BI's Grand Strategy of Islamic Banking Market Development (GSIBMD), formulated in 2008, set out three phases for the development of the sector. Phase I, set in 2008 and to be met by 2009, was to achieve assets of Rp50trn (US\$5bn) with a growth rate of 40%; phase II, in 2009, was to make Indonesia's Islamic banking sector the most attractive in the Association of South-East Asian Nations (ASEAN) by achieving total assets of Rp87trn; and phase III, in 2010, was to transform it into the leading sector in ASEAN by having assets of Rp124trn. Although it is arguable whether these asset targets alone are sufficient to make Indonesia's Islamic banking sector the regional leader, all of the aggressive targets set by the central bank for asset growth have been met.

Islamic banks are growing in importance, with the share of the banking sector's total assets held by Islamic banks nearly tripling from 1.6% in 2007 to 4.4% in 2012. As of February 2013 sharia-compliant banks and the sharia business operations of conventional banks had total assets of Rp197trn, out of total assets in the banking sector of Rp4,502trn. This represented an increase of 35% year on year, compared with 17% growth in the assets of the banking sector as a whole. Since 2007 assets in sharia-

compliant banks have grown at an average compound rate of nearly 43% per year-easily surpassing BI's target of total assets of Rp50trn. There has also been rapid growth in the number of Islamic bank branches, rising from 568 branches of 29 banks in 2007 to 2,290 branches of 35 banks in 2012. Much of this expansion has taken place in rural areas. Sharia-compliant banks account for nearly 25% of the total number of new bank offices opened in the period, not accounting for the fact that many conventional banks also offer sharia-compliant services. This increase in the accessibility of Islamic banking has been one factor behind the rapid asset growth recorded by Islamic banks. Nevertheless, in a country of nearly 240m inhabitants this equates to just one Islamic banking branch per 110,000 people.

Products of Islamic Banking

Islamic Banking are the banks that operates by being compliant to the principles of Islamic teachings (Sharia). Islamic banking and finance rest on certain principles and ethos that govern not only the interest-free mechanism but also several other prohibitions and unethical practices discouraged by the *Shari'ah*. These include such practices as uncertainty (*gharar*), cheating (*ghish*) and gambling (*qimar*) (El Qorchi, 2005). As well as being interest-free, Islamic Banking avoid the practice of interest (*riba*) itself by replacing it with profit sharing instead.

1. Mudaraba

Under the *murabaha* arrangement, the client makes a promise to buy specified goods from the Islamic bank on a deferred payment basis. The Islamic bank purchases goods from the original supplier and sells them on to the client after adding its own profit margin. The legality of *murabaha* could not be established from the primary sources of Islamic *Shariah*, i.e. the holy *Quran* and *Sunnah*. The early Islamic jurists, such as Imam Malik (796) and Imam Shafi (820), approved *murabaha* sales but they did not refer to the increase in price in the case of deferred payment. Subsequently, certain other Islamic jurists, such as Sarakhsi (1091), Marghinani (1197) and Nawawi (1277), allowed the seller to charge a higher price in the deferred payment sale by characterising it as a normal trade practice (Saadullah, 1994; Vogel and Hayes, 1998). Contemporary Islamic scholars have mixed opinions about the *murabaha* banking system. The majority of them have strong reservations about it because of its close resemblance to conventional banking practice.

2. Musharaka

Type of partnership where Islamic Bank become an active partner and become management partner for entrepreneur. Islamic Bank provides funds for equity and working capital top the entrepreneur, with the agreement before about profit and loss ratio contribution between two parties. Islamic Bank provides the funding for the purchase of goods or commodities in the return of profit sharing.

3. Murabaha

Islamic Bank buys an asset or goods for the client that will be sold with markup price by the client. The bank takes the return in a form of profit amrgin from the asset sale. The purchase price, selling price, and the profit margin must be stated at the sale agreement.

4. Ijara

The features of *Ijarah* financing are very similar to those of conventional lease financing. But unlike in the conventional lease contract, *Shariah* holds the leaser responsible for all damage, repairs, insurance and depreciation of the leased asset. The leaser should also bear the risk of uncertainty attached to the useful life of the leased asset. Islamic financial institutions mostly rely on leasing, known as *Ijarah wa iqtina*, for meeting financing needs in the real estate, retail, industry and manufacturing sectors. Leasing enjoys strong support from *Shariah* scholars and bears a close resemblance to conventional leasing (Iqbal, 1998; Warde, 2000).

