Essays in Financial Economics Vitali Alexeev

Abstract

This thesis is comprised of three essays. The first essay examines weak form market efficiency on the Toronto Stock Exchange (TSX). A model-based bootstrap is used to generate a series of simulated trials and a modified chart pattern recognition algorithm is applied to all stocks listed on the TSX. Although, we fail to reject the null hypothesis of weak form efficiency on the TSX, some sectors of the Canadian economy appear to be less efficient than others. The second essay introduces a nonparametric level crossing random walk test, in which the crossing level is determined locally. The test is robust to unknown multiple structural breaks in the level and slope of the trend function under both the null and alternative hypothesis. No knowledge regarding the number or timing of the breaks is required. The test is applied to Canadian nominal inflation and nominal interest rate series with implications for the Fisher hypothesis. The third essay is an empirical investigation of the relationship between crude oil prices and exchange rates. We find that oil price fluctuations in leading oil export countries are important determinants of their bilateral nominal exchange rates. In particular, currency appreciations are strongly associated with an increase in the price of oil for net oil exporters.