Revisiting Mean Reversion in the Stock Prices for both the U.S. and its Major Trading Partners: Threshold Unit Root Test

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Abstract: This study aimed to re-investigate whether mean reversion of stock prices exists for the stock markets of the U.S. and its major trading partners: Canada, China, Japan and Mexico, using threshold unit root test developed by Caner and Hansen (2001). Sample periods are from November 1998 to August 2010. The empirical results from our threshold unit test indicate that the null hypothesis of I(1) unit root in stock prices can not be rejected for any of the U.S. and its major trading partners, with the exception of China. Our results highlight the fact that the efficient market hypothesis is valid in the stock markets of the U.S. and its major trading partners, with the exception of China. These findings should prove valuable to individual investors and financial institutions holding long-term investment portfolios in these markets.

1. Introduction

Researchers in finance have long been interested in the time-series properties of equity prices, with particular attention paid to determining whether stock prices can be characterized as random walk (unit root) or mean reverting (trend stationary) processes. Much research has focused on the best way to characterize the dynamic properties of economic and financial time series. The issue, whether stock prices follow a mean reverting or random walk process, has been much