5. Bai at Salam

Bai salam and *bai istisna* are forward sale contracts in which the seller pays in advance the price of goods that are to be delivered to him at a specified future date. *Bai salam* was widely practised in the Arabian agricultural sector long before the dawn of Islam. These instruments are best suited to meet the financing needs of the farming and manufacturing industries in the Islamic economy. *Shariah* stipulates that the terms and conditions of *bai salam* and *bai istisna* contracts, such

as price, quantity and quality of goods, should be clearly determined without involving any features of interest, *gharar* (speculation) or dubious sale (Iqbal, 1998)

6. *Istisna*

Contract to purchase goods for the third party. The price is paid to the manufacturer in advance and the goods are produced and delivered in the future. This tool usually used for infrastructure projects.

Previous Researches on Comparison between Islamic Bank and Non-Islamic Bank

Ika and Abdullah (2011) study about the financial performance of Islamic and Non Islamic bank in Indonesia during a time period of 2000 to 2007 in Indonesia. 3 Islamic and 6 Non Islamic Bank was compared in this study. The measurement used iare Asset Utilization, Liquidity and Operating Efficiency ratio. The result of this study has shown that, in general, there is no major difference in financial performance between Islamic banks and Non-Islamic banks, except for the liquidity ratios. The ratio showed significant difference between the Islamic banks as compared to Non-Islamic banks. Olson and Zoubi (2008) researching Islamic and Non Islamic Bank in GCC region at time period of 2000 to 2005. Financial ratios were used to define those bank's performance. The ratios used are profitability ratios, efficiency ratio, asset quality indicators, liquidity ratios, and risk ratio. The results show that profitability, efficiency, asset-quality, and liquidity ratios are all good discriminators between Islamic and Conventional banks in the GCC region. For asset quality, the results was that it reveal some differences between Islamic and Non-Islamic, at which the ratios are significantly at a smaller level for Islamic banks. The liquidity ratios are not significantly different between types of banks, but Islamic banks are more liquid relative to deposits than Non-Islamic banks.

Wibowo and Saptutyningasih (2004) examined the financial performance of two main Islamic banks: BMI and BSM, during period 2000-2003 with tool called CAMEL-modified. The result revealed that performance of BMI was superior to performance of BSM. A more recent study was conducted by Widagdo and Ika (2007) to examine whether the financial performance of Islamic bank in the period before the release of the *fatwa* regarding the prohibition of interest in Indonesia (2002 – 2003) is different from after *fatwa* (2004 – 2005). They also examined the comparison of financial performance of Islamic banks and Non-Islamic banks. The result indicated that, the financial performance indicates that there is no major difference between Islamic and Non-Islamic banks.

Akhtar, Raza, Orangzab, and Akram (2011) analyzed the trends in progress of Islamic banks and Non-Islamic in Pakistan and probed that there is not a menigful difference regarding profitability and risk but some variations are observed in liquidity, and trend analysis revealed that balance sheet for Islamic banks are showing improvement that those of conventional banks. There is no significant difference in profitability, but Islamic banks is relatively more liquid and less risky as compared to conventional banks.

Siraj and Pillai (2012) compared performance of conventional and Islamic banks operationg in GCC region during period 2005 – 2010) based on performance indicators such as OER, NPR, ROA, ROE, EOA, operating expense, profitability, assets, operating income, deposits, and total equity. Inferences based on those analysis revealed better performance of Islamic banking durint the study period and concluded that Islamic banks are more equity financed than conventional banks, and the performance indicators were affected by the financial crises. Similar study was also conducted in the Middle East countries by Kader (2007), which evaluates financial performance of Islamic bank and conventional banks in UAE. The findings of the study indicated that there is no major difference in terms of its profitability and liquidity. Different result was founded by Mahmood (2005) when he examined the performance comparison between Islamic banks and conventional banks in Pakistan. His study conformed that almost in all ratios; Islamic banks were superior to conventional banks during the period of 2000 to 2004.

Olson and Zoubi's research implied that 26 ratios are a good distinguisher between Islamic and Non-Islamic Banks; of which 6 ratios are used in this ratio. Previous other research results had varied conclusion on whether Islamic or Non Islamic Bank has better liquidity. The same problem incurs in Indonesia, researches had varied results of financial performance between banks. Moreover, researches that had been done had both smaller time period and sample size, as well as those done for banks in Indonesia. This research focuses on the assets side of financial performance using Asset-quality and Liquidity ratios with 11 years of time period (2004 – 2014) and with sample size of about 140 banks per year.

