On Russell index reconstitution

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Abstract This paper investigates whether abnormal returns permanently exist in transparent U.S. Russell index reconstitution and provides evidence to disentangle the competing hypotheses associated with the index effect in the literature. Additions to Russell 1000 generate cumulative excess returns of 10.9% from 2 days before May 31 to June 30 while stocks deleted from Russell 2000 Growth Index suffer cumulative loss of 6.6%. The effect of index reconstitution on stocks in the style switching groups is moderate while it is much smaller for stocks in the retention groups. Based on daily trading volume, there is evidence that money managers tied to Russell style indexes tend not to rebalance their portfolios actively until the time of index reconstitution to avoid tracking error. However, for stocks generating large excess returns, money managers trade them actively prior to the reconstitution. This study is supportive of the imperfect substitutes hypothesis in explaining the index effect, given the absence of complete reversal of the event period abnormal returns and of consistent improvement in liquidity for the index additions. In the joint test, the price pressure hypothesis and the liquidity hypothesis explain the marginal index effect at most by 0.12% and 3.05%, respectively, while the imperfect substitutes hypothesis explains it at least by 9.21%. Furthermore, the index effect is not purely driven by individual stock price momentum.

Russell, along with Dow Jones and McGraw-Hill’s Standard & Poor’s unit, is among the best-known providers of equity indexes, which are used to track broad portions of the stock market. S&P indexes are not rules-based while Russell indexes are. All changes in the S&P indexes are fully discretionary and are determined by the Index Committee based upon public information. However, the inclusion and deletion of firms for the Russell indexes are more transparent and are reconstituted every June 30 based on stocks’ May 31 total market capitalization. It is well established in the literature that when a stock is added to the S&P 500 index, it earns positive abnormal returns in the order of about 3% and experiences increased

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trading volume. By contrast, Russell indexes have received little attention from academic literature despite the fact that a significant amount of assets under management is specifically tied to these Russell indexes. As of June 2005, more than $1,895.5 billion is invested in funds that rely on Russell’s U.S. indexes as investment models.

Prior empirical work attempting to identify the source of index reconstitution effects has focused primarily on the S&P 500 index. While finding the price effect of index inclusions is common, the causes of the price increase are still much debated and at least four competing hypotheses appear in the literature. Shleifer (1986) claims that the price increase is driven by the imperfect substitutes hypothesis. If the stocks added to the index do not have perfect substitutes (i.e., their demand curves slope down), a rightward shift in demand for these stocks (driven by index funds) will result in higher prices.

Since Shleifer (1986), several competing hypotheses have emerged to explain the index effect. Harris and Gurel (1986) argue that suppliers of liquidity can demand higher prices during the temporary surge in demand from index funds at the time of index inclusion. This price pressure hypothesis implies that the positive returns over the rebalancing period should be offset by subsequent negative returns of approximately equal magnitude. While Harris and Gurel (1986) are unable to reject complete reversal of the event period abnormal returns, Shleifer (1986), Jain (1987), and Dhillon and Johnson (1991) find no evidence of return reversal, and Beneish and Whaley (1996) and Lynch and Mendenhall (1997) find partial reversals. By examining the changes in betas of additions to S&P 500 index, Vijh (1994) finds supportive evidence of the price pressure hypothesis. The information hypothesis declares that index inclusions could convey favorable news about the included company’s prospects. Evidence supportive of the information hypothesis is provided by Jain (1987), who observes significant abnormal returns when stocks are added to S&P supplementary indexes (which are not mimicked by index funds), as well as by Dhillon and Johnson (1991), who examine the option and bond returns of firms being added to the S&P 500. A final possibility is the liquidity hypothesis. Inclusion may be followed by a closer scrutiny of the company by analysts and investors and thus by an increase in public information about it. As a result, the stock will be traded more widely, become more liquid, and the bid-ask spread on the stock will fall. This lowers the required rate of return on the stock and thus leads to a permanent price increase. Hegde and McDermott (2003), using intraday data, support this argument while Vijh (1994) presents evidence against this.

Among these hypotheses, only the price pressure hypothesis predicts that the price-increase-associated index effect will be temporary while others predict a permanent price increase. Although no one disputes the existence of the S&P 500 Index effect, which hypothesis mainly explains the index effect has not yet been answered. Since these hypotheses may not be mutually exclusive and in general have similar implications—increases in price and trading activities for index additions around index reconstitution, it is essential to examine these competing hypotheses simultaneously. This study aims at such an attempt.


3 The fact of increases in beta of S&P 500 additions is not inconsistent with the imperfect substitutes hypothesis, which predicts that two identical stocks, one added to the index and one not, are no longer perfect substitutes. Thus, S&P 500 stocks comove less with non-S&P 500 stocks. Barberis et al. (2002) propose a trading-based model of comovement to explain the increase in betas of additions to S&P 500.

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