# Comparison of Banking Efficiency in the selected ASEAN Countries during the Global Financial Crisis

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## ABSTRACT

This study attempts to provide new empirical evidence on the efficiency performance for the selected ASEAN countries banking sector namely Malaysia, Indonesia and Thailand from 2004 to 2011. The efficiency estimates of ten anchor banks for each country are evaluated by using the non-parametric data envelopment analysis (DEA) method. The result indicates Malaysian banking sector have exhibited higher technical efficiency compared to both Indonesian and Thailand banking sector during the Global Financial Crisis in 2008. The result suggests that most of the anchor banks in ASEAN are affected by the Global Financial Crisis and this implying that even their have well-established, the anchor banks are not insulated from the Global Financial Crisis in 2008.

Keywords: Efficiency; Data Envelopment Analysis (DEA); Global Financial Crisis; ASEAN

## *ABSTRAK*

*Kajian ini bertujuan untuk memberikan bukti empirikal baru prestasi kecekapan untuk sektor perbankan negara ASEAN yang dipilih iaitu Malaysia, Indonesia dan Thailand dari tahun 2004 hingga 2011. Analisis kecekapan sepuluh bank utama untuk setiap negara dinilai dengan menggunakan analisis penyampulan data bukan parametrik (DEA). Hasil kajian menunjukkan sektor perbankan Malaysia mempunyai kecekapan teknikal yang lebih tinggi berbanding dengan kedua-dua sektor perbankan Indonesia dan Thailand semasa Krisis Kewangan Global pada tahun 2008. Hasil kajian juga menunjukkan bahawa kebanyakan bank-bank utama di ASEAN dipengaruhi oleh Krisis Kewangan Global dan ini membuktikan bahawa walaupun mereka telah kukuh, bank utama juga tidak terlepas daripada Krisis Kewangan Global pada tahun tersebut.*

## INTRODUCTION

Efficiency is a crucial issue for the banks because it measures the performances of the banks. Banks which have better performances must manage their efficiency level for more competition. The competitive banks will help the country in developing. Its mean the highest efficiency level of banking of one country will have more sustainable and higher growth. It is very crucial especially for developing economies which still depend on their banks performances in the channeling of funds productively.

This study used Data Envelopment Analysis (DEA) approach to measure the efficiency of the ASEAN's country commercial banks from 2004 to 2011. After faced Asian Financial Crisis (AFC) in 1997 banking industry in ASEAN countries is more competitive by merging and consolidation. After that, the Global Financial Crisis in 2008 faced most of the countries in the world includes ASEAN

countries. Therefore, this study investigates how efficient is the ASEAN banking system and what need to be changed to improve the performance of the banking sector. Panel data of thirty commercial banks from three ASEAN's country was used for the empirical research.

The research findings present a number of challenges, which will provide useful opportunities for further research in the future. They are also useful for bank management in identifying sources of inefficiency, particularly for banks failing to achieve satisfactory levels of output given the resources they have been utilizing.

The rest of the paper is structured as follows. Section 2 reviews the recent literature of the banking sector across the world and ASEAN specifically. Section 3 discusses the method and data use in the study. Empirical results are presented in section 4. Section 5 offers concluding remarks and discussion of the study.

**LITERATURE REVIEW**

A financial institution or a bank can be said to be efficient if it has the ability to produce a result with minimum effort or resources. It measures how close a production unit gets to its production possibility frontier, which is composed of sets of points that optimally combine inputs in order to produce one unit of output. (Kablan, 2010).

There are several methods to measure banks' efficiency. These methods can be classified into (1) traditional method of financial indices based on balance sheet analysis, (2) parametric methods based on the knowledge of production function, and (3) non-parametric methods that do not require such knowledge.

Popular approaches to measurement of efficiency are inclined to focus on simple financial ratios, but they have a number of deficiencies. Berger et al. (1997) noted that financial ratios may be misleading because they do not control for product mix or input prices.

The second approach focuses on production function or cost function of banks, in which the estimated function can be viewed as an optimal function of the banking system (Banker & Maindiratta, 1988). This parametric estimate is based on a regression model with certain confidence intervals and deviations, therefore, the parametric is statistically recognized. In their survey from 1992-1997, Berger and Humphrey (1997) reported that more than 52 percent of researchers preferred using parametric approach in measuring the efficiency of the financial institutions. However, the assumption of this estimation is often not tenable, especially when the scale of measurement (sample size) is small. In this situation, the nonparametric approach was preferred.

