

Price gap anomaly in the US stock market: The whole story

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Abstract

This paper analyses the price gap anomaly in the US stock market (comprised of the DJI, S&P 500 and NASDAQ) covering the period 1928 to 2018. This paper aims to investigate whether or not price gaps create market inefficiencies. Price gaps occur when the current day's opening price is different from the previous day's closing price due orders placed before the opening of the market. Several hypotheses are tested using various statistical tests (Student's t-test, ANOVA, Mann-Whitney test), regression analysis, and special methods, that is, the modified cumulative returns and the trading simulation approaches. We find strong evidence in favour of abnormal price movements after price gaps. We observe that during a gap day prices tend to change in the direction of the gap. A trading strategy based on this anomaly was efficient in that its results were not random, indicating that this market was not efficient. The momentum effect was found to be temporary and no evidence of seasonality in price gaps was found. Lastly, our results were also contrary to the myth that price gaps tend to get filled.

Keywords

Price gap anomaly, Trading strategy, Stock market, Momentum effect, Efficient market hypothesis