Methodology

Methods

The methods in which this research is done is covered in 6 major steps, which are chronologically ordered in these methods: starts with Problem Identification, Literature Review, Hypothesis, Data Collection, Data Computation and Analysis, and ended with Conclusion and Recommendation.

Data Collection

In this research, the data used are annual financial reports of Islamic and Non Islamic Bank. The data is collected by conducting a direct observation within a predetermined period. Financial reports needed in this research are Balance Sheet and Income Statement of both Islamic and Non Islamic Bank in Indonesia. The available data are ranging in time period of 2004 – 2014, a total of 11 years. The source of data of these financial reports are gathered from Bank Indonesia, Infobank, Otoritas Jasa Keuangan, and previous research data from previous researcher related to this topic. Number of banks investigated in this research is displayed in the table below.

Year	Conventional Bank	IBU (UUS)	Islamic Bank
2004	125	13	3
2005	124	15	3
2006	104	17	3
2007	105	23	3
2008	112	22	5
2009	109	23	6
2010	111	22	11
2011	108	23	11
2012	108	24	11
2013	108	21	11
2014	107	22	10
Total	1221	225	77

Data Analysis

The financial performance measurement were expressed in six financial ratios in which were categorized into Asset-Quality and Liquidity. These six ratios are: Provision to Earning Assets (PEA), Loan Ratio (LR), Loan to Deposits (LTD), Cash to Assets (CTA), and Cash to Deposits (CTD)). More on details of these ratios below.

1. Provision to Earning Assets

$$PEA = \frac{\text{Provison for loan losses}}{\text{Total loans and advances}}$$

2. Loan Ratio

$$LR = \frac{\text{Total loans and advances}}{\text{Total assets}}$$

3. Loan to Deposits

$$LTD = \frac{\text{Total loans and advances}}{\text{Total customer deposits}}$$

4. Cash to Assets

$$CTA = \frac{\text{Cash}}{\text{Average total assets}}$$

5. Cash to Deposits

$$CTD = \frac{\text{Cash}}{\text{Average total customer deposits}}$$

The results of these data will then be calculated further to find the mean, median, and standard deviation of each ratio each year. Then, to test the hypotheses, Mann-Whitney is utilized to compare and find if there is any significant differences between the banks.

Research Result

The six financial ratios is applied to each banks financial performances during 2004 to 2014. Then the results is then calculated further to find the mean, median, and standard deviation from the entire period. Mann-Whitney is then utilized to the output to find if there is any significant difference in each ratio. If there is, the mean value is compared to find which has the better ratio. These result is displayed in the table below.

Year	CTA	CTD	PEA	LR	LTD
2004		I	N		I
2005		I	N		I
2006		N	I		I
2007		I	I		I
2008	N	I	I		I
2009	N	I	I	I	I
2010	N		N	N	I
2011	N	I	N	N	I
2012	N	I	I	N	I
2013	N	I	I	N	I
2014	N	I	I	N	I

Note I : Average score of Islamic Bank statistically significantly higher than Conventional Bank
 N : Average score of Conventional Bank statistically significantly higher than Islamic Bank

Conclusion

Islamic Banks growth in Indonesia is relatively fast compared to Non Islamic Banks. In term of asset, Islamic Bank growth reach more than 10%. Although Islamic Bank growth rate is fast, market share of Islamic Bank in Indonesia is still below 5%. With this condition, asset quality is one of the important factor to see the a banks performance and its credibility as well as its solvency for future predicaments. Findings from the calculation with descriptive statistic and Mann-Whitney test, Islamic Bank excels in CTD, PEA, and LTD ratio compared to those of Non-Islamic Banks. For the rest of the ratio, although significance differences exists in them, Islamic Banks shows no better results than Non-Islamic Banks. But throughout the years, Islamic Banks results shows an unexpected growth. At the end, Islamic Bank is increasing their asset quality performance and starting to catch up to Non Islamic Bank that show more stable performance in this research. This result, however, must consider

the fact that Islamic Banks still was not as big as Non Islamic Banks and it makes them easier to maintain and control their assets and liquidity.