This study uses Data Envelopment Analysis (DEA), a non-parametric technique originally developed by Charnes Cooper & Rhodes (1978) to measure banks' efficiency. The method developed on the basis of constant returns to scale, but subsequently extended by Banker Charnes & Cooper (1984) into a model providing for variable returns to scale. It does not specify any functional form for the data, allowing it (reflected in the weights for the inputs and outputs) to be determined by the data.

This modern efficiency measurement begins with Farrell (1957) who defined a simple measure of firm efficiency which could account for multiple inputs. Farrell proposed that the efficiency of a firm consists of two components: *Technical Efficiency (TE)*, which reflects the ability of a firm to obtain maximal output from a given set of inputs, and *Allocative Efficiency (AE)*, which reflects the ability of a firm to use the inputs in optimal proportions, given their respective prices. These two measures are then combined to provide a measure of total *economic efficiency*. Two other terms used to measure efficiency of a firm are Scale efficiency and Cost efficiency. *Scale Efficiency* (SE) is the scale of operation maximizing the ratio of the linear sum of outputs to the linear sum of inputs. *Cost Efficiency* (CE) measures the possible reductions in cost that can be achieved if a bank is technically and allocatively efficient (Elyasiani and Mehdian, 1990).

In the past few years, DEA has frequently been applied to banking industry studies. The first application analyzed efficiencies of different branches of a single bank. Sherman and Gold (1985) studied the overall efficiency of 14 branches of a U.S. savings bank. The DEA results showed that six branches were operating inefficiently compared to the others. A similar study by Parkan (1987) suggested that eleven branches out of thirty-five were relatively inefficient.

In addition to the heavy concentration on the U.S, DEA has fast become a popular method to assess the efficiency of financial institutions in other nations. Fukuyama (1993, 1995) was among the early researchers among Asian countries to employ DEA to investigate banking efficiency. Fukuyama (1993) considered the efficiency of 143 Japanese banks in 1990. He found that the pure technical efficiency averaged around 0.86 and scale efficiency around 0.98 implying that the major source of overall technical inefficiency is purely technical inefficiency. Xiaogang Chen (2005) examines the

cost, technical and allocative efficiency of 43 Chinese banks over the period 1993 to 2000. Results show that the large state-owned banks and smaller banks are more efficient than medium sized Chinese banks. In addition, technical efficiency consistently dominates the allocative efficiency of Chinese banks.

Chansarn (2008) doing study the relative efficiency of 13 commercial banks in Thailand. The major finding is operational approach is more relative efficient compare than intermediations approach to measure the relative efficiency banking sectors in Thailand from 2003 until 2006. It is because the banking sector affected by the financial crisis during 1997. Based on analysis of bank size, operational approach is more efficient than intermediation approach and small banks are enjoyed efficiency compare than average and large banks using intermediation approach.

Besides that, Zaini (2001) investigate bank efficiency comparatively for selected ASEAN countries with pressure of financial market and how financial liberalization influences through competitive of banking in terms of their performances thus efficiency. Based on the analysis of this study, the main finding is there are very significant differences of banking efficiency in selected ASEAN countries included Malaysia, Indonesia, Thailand and the Philippines. In terms of average cost inefficiencies across countries found banks in ASEAN market are free to move which Malaysia and Thailand banks would be have advantages and contrast with both of the banking sectors in Indonesia and the Philippines. For cost inefficiency and the relationship with bank size analysis, the more banks decrease their asset size; larger banks will have a higher cost efficiency compare the smaller banks. For cost inefficiency and bank ownership show that privately owned banks more efficient than state-owned banks and in terms of economies scale, ASEAN countries bank is increasing returns to scale which respectively on size of banks.

Simon (2003) is studying about the operating performance of the banking sector for Asian. The study focus on operating cost of banks in Malaysia, Indonesia, Hong Kong, Korea, Singapore, Philippines and Thailand from 1992 until year of 1997. From the analysis of this study, operating costs have very significantly to banking efficiency across countries which is seven years selected and over time. Besides that, degree openness is not significant to banks' efficiency across countries and by over time analysis found that bank operating cost among selected countries shown decrease from 1992 until 1997.

Furthermore, Simon (2011) investigates the efficiency and changing of productivity for banking' sectors in South East Asia from year 2001 until 2007. From the analysis of studies found smaller banks enjoys efficiency compare than the largest banks in South East Asia banking sectors. Overview total factor productivity analysis finds Thailand, Hong Kong, Korea, Singapore and Taiwan have increase grow up of productivity compare than Malaysia and Indonesia.

