MONTH-OF-THE-YEAR AND FIRM SIZE EFFECTS ON
THE KUALA LUMPUR STOCK EXCHANGE

BY

HII CHIN SEI

Bachelor of Arts with Education (Honours)
(Economics)
University Science of Malaysia
Penang, Malaysia
2001

Submitted to the
Faculty of Economics & Administration
University of Malaya
in partial fulfillment of
the requirement for the Degree of
MASTER OF ECONOMICS
November 2002
ACKNOWLEDGEMENTS

First and foremost, I wish to thank God for His divine help in opening up the opportunity to further my studies.

I would like to express my sincere appreciation and gratitude to my supervisor, Professor Dr. Kok Kim Lian, for his suggestions, dedicated guidance, patience, encouragement, his invaluable time and helpful advice which enable me to successfully complete this dissertation.

My special thanks to Lim Gin Hoe, for his help in obtaining necessary data to me. To Goh Huay Yuin, Tan Ai Geoy, Chang Mee Choo and Ooi Mong Lee, I wish to extend my gratitude for their provision of a couple of related computer software and their assistance in obtaining the necessary computer manuals.

My heartfelt thanks also go to my beloved parents, my sister and brother, Yih and Kiat, for their love and encouragement. I owe much to Kit, for his moral support, love and understanding. It is to them that I dedicate this dissertation.

Finally, I am deeply grateful for the encouragement and support from my course mates throughout the course.
ABSTRACT

The main purpose of this study is to empirically investigate the existence of seasonality in monthly stock returns and the relationship between seasonal return and firm size effect in the Malaysian equity market. The sample consists of six Kuala Lumpur Stock Exchange (KLSE) sectoral indices and Kuala Lumpur Composite Index (KLCI) for the period from January 1987 to December 2001.

The main finding of the study is that seasonality according to the Gregorian calendar is present in the Malaysian stock market which is mainly manifested as a January effect. The January returns have been found to be high and are significantly different from the rest of the year on average. Since there is no capital gain tax in Malaysia, the tax-loss selling hypothesis cannot explain the January effect. Instead, the anomaly may be best explained by the market integration hypothesis, gamesmanship hypothesis, and the parking-the-proceeds hypothesis in view that the January effect is also a worldwide phenomenon.

Evidence is also provided that there is higher return observed in February indicates the presence of the Chinese New Year (CNY) effect, which is attributed to the dominant role of the ethnic Chinese investors in the Malaysian stock market. In addition, the results of this study reveal that firm size effect is prevalent in the KLSE. Both January effect and CNY effect are more robust in smaller companies as
compared to larger firms. Further investigation reveals that the reverse August effect is reflected by the negative return in the month that may also be due to the impact of the global market integration.
# TABLE OF CONTENTS

## CHAPTER 1 INTRODUCTION

1.1 THE KUALA LUMPUR STOCK EXCHANGE ........................................... 1  
1.2 THE RANDOM WALK THEORY ............................................................ 3  
1.3 THE EFFICIENT MARKET HYPOTHESIS ................................................ 3  
1.4 STOCK MARKET ANOMALIES .............................................................. 4  
1.5 RESEARCH OBJECTIVES ........................................................................ 6  
1.6 SIGNIFICANCE OF THIS STUDY ............................................................ 8  
1.7 ORGANIZATION OF THIS PAPER .......................................................... 9  

## CHAPTER 2 LITERATURE REVIEW

2.1 SEASONALITY OF STOCK RETURNS ....................................................... 11  
2.2 TURN-OF-THE-YEAR EFFECT .................................................................. 12  
2.3 HYPOTHESES ON THE TURN-OF-THE-YEAR EFFECT ......................... 15  
   (I) THE TAX-LOSS SELLING HYPOTHESIS ............................................ 15  
   (II) THE GAMESMANSHP HYPOTHESIS ............................................... 17  
   (III) THE INFORMATION RELEASE OR INSIDER TRADING ..... 18  
         HYPOTHESIS  
   (IV) THE PARKING THE PROCEEDS HYPOTHESIS .......................... 19  
2.4 CHINESE NEW YEAR EFFECT ............................................................. 21  
2.5 THE RELATIONSHIP BETWEEN SEASONAL STOCK RETURNS .... 22  
    AND FIRM SIZE EFFECT
CHAPTER 3  DATA AND METHODOLOGY

