MBA(
07:
L3
C.1

UNIVERSITY OF MACAU

FACULTY OF BUSINESS ADMINISTARTION

FURTHER INVESTIGATION ON FF3 MODEL IN THE CASE OF HONG KONG: 1987 – 2000

Kunlin Li

M-A3-5742-3

Thesis presented to the

Faculty of Business Administration

University of Macau

In partial fulfillment for granting the MBA degree

(Finance)

2006

Table of Contents

ABSTRACT II
ACKNOWLEDGEMENTS IV
LIST OF TABLES VII
LIST OF FIGURES VII
CHAPTER 1 INTRODUCTION 1
CHAPTER 2 LITERATURE REVIEW 7
CHAPTER 3 SAMPLE AND METHODOLOGY 14
3.1 SAMPLE 14
3.2 CONSTRUCTION OF MIMICKING PORTFOLIOS 15
3.3 METHODOLOGY 17
CHAPTER 4 DESCRIPTIVE STATISTICS 21
4.1 THE AVERAGE RETURNS FOR THE 25 PORTFOLIOS 21
4.2 THE RISK PREMIUMS OF THE FOUR FACTORS 26
4.3 REGULARITIES IN THE FACTOR'S BEHAVIOR 29
4.3.1 Seasonal Effect 29
4.3.2 Chinese New Year (CNY) effect 35
4.3.3 Market environment: Up-and Down-markets 38
CHAPTER 5 EMPIRICAL RESULTS OF THE FOUR-FACTOR MODEL 42
5.1 THE REGRESSION RESULTS OF THE FOUR-FACTOR MODEL 42
5.2 UP- AND DOWN- MARKET CONDITIONS 48
5.3 BEHAVIOR OF FACTOR LOADINGS 54
CHAPTER 6 THE AUGMENTED FOUR-FACTOR PRICING MODEL 57
6.1 FOUR CO-MOMENTS 57
6.1.1 Residual standard deviation 58
6.1.2 Higher co-moments 61
6.2 ILLIQUIDITY 64
6.2.1 Variable measurement 65
6.2.2 Construction of ILLQ and the five factor model 66
6.2.3 Transformation of ILLIQ 67
6.2.4 Why the new proxy variable performs differently? 70
CHAPTER 7 CONCLUSIONS 71
APPENDIX A 75

APPENDIX B 77
APPENDIX C 79
APPENDIX D 80
APPENDIX E 82
APPENDIX F 83
REFERENCES 85
WEBSITES 90