From done previous study, the researcher found that most of study about efficiency is lead by developed countries such us U.S and European countries. Besides that, it's very rare of study about the efficiency of banking sectors across countries especially in ASEAN countries. Even, there are studies for a South East Asian country such Zaini (2001), Hong Liu et al (2012), Luc Can & Mohamed Ariff (2009) and Simon (2012); there is still lack of study in terms of efficiency during the Global Financial Crisis in 2008 analysis. Therefore, apart from that, this study will fill the gap to determine efficiency scores for banking sectors in selected ASEAN countries.


## RESEARCH METHOD

DEA is a linear programming technique for examining how a particular decision making unit (DMU, or bank in this study) operates relative to the other banks in the sample. The technique creates a frontier set by efficient banks and compares it with inefficient banks to produce efficiency scores. Furthermore, banks bordered between zero and one scores with completely efficient bank have an efficiency score of one.

The basic or multiplier form of the DEA in the constant returns to scale version, can be expressed as a requirement to maximize efficiency, for output weights u and input weights v, for i inputs x and j outputs y (with u and v indicate vectors). If we set the weighted sum of inputs as 1, a bank can maximize its efficiency by solving the following equation:

$$\max_{uv} (\mathbf{u}y_j) \qquad st \qquad \mathbf{v}x_i = 1$$

$$\mathbf{u}y_j - \mathbf{v}x_i \leq 0$$

$$u, v > 0$$

Because DEA assesses the efficiency by comparing a financial institution's efficiency with those of others, each inefficient financial institution will have a group of efficient institutions against which its performance is identified as inefficient. This group of efficient institutions is then described as being the reference set for that inefficient institution. This is the basis for arguing that DEA provides an operational approach to measurement of efficiency, in that it more directly identifies ways in which inefficiency can be reduced.

DEA can be used to derive measures of scale efficiency by using the variable returns to scale. Coelli et al (1998) note that variable returns to scale models have been most commonly used since the beginning of the 1990s. As Dyson et al (2001) note, if a variable returns to scale model is used, small and large units will tend to be over-rated in the efficiency assessment. This means that scale inefficiencies identified for such institutions may be spurious, with the actual cause of inefficiency. If a constant return to scale model shows a DMU as inefficient, it may be difficult to ascertain whether the source of that inefficiency is scale or technical inefficiency.

This study utilizes inputs which are including labor, fixed assets and total funds. Labor is defined as the total expenditure on employees which is based on personal expenses for every bank. This input is utilized in previous studies; Aly et al (1990), Berger and Humprey (1991), Favero and Papi (1995) & Laurent (2002 & 2003). Fixed assets are defined as the sum of physical capital and premises. Leong and Dollery (2002) is significant to measure how the bank manager to utilize their fixed asset such as property and equipments for generating their services. Funds are defined as total customer deposits and short term funding funds. Aly et al (1990); Humprey (1993); Mester (1997); Laurent (2002) is among studies which utilize funds as one inputs to examine the efficiency level for banks.

There are three measures of outputs. They are including total loan, other earning assets and off-balance sheet items. A total loan is defined as the total of short term loans and long term loans. This input is the main outputs for utilizing the intermediate approach to measure efficiency level. From various studies; Aly et al (1990), Casu and Girardone (2006) and others measure loans as a one of inputs. this input important to bank on how to provide loans as main product efficiently to their customers. Other earning assets are defined as the sum of total of investment securities, interbank funds sold and loans to special sectors (directed lending). Bader et al (2008), this input important to indicates on how bank holds assets which does not generate income to them and then become efficient. Off-balance sheet items refer to the value of the off-balance sheet activities. This input indicates credit such as other guarantees and acceptances which not reported on balance sheet activities as highlighted by Wahida and Robin (2010) and Bader et al (2008).


**RESULT**

Based on table 1 describe the summary statistics. It includes descriptive pertaining to the outputs variables (labour, fixed assets, and total funds) and outputs variables (total loans, other earning assets, and off-balance sheet items) during the sample period of study. The overall inputs and outputs variables from 2004 until 2011 are pictured through panel data set in the last table summary statistics. The average for inputs are personal expenses is US$ 196750.3; fixed assets is US$ 244375.8; total funds is US$ 17528088 over eight years. Besides that, the average for output are total loans is US$ 2203564; other earning assets is US$ 6019234 and off-balance sheet items is US$ 33625275.

