

DOCTORAL THESIS

The impact of stock index futures trading on the underlying spot market: Hong Kong evidence

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The Impact of Stock Index Futures Trading on the Underlying Spot
Market: Hong Kong Evidence

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ABSTRACT

This thesis is an empirical study of the impact of the Hang Seng Index (HSI) futures trading on the underlying stock market. In the process of exploring such impact, the approach of this thesis is different from previous studies in which only an underlying index is examined. This study extends the existing literature by also analyzing the impact of the HSI futures trading on the underlying individual constituent stocks. The central skeleton of this study is mainly composed of four empirical tests examining four potential adverse effects of index futures trading on the underlying spot market.

Firstly, the effect on the volatility of the HSI constituent stocks is examined. By analyzing the changes in unconditional and conditional volatility of the HSI constituent stocks, our results show that no destabilizing effect exists on the volatility of its underlying spot market after the introduction of the HSI futures contracts.

Secondly, this study further investigates the changes in both the systematic risks and the covariabilities of the HSI constituent stocks so as to test whether an adverse effect of the HSI futures trading exists on the diversification potential of its underlying spot market. The findings conclude that the diversification across the HSI constituent stocks is beneficial after the trading of the HSI futures contracts.

Thirdly, the impact on the liquidity of the underlying spot market is evaluated. Liquidity is defined as the ability of resiliency. This study is the first empirical test of the effect of index futures contracts on the underlying constituent stocks' resiliency ability. The results show that the liquidity of the HSI constituent stocks really improves after the introduction of the HSI futures trading.

Finally, the expiration-day effect of the HSI futures contracts on the underlying spot market is studied. For the first time, a series of minute-by-minute HSI data is employed to analyze the expiration-day effect on the Hong Kong stock market, besides the relevant daily data of the HSI and its individual constituent stocks. Consistent with the results found in the earlier chapters of this thesis, the expiration-day effect of the HSI futures contract is also insignificant in the Hong Kong stock market.

In summary, this study contributes to the literature by revealing that the potential adverse effects of the introduction of index futures contracts are not unavoidable by-products from the creation of index futures trading in the stock market. The results should provide useful reference for other emerging markets which have introduced and/or been considering to launch stock index futures to their markets.

TABLE OF CONTENTS

1. INTRODUCTION

1.1 Introduction	1
1.2 Objectives of this Study	3
1.3 Rationales for Studying Hong Kong Stock Market	5
1.4 Organization of this Study	7

2. LITERATURE REVIEW

2.1 Introduction	9
2.2 Impact on the Underlying Spot Market Volatility	9
2.2.1 Introduction	9
2.2.2 Evidence of Spot Market Volatility Increased	15
2.2.3 Evidence of Spot Market Volatility Unchanged	18
2.2.4 Evidence of Spot Market Volatility Decreased	23
2.2.5 Evidence of Ambiguous Change in Spot Market Volatility	25
2.2.6 Remarks	26
2.3 Impact on the Underlying Spot Market Systematic Risk	28
2.3.1 Introduction	28
2.3.2 Existing Empirical Evidence	29
2.3.3 Remarks	30

2.4	Impact on the Underlying Spot Market Liquidity	31
2.4.1	Introduction	31
2.4.2	Impact on the Resiliency Ability of the Underlying Spot Market	33
2.4.3	Impact on the Cost of Immediacy of the Underlying Spot Market	34
2.4.4	Remarks	36
2.5	Expiration-Day Effect on the Underlying Spot Market	38
2.5.1	Introduction	38
2.5.2	Evidence on the U.S. Stock Markets	40
2.5.3	Evidence outside the U.S. Stock Markets	44
2.5.4	Remarks	45

3. HONG KONG STOCK AND INDEX FUTURES MARKETS AND DATA

SOURCES

3.1	Introduction	47
3.2	Futures Trading in Hong Kong	47
3.2.1	Introduction	47
3.2.2	Hang Seng Index Futures Contracts	48
3.3	Stocks Trading in Hong Kong	50
3.3.1	Introduction	50
3.3.2	Hang Seng Index	51

