The Efficiency of Financial Markets Part II: A Stochastic Oscillator Approach

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2019 (English)

Independent thesis Advanced level (degree of Master (One Year)), 10 credits / 15 HE credits

Student thesis

Abstract [en]

Over a long period of time, researchers have investigated the efficiency of financial markets. The widely accepted theory of the subject is the Efficient Market Hypothesis, which states that prices of financial assets are set efficiently. A common way to test this hypothesis is to analyze the returns generated by technical trading rules which uses historical prices in an attempt to predict future price development. This is also what this study aims to do. Using adjusted daily closing prices ranging over 2007 to 2019 for 5120 stocks listed on the U.S stock market, this study tests a momentum trading strategy called the stochastic oscillator in an attempt to beat a buy and hold strategy of the Russel 3000 stock market index. The stochastic oscillator is constructed in three different ways, the *Fast%K*, the *Fast%D* and the *Slow%D*, the difference being that a smoothing parameter is used in the *Fast%D* and *Slow%D* in an attempt to reduce the number of whiplashes or false trading signals. The mean returns of the technical trading strategies are tested against the mean returns of the buy and hold strategy using a non-parametric bootstrap methodology and also, the risk adjusted returns in terms of Sharpe Ratios are compared for the different strategies. The results find no significance difference between the mean returns of the buy and hold strategy and any of the technical trading strategies. Further, the buy and hold strategy delivers a higher risk adjusted return compared to the technical trading strategies, although, only by a small margin. Regarding the smoothing parameter applied to the strategies, it seems to fulfill its purpose by reducing the number of trades and slightly increasing the mean returns of the technical trading strategies. Finally, for deeper insight in the subject, a reading of "*The efficiency of financial markets: A dual momentum trading strategy on the Swedish stock market*" by Netzén Örn (2018) is recommended.

Place, publisher, year, edition, pages

2019. , p. 48

Keywords [en]

Technical Trading, Technical Analysis, Efficient Market Hypothesis, Stock Market, Financial Markets, Trading, algorithm

National Category

Business Administration

Identifiers

URN: urn:nbn:se:umu:diva-170753

OAI: oai:DiVA.org:umu-170753

DiVA, id: diva2:1430318

Educational program

Study Programme in Business Administration and Economics

Supervisors

Höglund, Henrik

Examiners

Biedenbach, Thomas

Available from: 2020-05-14 **Created:** 2020-05-14 **Last updated:** 2020-05-14

Bibliographically approved