A Study of the Impact of Migration to Electronic Trading on the Competitiveness and Relative Pricing Efficiency of Index Futures and Options Markets

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ABSTRACT

This thesis examines empirically how and to what extent simultaneous migration to electronic trading of index futures and options affect: (i) their bid/ask spreads; (ii) arbitrage efficiency between the index futures and options; and (iii) the parity (which is also referred to as substitutability) between index options and index futures prices (positions). The results of the study show that with screen trading, the bid/ask spreads of the futures and options are generally reduced. Second, the arbitrage efficiency between futures and options is enhanced greatly after migration to electronic trading, with reductions in the arbitrage profits and the standard deviations of these profits under both ex-post and ex-ante analyses. In addition, the test results on the parity-price relationship between futures and options positions reveal the put and call options combination strategy mimics more closely the equivalent actual futures position under electronic trading.

The thesis contributes to the literature in providing empirical test evidence on the impacts of the simultaneous migration of Hang Seng Index futures and options on 5 June 2000 from floor trading to screen-based trading on the Hong Kong Futures Exchange on the options and futures prices. The results of the study provide incremental evidence that electronic trading enhances arbitrage and pricing efficiency of options and futures. The test findings bear reference for those exchanges that are considering to switch from floor-based to screen-based trading.
# TABLE OF CONTENTS

DECLARATION........................................................................................................... i  
ABSTRACT................................................................................................................... ii  
ACKNOWLEDGEMENTS.............................................................................................. iii  
TABLES OF CONTENTS............................................................................................. iv  
LIST OF TABLES.......................................................................................................... vi  
LIST OF CHARTS......................................................................................................... xvii  

1. INTRODUCTION.................................................................................................... 1  

2. LITERATURE REVIEW............................................................................................ 8  
   2.1 Effect of microstructural change in securities prices and their relative information efficiency................................................................. 8  
   2.2 Electronic trading and arbitrage efficiency.......................................................... 14  
   2.3 Put-call-futures parity model to test arbitrage efficiency between index futures and index options......................................................... 16  

3. MARKET MICROSTRUCTURES FOR THE TRADING OF HSI FUTURES AND OPTIONS BEFORE AND AFTER 5 JUNE 2000........ 20  

4. DATA SET............................................................................................................... 24  

5. BID/ASK SPREAD.................................................................................................. 26  
   5.1 Hypotheses .......................................................................................................... 26  
   5.2 Methodology ........................................................................................................ 27  
   5.3 Empirical findings ............................................................................................... 30  
   5.4 Conclusion ........................................................................................................... 37  

6. ARBITRAGE EFFICIENCY BETWEEN INDEX FUTURES AND OPTIONS................................................................. 38  
   6.1 Hypotheses .......................................................................................................... 38  
   6.2 Methodology ........................................................................................................ 39  
   6.3 Empirical findings ............................................................................................... 53  
   6.4 Conclusion ........................................................................................................... 59  

7. PRICE PARITY BETWEEN THE OPTIONS AND FUTURES PRICES.... 60  
   7.1 Hypotheses .......................................................................................................... 60  
   7.2 Methodology ........................................................................................................ 61  
   7.3 Empirical findings ............................................................................................... 66  
   7.4 Conclusion ........................................................................................................... 78
8. OVERALL CONCLUSION.................................................................................. 79
9. SELECTED REFERENCES.................................................................................. 81
10. TABLES/CHARTS............................................................................................ 85
11. CURRICULUM VITAE..................................................................................... 215