Table 2 presents the average technical efficiency (TE) scores for each of the ten anchor banks in Malaysia. The results suggest that the TE over the sample time is not consistent and the highest value obtained for 2004 is 0.867. On average TE scores, B2 have greater efficiency than others anchor banks in average (91.0% compared with 76.7%). In year 2008 clearly shown the lowest average technical efficiency of the anchor banks across eight time period. The average TE score only reach 0.671 score suggesting that the anchor banks in Malaysia produce the same output level each other, used 67.1% of the inputs, which implies the bank's resources were wasted at a rate of 32.9%.

Table 3 present the average technical efficiency score for ten anchor banks in Indonesia. In Indonesia, B6 and B9 are lead technical efficiency scores for eight years excludes in 2005 for B6 and 2004 for B9 and most of anchor banks faced the impact of Global Financial Crisis in 2008 through the efficiency scores stated the lowest compared the other years of period. This suggests that B6 and B9 used their resources more effectively. This may be the consequence of a number of advantages that both B6 and B9 had during this period. They managed risk better, and their pressure of finance crisis were less than other anchor banks, customers have trust in these banks; moreover, they are more competitive in raise funds, opening new branches, etc.

Table 4 depicts the average technical efficiency score for ten anchor banks in Thailand. In average, most of anchor bank in Thailand are shown efficiency scores 0.800 and above excludes B1 and B7. This suggests that most of anchor banks are used their resources slightly more effectively. Surprisingly in 2008, the technical efficiency of anchor banks in Thailand seems not affected by Global Financial Crisis. The technical efficiency score in 2008 reach 0.851 suggesting that the anchor banks in Thailand produce the same output level each other, used 85.1% of the inputs, which implies the bank's resources were wasted at a rate of 14.9%.

To sum up, most of commercial banks in Thailand is lead the technical efficiency in selected ASEAN countries which is the average score is 80% compared to Malaysia and Indonesian anchors banking sectors. By time, the technical efficiency score for three countries are affected by Global Financial Crisis in 2008 and the most affected are ten anchor banks in Malaysia followed by Indonesia banking sectors.

Based on table 5, the result indicates five commercial banks operate in Malaysia has lead of technical efficiency compared to other countries in ASEAN. They are B2-M, B3-M, B5-M, B6-M B7-M which the banks are reach efficiency score equal with one while the rest has intermediate efficiency which is the technical efficiency score is more than 0.6 or 60%. Then, followed by commercial banks in Thailand which is there is four banks are having technical efficiency. They are B5-T, B6-T, B7-T and B8-T which is highest technical efficiency score on this study. In Indonesia, there are three commercial banks have technical efficiency namely B2-I, B6-I and B7-I which is the score is the highest, 100% or equal with one.

## CONCLUSION AND DISCUSSION

In this paper, the efficiency measures and productivity change are calculated by utilizing the non-parametric technique, Data Envelopment Analysis. Several conclusions have emerged. Firstly, the results indicated that the banks' efficiency average was around 0.7 for thirty anchor banks in the selected ASEAN country namely Malaysia, Thailand and Indonesia. Secondly, most of anchor banks suffered from the Global Financial Crisis in 2008 but performed very well thereafter. For comparison between ten anchor banks industries between countries, most of the commercial banks in Thailand are leading the technical efficiency in selected ASEAN countries which has an average score of 80% and followed by anchors banks in Malaysia and Indonesia. The results of this study are believed to benefit the policy makers, the top managers of commercial banks and consumers as well. First, policy makers can benefit the main findings of this investigation in terms of valuable information to implement the optimal policy to benefit the commercial banking industry and a country as a whole. Besides that, as for bank managers, this study can help them to understand the underlying reasons for their banks' efficiency and how to improve it efficiently.

