

A Study of Newly Added Stocks: Analysis in the DJIA Index's Performance Consistency in 2013

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Abstract: The performance of the Dow Jones Industrial Average (DJIA) Index components is examined in this event study, which focuses on three newly included equities announced in September 2013. The investigation's main question is: Is the performance of DOW winners consistently consistent in the two months leading up to and following the announcement? This study looks at the performance consistency of the three stocks that were recently introduced to the DOW Index. Furthermore, during the same two-month periods, this article compares the performance of the new trio of stocks to the performance of an ideal portfolio of Dow equities. In the past, the optimal portfolio theory was largely employed in theoretical discussions but was rarely applied to examining the consistency of DOW winners' performance.

Keywords: Information, Investment performance, consistency, and market efficiency, Stocks on the NYSE

INTRODUCTION

In 2013, the Dow Jones Industrial Average (DJIA) Index committee announced a significant reorganisation. Three freshly added equities have the potential to outperform the market. Did the winners maintain their winning streak for the next two months after the DJIA Index component revisions were announced in 2013? To answer this research topic, this article examines the performance of Dow component winners for the periods around the DJIA Index component changes in 2013.

The following are essential statistics about the Dow Jones Industrial Average Index, according to S&P Dow Jones Indices LLC (2014). The Averages Committee, for starters, keeps track of the Index. On a case-by-case basis, components are added and removed. For the sake of consistency, such changes are uncommon, and usually occur as a result of corporate acquisitions or other significant changes in the primary business of a component company.

LITERATURE REVIEW

In the framework of the price-pressure concept, the performance consistency of equities surrounding the announcement of Index component additions and deletions has been studied (PPH). It suggests that as firms are introduced to (or removed from) a market, there is a transitory spike (or fall) in returns and trading volumes around the announcement date. Firms that were removed from the Index, on the other hand, saw huge price drops.

Investigative Design and Optimum Portfolio Construction Methodology

The Wilcoxon Matched-Pairs Signed-Ranks Test of SPSS is used in this study to answer the question of market efficiency of the DOW Index. The Wilcoxon test can be used to analyse the impacts of component changes in a partial equilibrium analysis. The Wilcoxon signed-ranks test is used to compare "before" and "after" data.

This research used a set of paired Xa and Xb values, where Xa represents the holding period yield for 60 days prior to the component modifications in September 2013 and Xbis represents the holding period yield for 60 days following the component changes in September 2013.

Thomson Reuters provided the data for this study. This section explores how to apply optimum portfolio theory to Dow equities using 30 Dow components. The programme creates the best portfolio based on 60 days of daily market data before the Dow component changes. In the past, the theory was largely discussed in academic circles. This section lays out a practical and operational approach for putting together optimal component portfolios. The capital asset pricing model, methods for calculating excess return to risk ratios, and unsystematic risk metrics are all included in the programme. This section demonstrates a realistic method for determining precise weights for a diversified optimal component portfolio. It focuses on demonstrating a process for determining an ideally diversified portfolio of components. The performance features of optimal portfolios created using all Dow component stocks are also examined in this section. The technique for determining the best portfolio was developed by Elton, Gruber, and Padberg (1987) (= EGP technique). The Portfolio Management Software by Nawrocki was used to implement this strategy (1987).

Set the cutoff ratio to include those components that need to be qualified for the best mix. The best blend will include all components with a “excess return to beta” ratio larger than the cutoff rate. The model calculates the C ratio for each individual component by solving a mathematical objective function to maximise the tangency slope of excess return to the component’s risk measure while keeping the constraint that the sum of the proportions of individual components in the mix equals one. This ideal cutoff ratio (C’) is determined by determining the C ratio of the last individual component in the sorted list, which is less than its “excess return to beta” ratio.

