

## MASTER'S THESIS

### **Empirical relationships among stock prices, interest rate differentials and exchange rates: evidence from Hong Kong, Japan and the U.S.**

Chan, Kam Po

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**Empirical Relationships Among Stock Prices, Interest Rate Differentials and  
Exchange Rates: Evidence from Hong Kong, Japan and the U.S.**

**CHAN Kam Po**

**A thesis submitted in partial fulfillment of the requirements  
for the degree of  
Master of Philosophy**

**Principal Supervisor: Dr. HUNG Wan Sing**

**Hong Kong Baptist University**

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## **ABSTRACT**

In recent years, the global stock crises are induced by short-term capital flows which constitute the market volatilities. Interest rate differentials may be considered as one of the major factors driving the direction of capital flows. This thesis takes account of this issue and examines the dynamic interactions, and the long-run relationship among stock prices, interest differentials and exchange rates. Various econometric techniques, namely cointegration, error correction model, impulse response functions and forecasting variance decomposition, are employed to investigate the postulated relationship and analyze the effect and persistence of a shock in one variable to itself as well as to the other variables in the system. Empirical findings indicate that there exists a single cointegrating relationship among the stock indices, interest differentials and exchange rates, even across different time spans of interest spreads. Specifically, for the Hong Kong stock market, the interest spreads between the Australian dollar and the Yen, and the U.S. stock index are both statistically significant in all time spans, along with the expected positive signs. This implies that they are positively correlated with the Hong Kong stock index. In addition, the shock to the interest spread between the U.S. dollar and the Yen elicits a statistically significant response on the U.S. stock market at the 5% level among other interest spread shocks.

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