CHAPTER 5:   DISCUSSION AND CONCLUSION

5.1   Introduction

This study analyses on the bank efficiency of selected ASEAN countries by using Data Envelopment Analysis for the period of five years from 2005 to 2009.

Chronologically, this study reviewed the relevant literature and measurement procedures whereby this would assist in determining the best approach to be used for the study. Based on the review, the measurement model is being developed and based on the data set that has been obtained, the efficiency scores are being calculated. Based on the scores, the process of benchmarking the banks within the country of study and cross country comparison in terms of size is being done. This final chapter contains a comprehensive discussion of the results obtained and the recommendation that could be derived based on the result.

5.2   Findings and Discussion

In this section, the findings are being revisited to relate to the conclusion. Based on the intermediation approach to determine the input and output variables and by applying the input orientation approach to obtain the CRS and VRS scores, the average efficiency score for VRS is higher than CRS. Malaysia banks and Philippines banks have the least variation in terms of the average CRS and VRS score. Thailand banks efficiency score for both CRS and VRS have been on a decreasing trend since 2005 to 2008 however in

2009, the efficiency scores increased. As for Vietnam, it is notable that there is a huge decrease in the efficiency score for both CRS and VRS in 2009 as compared to the previous years.

In terms of the bank size, the average efficiency scores shows that in 2005 - 2006, the small size banks are performing more efficiently as compared to the medium and large size banks the following years up to the last period of study which is 2008 - 2009, the large size banks are performing at a higher average efficiency score as compared to the small size banks. This also means that the large size banks have grown to be more efficient in managing the bank as compared to the smaller size bank.

After obtaining the CRS and VRS scores, Multiple Regression method is employed to analyse the bank specific variable which is the bank size. The purpose of the regression was to observe if the independent variable is able to explain the variation in the calculated of the DEA scores. The analysis result obtain based on the Multiple Regression is that the bank specific variable which in this study is the bank size is significant during the analysis period and there is a mix result based on the different country where Malaysia and Philippines has a negative relationship with efficiency score however Thailand and Vietnam has positive relationship with efficiency. Based on the result, the bank size is also country specific whereby banks with the different bank size have different relationship towards the firm's efficiency in the different country.

Earlier study support that medium size banks tend to be slightly more scale efficient as compared to large banks (Mester, 1987; Berger et al., 1993). Drake and Hall (1993) had its findings that large banks will be least inefficient.

Fadzlan (2004) study on Malaysian banks have found that the merger programme have been successful in Malaysia as small and medium size banks which was involved in the merger exercise have benefited most from the expansion via economies of scale.

Based on the findings for this study, we can conclude that large banks is able to improve its efficiency over time assuming that they are having the advantage of being 'large' whereby they might have the funds to explore in different ways to improve on the bank's efficiency level as compared to smaller banks where the funds to do so might be limited.

Based on the benchmarking analysis, the number of banks that are categorized as efficient have been quite consistent among the period of study whereby some banks have continuously appeared to be best practice banks. The list of banks that are categorised with at least 3 years of VRS score at 1.00 has shown that large banks dominates the number of banks followed by the medium size and small size banks. One possible explanation is that large banks are able to take advantage in terms of operation of economies of scale and scope in some form.

5.3   Conclusion

This study analyses on the efficiency of banks in selected ASEAN countries based on a two stage non-parametric technique which incorporates non-discretionary variables to explore the efficiency levels within a period of 5 years. Comparison is being done by for banks within the same country and cross country based on the efficiency scores. Further analysis is being done by adopting the bank size.

A total number of 74 banks have been used in this study ranging from 4 different countries selected within ASEAN whereby all 74 banks are of commercial banks. The data collection is obtained via BANKSCOPE and banks with at least 5 years of data will only be taken into the study. A total number of 370 bank years of data is being used for this study.

The result suggest that bank size have significance in determining the banks efficiency in Malaysia, Philippines and Thailand however it is not significant for banks in Vietnam. Based on the efficiency scores, larger banks have a higher tendency to be efficient which could suggest that the large bank is able to take advantage of the economies of scale and to have the ability to invest in technology advancement which would provide them the distinctive advantage as compared to banks without the technology.

This study provides policy makers a rough benchmark and guidance in determining the 'best practice' to achieve efficiency. Besides that, the list of

banks listed with high efficiency score is able to indicate to the policy makers on the different bank model to be made as an example.

5.4   Limitation of Study

The main concern pertaining to the data set used in this study which was being obtained from BANKSCOPE have limited information concerning the individual banks whereby some information are not on yearly basis.

Besides that, due to the limited access of data, the study period only ranges from year 2005 to 2009. Based on initial data being retrieved from the database, there are many banks without data prior to 2005.

Apart from that, there is currently no standardization to define the bank size across countries. A general assumption has to be made in relation to this so that the definition can be the same across the countries.

5.5   Recommendation and Direction for Future Research

This research provides a framework for efficiency measurement by incorporating bank specific variables. The competitive adjusted Data Envelopment Analysis (DEA) model was formed using a two stage DEA analysis consisting of a DEA analysis and Multiple Regression analysis.

The following recommendations can be considered for future research on bank efficiency:

1. The study might consider expanding the scope of study to include all countries in ASEAN in order to have an overall view of the bank efficiency and the relationship between bank sizes.

2. The study to be applied to other segments of the banking and financial sector such as the Islamic Bank and non financial institutions in ASEAN country.

3. A comparison between the developed and developing countries can be made in order to provide some insight of the differences in the bank efficiency of the country.