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TABLE 1: The Summary Statistics Ten Anchor Banks In ASEAN' Countries, 2004- 2011

|  | Labour | Fixed Assets | Total Funds | Total Loans | Other Earning Assets | Off-Balance Sheet Items |
|---|---|---|---|---|---|---|
| MEAN | 196750.3 | 244375.8 | 17528088 | 2203564. | 6019234. | 33625275 |
| MEDIAN | 101800.0 | 110780.0 | 8641850. | 848450.0 | 2619650. | 13779150 |
| **MAX** | 1316200. | 1443700. | 1.94E+08 | 43590000 | 60015000 | 5.19E+08 |
| **MIN** | 16.00000 | 76.00000 | 1018.000 | 227.0000 | 147.0000 | 333.0000 |
| STD. DEV. | 234477.2 | 300028.2 | 25230529 | 4289730. | 9722097. | 57446668 |

Note: the value in mill dollar

TABLE 2: Technical Efficiency of Ten Anchor Banks in Malaysia, 2004-2011

| YEAR | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | MEAN TE ALL BANKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004 | 0.71 | 1 | 1 | 0.76 | 1 | 1 | 1 | 0.68 | 0.71 | 0.81 | 0.867 |
| 2005 | 0.6 | 0.71 | 0.74 | 0.62 | 0.57 | 0.92 | 1 | 0.44 | 0.72 | 0.55 | 0.687 |
| 2006 | 0.65 | 0.84 | 0.68 | 0.74 | 0.42 | 0.74 | 0.69 | 0.9 | 0.57 | 0.62 | 0.685 |
| 2007 | 0.54 | 1 | 0.74 | 0.63 | 0.73 | 0.69 | 0.98 | 0.72 | 1 | 0.78 | 0.781 |
| 2008 | 0.44 | 0.95 | 0.76 | 0.53 | 1 | 0.65 | 0.75 | 0.65 | 0.45 | 0.53 | 0.671 |
| 2009 | 0.75 | 1 | 0.88 | 0.86 | 0.81 | 1 | 1 | 0.6 | 0.85 | 0.67 | 0.842 |
| 2010 | 0.71 | 0.92 | 0.73 | 0.66 | 0.85 | 0.86 | 0.77 | 1 | 0.81 | 0.69 | 0.800 |
| 2011 | 0.69 | 0.87 | 0.8 | 0.76 | 0.88 | 0.7 | 0.84 | 1 | 0.74 | 0.78 | 0.806 |
| MEAN (2004- 2007) | 0.64 | 0.91 | 0.79 | 0.69 | 0.78 | 0.82 | 0.88 | 0.75 | 0.73 | 0.68 | 0.767 |

Note: B1= Maybank, B2= Public Bank, B3= CIMB, B4= Hong Leong Bank Berhad, B5= RHB Bank, B6= Ambank, B7= HSBC, B8= United Overseas Bank Malaysia, B9= OCBC Malaysia, B10= Standard Chartered Malaysia

TABLE 3: Technical Efficiency of Ten Anchor Banks in Indonesia, 2004-2011

| YEAR | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | MEAN TE ALL BANKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004 | 0.68 | 1 | 0.57 | 0.82 | 0.91 | 1 | 1 | 0.72 | 0.76 | 0.85 | 0.831 |
| 2005 | 0.44 | 1 | 0.51 | 0.53 | 0.88 | 0.68 | 0.71 | 0.48 | 1 | 0.81 | 0.704 |
| 2006 | 0.73 | 1 | 0.73 | 0.48 | 1 | 1 | 0.71 | 0.69 | 1 | 0.91 | 0.825 |
| 2007 | 0.64 | 0.99 | 0.81 | 0.6 | 0.87 | 1 | 0.84 | 1 | 1 | 0.76 | 0.851 |
| 2008 | 0.38 | 0.88 | 0.44 | 0.36 | 0.96 | 1 | 0.68 | 0.93 | 1 | 0.86 | 0.749 |
| 2009 | 0.96 | 0.89 | 1 | 0.9 | 1 | 1 | 0.82 | 1 | 1 | 1 | 0.957 |
| 2010 | 0.75 | 0.94 | 0.94 | 0.71 | 1 | 1 | 0.66 | 1 | 1 | 1 | 0.900 |
| 2011 | 0.8 | 0.96 | 0.94 | 0.63 | 1 | 1 | 0.73 | 1 | 1 | 1 | 0.906 |
| MEAN (2004- 2007) | 0.64 | 0.91 | 0.79 | 0.69 | 0.78 | 0.82 | 0.88 | 0.75 | 0.73 | 0.68 | 0.767 |

Note: B1= Bank Mandiri, B2= Bank Rakyat Indonesia, B3= Bank Central Asia, B4= Bank Negara Indonesia, B5= PT Bank CIMB Niaga, B6= Bank Danamon Indonesia, B7= Bank Pan Indonesia, B8= Bank International Indonesia, B9= Bank Permata, B10= Bank Mega TBK