3.4 Data Sources	52
Tables (3.1 - 3.2)	56

4. THE IMPACT OF THE HSI FUTURES TRADING ON THE VOLATILITY OF THE UNDERLYING SPOT MARKET

4.1 Introduction	58
4.2 “Before and After” Approach	60
4.2.1 Methodology	60
4.2.2 Results and Analysis	62
4.2.2.1 Equality of HSI Volatility between Pre- and Post-futures Periods	62
4.2.2.2 Equality of Individual Stocks’ Volatility between Pre- and Post-futures Periods	65
4.2.3 Concluding Remarks	74
4.3 Modified Cross-Sectional Analysis of Covariance Regression	
Model	75
4.3.1 Methodology	75
4.3.2 Results and Analysis	78
4.3.3 Concluding Remarks	79
Tables (4.1 - 4.11)	82
Figure (4.1 - 4.2)	103

5. THE IMPACT OF THE HSI FUTURES TRADING ON THE SYSTEMATIC RISK AND COVARIABILITY OF THE UNDERLYING SPOT MARKET

5.1	Introduction	105
5.2	Impact on Systematic Risk of Constituent Stocks	107
5.2.1	Methodology	107
5.2.2	Results and Analysis	110
5.2.2.1	Change of Individual Stock Beta Coefficient	110
5.2.2.2	Change of Portfolio Beta Coefficient	116
5.2.3	Concluding Remarks	119
5.3	Impact on Covariability of Constituent Stocks	121
5.3.1	Covariation of HSI Constituent Stock Returns	122
5.3.1.1	Methodology	122
5.3.1.2	Results	123
5.3.2	Covariation of Residual Returns of Index Constituent Stock	125
5.3.2.1	Methodology	126
5.3.2.2	Results	131
5.3.3	Concluding Remarks	138
	Tables (5.1 - 5.19)	140

6. THE IMPACT OF THE HSI FUTURES TRADING ON THE LIQUIDITY OF THE UNDERLYING SPOT MARKET

6.1	Introduction	179
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6.2	Equality of Liquidity Ratio	181
6.2.1	Methodology	181
6.2.2	Results	183
6.3	Cross-Sectional Regression Model	186
6.3.1	Methodology	186
6.3.2	Results	188
6.4	Discussions and Conclusions	190
Tables (6.1 - 6.8)		193
7.	EXPIRATION-DAY EFFECT OF THE HSI FUTURES TRADING ON THE UNDERLYING SPOT MARKET	
7.1	Introduction	209
7.2	Expiration-Day Effect: Evidence from Daily Data	211
7.2.1	Data	211
7.2.2	Methodology	213
7.2.2.1	Expiration-Day Volatility Effect	214
7.2.2.2	Expiration-Day Volume Effect	217
7.2.3	Results	218
7.2.3.1	Expiration-Day Volatility Effect	218
7.2.3.2	Expiration-Day Volume Effect	220
7.2.4	Concluding Remarks	221
7.3	Expiration-Day Effect: Evidence of Minute-by-minute HSI Data ...	222

7.3.1	Data	222
7.3.2	Methodology	223
7.3.2.1	Expiration-Day Volatility Effect	223
7.3.2.2	Expiration-Day Price Reverse Effect	225
7.3.3	Results	227
7.3.3.1	Expiration-Day Volatility Effect	227
7.3.3.2	Expiration-Day Price Reverse Effect	230
7.3.4	Concluding Remarks	233
Tables (7.1 - 7.10)		236
Appendix		246
 8. CONCLUSIONS		
8.1	Introduction	248
8.2	Results and Contributions	248
8.3	Limitations of Study	251
8.4	Recommendations for Future Research	252
 REFERENCES		254
 CURRICULUM VITAE		262