To sum these up, there are a few points that could be taken as the conclusion of this research. These points are mentioned as follow:

- Non-Islamic Bank's asset is more liquid than those of Islamic Bank's as represented by Cash to Total Assets (CTA).
- Consistently, Islamic Bank has the better Cash to Deposit ratio. Which means, Islamic Banks asset contains more cash than its customer deposit compared to Non-Islamic Banks.
- The Loan to Total Deposit (LTD) of Islamic Bank excels by a considerable amount to Non Islamic Banks.

Recommendation

Islamic banking and finance is experiencing a rapid growth worldwide. The IMF itself released a report which stated that Islamic banking is one of the fastest growing segments in the financial industry. In Indonesia, from which it started 17 years ago, to date, there are already ten Islamic banks and 23 Islamic windows from the conventional banks. This rapid development is the result from Indonesia's government strategies, which one of them states "placing strong base for sustainable development". This indicates that Islamic banks is already considered as a strong potential for further development of economic condition in Indonesia. Adding the fact that Indonesia is the biggest Islam majority country, Indonesia hold the potential to develop Islamic banking much further. Thus, based on this research there are several output that may help or support the development of Islamic banks in Indonesia.

Based on the results of this research, which is in terms of asset quality and liquidity, Islamic banks hold the better asset quality as in Loan to Total Deposit (LTD) ratio by a considerable amount. In liquidity, Islamic banks Cash to Total Deposit (CTD) also had the better significant amount than those of Non-Islamic Bank. For two other ratios, Cash to Total Asset (CTA) and Loan Ratio (LR), had shown that Non-Islamic Bank hold the better significant results in some years. As well as for the ratio Provision to Earning Asset (PEA)), not showing any consistent significance. So, in terms of asset quality, improvement can be done with increasing the Loan Ratio and Provision to Earning Assets that is still lower than Non-Islamic Banks. As well as the liquidity, which is indicated by Cash to Total Asset. The result of this research can be utilized by the mangement of Islamic Bank to provides proved evidence to the public. This result shows that Islamic Bank is able to improve and surpass with Non-Islamic Bank in asset quality and liquidity. Hopefully being able to be a strong base for sustainable development in the future as the government stated.

References

- Akhtar, W., Raza, A., Orangzab, & Akram, M. (2011). Efficiency and Performance of Islamic Banking: The Case of Pakistan. *Far East Research Centre Hong Kong*, 54-70.
- Beck, T., Kunt, A. D., & Merrouche, O. (2012). Islamic vs. Conventional Banking: Business model, Efficiency, and Stability. *Journal of Banking & Finance*.
- Bourke, P. (1989). Concentration and other Determinants of Bank Profitability in Europe. *Journal of Banking and Finance*.
- Ika, S. R. & Abdullah, N. (2011). A Comparative Study of Financial Performance of Islami Banks and Conventional Banks in Indonesia. *International Journal of Business and Social Science*.
- Kader, J. M., Asaporta, A. J., & Al-Maghaireh, A. (2007). Comparative Financial Performance of Islamic Banks vis-a-vis Conventional Banks in the UAE. *Thunderbird International Business Review*. 127-135.
- Khaliq, A., Rustam, G.A., & Dent, M.M. (2011) Brand preference in Islamic banking. *Journal of Islamic Marketing*.
- Khan, M.A., & Ali, M. (2015). Gauging Profitability and Liquidity of Islamic Banks: Evidence from Malaysia and Pakistan. *International Journal of Accounting and Financial Reporting*.
- Mahmood, Z. (2005). Islamic Banking: A Performance Comparison of Islamic Bank versus Conventional Bank in Pakista. *Unpublished Master Thesis*, Bradford University.
- Olson, D. & Zoubi, T. (2008). Using Accounting Ratios to Distinguish between Islamic and Conventional Banks in the GCC region. *The International Journal of Accounting*.
- Siraj, K.K. & Pillai, P.S. (2012). Comparative Study on Performance of Islamic Banks and Conventional Banks in GCC region. *Journal of Applied Finance and Banking*. Vol.2 (3), 123-161.
- Wibowo, E. & Saptutyingsih, E. (2004). Analysis of Performance of Bank Muamalat Indonesia and Bank Syariah Mandiri. *Journal of Economic Study*, 20-25.
- Widagdo, A.K & Ika, S.R. (2007). The Interest Prohibition and Financial Performance of Islamic Banks: Indonesia Evidence. *Asian-pacific Conference on International Accounting Issues*.