

The Regime Dependent Relationship Between the Canada-US Exchange Rate and the Canadian Stock Market
Man Hu

This project investigates the regime dependent impact of CADUSD exchange rate changes on the Canadian stock market returns, using a two-regime Markov switching model combined with three different time series models, namely First-order Autoregressive (AR(1)) model, Generalized Autoregressive Conditionally Heteroscedastic (GARCH) model and Exponential GARCH (EGARCH) model. We estimate these three models with weekly data over the period from January 1977 to December 2012. Our results show that the contemporaneous impact of FX changes on Canadian stock market returns is significant and regime dependent, with a much stronger positive influence during the low mean-high variance regime than the high mean-low variance regime. We explain this regime dependent effect in terms of “flight to quality;” during a financial turmoil, the Canadian dollar depreciates and investors tend to sell risky investment, such as Canadian stock shares, and instead purchase safer assets, such as US Treasuries. We find that Markov Switching GARCH and Markov Switching EGARCH models perform better in describing the volatility clustering behavior in the stock market comparing to single-regime GARCH and EGARCH models.