

## CHAPTER 6

### CONCLUSION

#### 6.1 Summary of the Study

The principal issue examined in this paper is the market timing ability and the relationship of selected finance stocks with the return of a benchmark market index. Since most of the previous studies of market timing used US and Australian data set, this study represents a new attempt for the case of Malaysia.

This study uses a set of data consisting of the KLSE Composite Index and a randomly selected sample of 15 finance stocks listed on the Main Board of KLSE. The period of study is from 1 April 1994 to 30 November 2000.

The investigation on the 15 finance stocks in this study involves two different market timing models. First, the quadratic returns market model and the dual-beta market model are used to analyze the market timing and the stock selection abilities. In addition, this study also applies some specification tests suggested by Jagannathan and Korajczyk (1986). The two specification tests are the cubic model which is augmented by an additional variable of the third order, and the other exclusion restriction test is based on the dual-beta market model specification which is augmented by a quadratic term.

The analysis is divided into two major parts and both have the same period of study. The first part is to test the market timing models and the ARCH test is performed to check the adequacy of all models. Since all results show that the market models suffer from the ARCH effect, the second part reestimates each market model for testing the relationship between the systematic risk and market timing ability in the presence of ARCH.

## 6.2 Summary of the Findings

All stocks have betas significantly different from zero and the beta values are positive. The estimated betas fall in the range of 0.38 to 1.59. In almost all the cases the estimates for abnormal returns after taking systematic risks into consideration are not significantly different from zero and the analysis shows no abnormal performance of the stocks. The results are similar using the quadratic and dual beta market models.

The quadratic returns market model found 10 stocks with favourable market timing behaviour and 1 stock with perverse market timing behaviour. The corresponding figures are 6 and 1 for the dual-beta market model. Although evidence of market timing performance is found, they are largely offset by the negative stock selection ability. Fortunately, the evidence for stock selection ability is very weak.

The exclusion restriction test is used to examine if misspecification is a problem in the estimation of the market timing models. Ten cases of the quadratic model and 8 cases of the dual-beta market model are found to fail the test, indicating

that they are misspecified. The degree of misspecification is thus non-trivial. Also, the evidence suggests that the dual-beta market model is slightly better than the quadratic model for the data set employed.

Of the stocks that exhibit favourable market timing behaviour, 4 are not misspecified but 6 are misspecified when the quadratic market model is used. For the dual-beta model, 3 are misspecified and another 3 stocks are not. The evidence of market timing ability is a lot weaker if the misspecified cases are not taken into account.

In addition to the misspecification problem, the models are found to be suffering from the ARCH effect. This means that the models do not capture the time varying volatility in the data, and the estimates are largely inefficient.

To tackle this problem of statistical inadequacy, the models are reestimated. The error terms are modelled as a GARCH (1, 1) process. This attempt is new in the literature of market timing performance. A comparison of the results with the models that are not corrected for ARCH reveals some different findings.

The systematic risk behaviour is not affected significantly when the ARCH effect is taken into account. Stock selectivity performance is also basically the same, that is, hardly much evidence is found. They are again negative, offsetting largely the market timing ability.

The quadratic market timing model shows a total of 8 stocks that have positive market timing performance. The dual-beta model shows a total of 7 cases with favourable timing ability and 1 case with perverse ability.

When the exclusion restriction test is applied to examine misspecification, only 4 and 5 cases of the quadratic and dual-beta models, respectively, suffer from misspecification. The severity of this problem reduced by about half when the market models take into account of the ARCH effect. This suggests that the earlier misspecification could be induced by the statistical inadequacy of the models that do not capture the ARCH effect. This analysis shows that the new attempt of this study is worthwhile.

Furthermore, only one case for the quadratic as well as dual-beta market models that has favourable market timing ability is found to be misspecified. The evidence of market timing ability is now much stronger. Excluding the misspecified case, 7 stocks (AMMB, COMMERZ, HANCOCK, IDRIS, MAA, MAYBANK and MIDF) for the quadratic model and 6 stocks (HANCOCK, IDRIS, MAA, OSK, PHILEO and RHBCAP) for the dual-beta model have favourable market timing performance. This analysis also suggests no clear dominance of one market timing model over the other.

### **6.3 Limitations of the Study and Recommendations for Future Research**

An important area such as evaluation of active portfolio management and asset allocation in particular the identification of market timing ability is very limited for

the Malaysian case. The investigation of this study, however, is limited by the fact that only 15 finance stocks are included. The sample used in this study is 24% of the total finance stocks. In future, more finance stocks and longer period can be considered and these might give a better overall and more accurate inference. The same analysis can be extended to different sectors of KLSE and also for the Second Board.

Also, this study does not take into account possible structural changes due to the financial crisis that happened since 1997. A comparison across different sub-periods may be useful in future research.

In modelling the variance process, only the GARCH approach is considered. This could be extended to other models in the ARCH family. The results of this study provide additional evidence of inadequacy of commonly used measures of timing performance. This is consistent with the findings of Kothari and Warner (2001) and Ferson and Schadt (1996). A possible area worthy of further research effort is by using the higher moment models following the suggestion of Prakash and Bear (1986), Stephens and Proffitt (1991), and also Chunnachinda, Dandapani, Hamid and Prakash (1994).