FINDINGS

Table 1-A shows that UTX, BA, and DD were three high performers in terms of holding period yields (HPYs) before the Dow Index changes during the two-month period, while KO, MSFT, and VZ were three bottom performers. Surprisingly, none of these six stocks were included in the Index’s components (GS, V, and NKE). The exclusion signified a drop in DOW Index efficiency as a result of the recent event that changed the components. If the Index were inefficient, the additions would have favoured the Dow components’ performance consistency, but there was no evidence of such inefficiency. NKE is the lone stock in both the optimal portfolio and the newly added stock group, as shown in Table 1-B. The results of the Wilcoxon matched pairs signed ranks test on the market efficiency of Dow stocks in general are shown in Table 2. It demonstrates statistical proof that the event of Index component adjustments did not disrupt the Dow Index’s efficiency. DowIndex alterations had no noteworthy performance changes among the overall components between the periods before and after the changes, according to the 2-tailed significance of 0.453.

The EGP Optimal Portfolio as of September 23, 2013 is shown in Table 3-A. The Elton-Gruber-Padberg portfolio was built by examining 30 Dow stocks for 60 days prior to the September 2013 component adjustments. MMM (39.91 percent weight), UTX (36.74 percent weight), and other ingredients are included. Its daily anticipated return relative is 1.002065, which translates to a 60-day-HPY projected return of 12.39 percent. The EGP ideal portfolio, however, performed worse than the equally-weighted portfolio comprising three fresh Dow Index additions, as shown in Table 3-B. Table 3-C shows that for the next 60 days, the equally-weighted portfolio of new trio stocks had an actual HPY of 7.01 percent, which was 2.88 percent greater than the actual HPY (4.13 percent) of the EGP ideal portfolio.

Despite the EGP optimal portfolio’s subsequent reduced performance following its development, it remained a collection of “winners.” The EGP ideal portfolio included six companies ranked 1 (UTX), 2 (BA), 3 (DD), 4 (NKE), 5 (MMM), and 10 (MMM), as seen in the last two columns of Table 1. (CVX). The EGP optimum portfolio had an average performance rating of 3.5 before the 60-day period. However, while the EGP portfolio’s average performance rating for the post-60-day period fell to 14.3, it still represented consistent “winners.” The new triple portfolio’s equally-weighted portfolio, on the other hand, outperformed the EGP ideal portfolio significantly more consistently. The new trio stocks’ average rank for the first 60 days was 7.0, indicating that they were “winners,” and the average rank for the second 60

days was 9.3, indicating that they were “winners” again. As of September 23, 2013, Table 4 depicts descriptive statistics for 30 DOW stocks. The smallest daily return relative was 0.99915 (VZ), while the maximum daily return relative was 1.0070. (UTX). The average correlation for 435 correlations was 0.2858, which was a crucial input for optimising the EGP portfolio.

CONCLUSION

Is the DOW winners' and losers' performance constant two months before and after the announcement? Dow stocks performed well over the sample period, according to the conclusions of this study. The Index's performance and historical consistency were not affected by the component adjustments on September 23, 2013. The performance of the three stocks of inclusion, on the other hand, was rather spectacular, as they performed comparably well after the inclusion and even outperformed the EGP ideal portfolio 60 days following the component change. Nike, Inc. (NKE), in particular, outperformed the other two companies. NKE was the only stock that was both a new addition to the Dow Index and a stock chosen for inclusion in the EGP ideal portfolio. Overall, Boing (BA) was the best performer, while NKE was the second best performer. These two stocks also had the most consistent performance.

NKE, the best-performing company among the three new additions to the Index, was also chosen in the study's EGP optimum portfolio. This data may support the idea that the EGP portfolio construction has qualities similar to those employed by the Dow Jones Industrial Average (DJIA) Index Committee to revise the Index composition. If that's the case, the EGP ideal portfolio could point to potential Dow Index candidates for inclusion or deletion in the future. Even if past performance is no guarantee of future results, it may indicate a higher likelihood of similar results in the future, at least in the short term.

The actual performance of the EGP optimal portfolio throughout the sample period of 60 days after September 23, 2013 (4.13 percent) outperformed DIA (3.68 percent), a Dow Index proxy. Even while the EGP optimal portfolio did not outperform the equally-weighted portfolio of three newcomers (7.01 percent), it is nevertheless worth considering for any serious global investors (see Table 3-C).

References

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