TABLE 4: Technical Efficiency of Ten Anchor Banks in Thailand, 2004-2011

| Year | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | Mean Te All Banks |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2004 | 0.76 | 1 | 0.66 | 1 | 1 | 1 | 1 | 1 | 0.81 | 0.97 | 0.920 |
| 2005 | 0.61 | 0.83 | 0.89 | 1 | 1 | 0.93 | 1 | 1 | 0.87 | 0.84 | 0.897 |
| 2006 | 0.67 | 0.89 | 0.77 | 0.75 | 1 | 0.81 | 0.69 | 1 | 0.86 | 1 | 0.844 |
| 2007 | 0.56 | 0.94 | 0.97 | 0.8 | 1 | 0.82 | 0.74 | 1 | 0.53 | 1 | 0.836 |
| 2008 | 0.66 | 0.86 | 0.77 | 0.91 | 1 | 0.94 | 0.7 | 1 | 0.67 | 1 | 0.851 |
| 2009 | 0.64 | 0.73 | 0.85 | 0.66 | 0.71 | 0.87 | 0.6 | 0.83 | 0.81 | 0.59 | 0.729 |
| 2010 | 0.74 | 0.58 | 0.88 | 0.75 | 0.37 | 0.9 | 0.75 | 0.31 | 0.49 | 1 | 0.677 |
| 2011 | 0.75 | 0.69 | 0.84 | 0.7 | 0.52 | 0.87 | 0.07 | 0.59 | 0.37 | 1 | 0.640 |
| Mean (2004- 2007) | 0.67 | 0.81 | 0.83 | 0.82 | 0.82 | 0.89 | 0.69 | 0.84 | 0.68 | 0.92 | 0.797 |

Note: B1= Bangkok Bank Public Company Limited, B2= Bank of Ayudhya Public Company Ltd, B3= Krung Thai Bank Public Company Limited, B4= TMB Bank Public Company Limited, B5= Kasikornbank Public Company Limited, B6= United Overseas Bank (Thai) PCL, B7= Siam Commercial Bank Public Company Limited, B8= Tisco Bank Public Company Limited, B9= Thanachart Capital Public Company Limited, B10= CIMB Thai Bank Public Company Ltd

TABLE 5: Comparison Technical Efficiency Score Between Countries, 2004-2011

| | **Malaysia (M)** | **Indonesia (I)** | **Thailand (T)** |
|---|---|---|---|
| B1 | 0.711 | 0.676 | 0.76 |
| B2 | 1 | 1 | 0.963 |
| B3 | 1 | 0.57 | 0.654 |
| B4 | 0.76 | 0.818 | 0.998 |
| B5 | 1 | 0.91 | 1 |
| B6 | 1 | 1 | 1 |
| B7 | 1 | 1 | 1 |
| B8 | 0.68 | 0.721 | 1 |
| B9 | 0.708 | 0.764 | 0.81 |
| B10 | 0.805 | 0.852 | 0.972 |
| **Mean For Each Country** | 0.866 | 0.831 | 0.916 |
| **Number Banks Efficient** | 5 | 3 | 4 |
| **Number Banks Inefficient** | 5 | 7 | 6 |
| **Total** | 10 | 10 | 10 |
| **Mean For Overall Country** | | 0.871 | |

Note: B1-M= Maybank, B2-M= Public Bank, B3-M= CIMB, B4-M= Hong Leong Bank Berhad, B5-M= RHB Bank, B6-M= Ambank, B7-M= HSBC, B8-M= United Overseas Bank Malaysia, B9-M= OCBC Malaysia, B10-M= Standard Chartered Malaysia, B1-I= Bank Mandiri, B2-I= Bank Rakyat Indonesia, B3-I= Bank Central Asia, B4-I= Bank Negara Indonesia, B5-I= PT Bank CIMB Niaga, B6-I= Bank Danamon Indonesia, B7-I= Bank Pan Indonesia, B8-I= Bank International Indonesia, B9-I= Bank Permata, B10-I= Bank Mega TBK, B1-T= Bangkok Bank Public Company Limited, B2-T= Bank of Ayudhya Public Company Ltd, B3-T= Krung Thai Bank Public Company Limited, B4-T= TMB Bank Public Company Limited, B5-T= Kasikornbank Public Company Limited, B6-T= United Overseas Bank (Thai) PCL, B7-T= Siam Commercial Bank Public Company Limited, B8-T= Tisco Bank Public Company Limited, B9-T= Thanachart Capital Public Company Limited, B10-T= CIMB Thai Bank Public Company Ltd