3.1  DATA DESCRIPTION .......................................................... 25

3.2  METHODOLOGY .............................................................. 28

  3.2.1  MODEL OF STOCK RETURNS ..................................... 29

  3.2.2  STATISTICAL TESTS ............................................... 30

  3.2.2(A)  PARAMETRIC TESTS ........................................... 31

             ONE-WAY ANOVA

             TUKEY TEST

             ONE-SAMPLE T-TEST

  3.2.2(B)  NON-PARAMETRIC TEST ..................................... 34

             KRUSKAL-WALLIS TEST

3.3  USE OF COMPUTER SOFTWARE .......................................... 37

CHAPTER 4  RESULTS INTERPRETATION AND DISCUSSION

4.1  MONTHLY MEAN RETURN DISTRIBUTION .............................. 38

4.2  RESULTS OF PARAMETRIC TESTS .................................... 40

4.3  RESULTS OF NON-PARAMETRIC TEST ................................. 47

4.4  ANALYSIS OF THE JANUARY EFFECT ................................ 49

4.5  ANALYSIS OF THE FEBRUARY AND THE CHINESE NEW YEAR ..... 53
     EFFECT

4.6  ANALYSIS OF THE AUGUST SEASONAL ............................... 57

4.7  ANALYSIS OF SEASONALITY ON THE KLSE COMPOSITE INDEX .... 59

4.8  ARE THE JANUARY EFFECT AND THE CHINESE NEW YEAR ....... 60
     EFFECT EXPLOITABLE?
CHAPTER 5  SUMMARY AND CONCLUSION

5.1  RESTATEMENT OF STUDY OBJECTIVE ........................................ 62

5.2  CONCLUSION ON THE MAIN FINDINGS ..................................... 63

5.3  IMPLICATIONS OF THE STUDY FINDINGS ................................. 65

5.4  LIMITATIONS OF THE STUDY ................................................ 66

5.5  RECOMMENDATIONS FOR FUTURE RESEARCH ............................ 67

REFERENCES

APPENDIX I  THE NAME OF MAIN BOARD STOCKS SELECTED ON THE KLSE

APPENDIX II  COMPUTATION FOR CAPITAL CHANGES

APPENDIX III  MARKET CAPITALIZATION FOR 150 STOCKS FROM 1987 TO 2001
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Summary Statistics of Mean Returns of Stock Portfolio By Month-of-the-Year For Full Period Sample (1987-2001)</td>
<td>41</td>
</tr>
<tr>
<td>Table 2</td>
<td>Summary Statistics of Mean Returns of Stock Portfolio By Month-of-the-Year For Sub-Period 1 Sample (1987-1993)</td>
<td>42</td>
</tr>
<tr>
<td>Table 3</td>
<td>Summary Statistics of Mean Returns of Stock Portfolio By Month-of-the-Year For Sub-Period 2 Sample (1995-2001)</td>
<td>43</td>
</tr>
<tr>
<td>Table 4</td>
<td>Summary Statistics of Mean Returns of KLSE Composite Index By Month-of-the-Year For Full Period Sample and Two Sub-Periods</td>
<td>44</td>
</tr>
<tr>
<td>Table 5</td>
<td>Results of Oneway ANOVA and Tukey Test for Month-of-the-Year Effect of five firm-size portfolio and Composite Index</td>
<td>45</td>
</tr>
<tr>
<td>Table 6</td>
<td>Results of Kruskal-Wallis Test ($\chi^2$) For Month-of-the-Year Effect of Stock Portfolios and KLSE Composite Index</td>
<td>48</td>
</tr>
</tbody>
</table>