On the Returns of Trend-Following Trading Strategies

Christian Lundström

Akademisk avhandling

som med vederbörligt tillstånd av Rektor vid Umeå universitet för avläggande av filosofie licentiatexamen framläggs till offentligt försvar i S 205h, Samhällsvetarhuset, fredagen den 28 april, kl. 13.15. Avhandlingen kommer att försvaras på engelska.

Fakultetsopponent: Professor, Jussi Nikkinen, Accounting and Finance/Vasa Universitet, Vasa, Finland.
Paper [I] tests the success rate of trades and the returns of the Opening Range Breakout (ORB) strategy. A trader that trades on the ORB strategy seeks to identify large intraday price movements and trades only when the price moves beyond some predetermined threshold. We present an ORB strategy based on normally distributed returns to identify such days and find that our ORB trading strategy result in significantly higher returns than zero as well as an increased success rate in relation to a fair game. The characteristics of such an approach over conventional statistical tests is that it involves the joint distribution of low, high, open and close over a given time horizon.

Paper [II] measures the returns of a popular day trading strategy, the Opening Range Breakout strategy (ORB), across volatility states. We calculate the average daily returns of the ORB strategy for each volatility state of the underlying asset when applied on long time series of crude oil and S&P 500 futures contracts. We find an average difference in returns between the highest and the lowest volatility state of around 200 basis points per day for crude oil, and of around 150 basis points per day for the S&P 500. This finding suggests that the success in day trading can depend to a large extent on the volatility of the underlying asset.

Paper [III] performs empirical analysis on short-term and long-term Commodity Trading Advisor (CTA) strategies regarding their exposures to unanticipated risk shocks. Previous research documents that CTA strategies offer diversification opportunities during equity market crisis situations when evaluated as a group, but do not separate between short-term and long-term CTA strategies. When separating between short-term and long-term CTA strategies, this paper finds that only short-term CTA strategies provide a significant, and consistent, exposure to unanticipated risk shocks while long-term CTA strategies do not. For the purpose of diversifying a portfolio during equity market crisis situations, this result suggests that an investor should allocate to short-term CTA strategies rather than to long-term CTA strategies.

Keywords