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Analyst responses to stock-index adjustments: Evidence from MSCI Taiwan Index additions

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ABSTRACT

Using data from MSCI Taiwan Index adjustments, we study analyst responses to stock additions from 1999 to 2007. The empirical results show that the magnitudes of changes in analysts' earnings-per-share forecasts are similar to those of their two benchmarks for new additions to the index. Therefore, in our sample we find no significant information effect from the additions. We also find that the absolute forecast errors made by analysts are smaller for new additions and those foreign analysts are more accurate than local analysts. This finding demonstrates that new additions to the index exhibit significant performance improvements.

1. Introduction

Many studies exist that examine the price and volume effects of stock-index adjustments. For example, Harris and Gurel (1986), Shleifer (1986), Wurgler and Zhuravskaya (2002) and Chen, Noronha, and Singal (2004, 2006) examine the change in the composition of the S&P 500 index. Some studies focus on non-US stock indices. For instance, Chakrabarti, Huang, Jayaraman, and Lee (2005) use a common set of country indices—the MSCI country indices and further document that stock returns and volumes exhibit "index effects" in international markets. Greenwood (2005) finds similar effects in the Nikkei 225 Index. Shu, Yeh, and Huang (2004) analyze price relations for Taiwanese-listed firms that are added to or deleted from the MSCI free indices. However, few studies showed how stock additions and deletions to major indices are related to analysts' forecasts until Denis, McConnell, Ovtchinnikov, and Yu (2003) present their results. Denis et al. (2003) analyze earnings per share (EPS) forecasts for companies that are newly added to the S&P 500 index and also compare post-addition realized earnings to the pre-addition forecast. They find that companies that are newly added to the index experience significant increases in EPS forecasts and apparent improvements in realized earnings. This finding indicates that an addition to the S&P 500 is not an information-free event.

The nature of stock markets varies from one country to another. The US stock market is a developed market and the major investors are institutional. The Taiwanese stock market, unlike the US market, is an emerging market and the main investors are individuals.[2] Emerging markets can be relatively risky because they carry additional political, economic, and currency risks. They certainly are not for those who value safety and security above all else. An investor in emerging markets should be willing to accept volatile returns—there is a chance for large profit at the risk of large losses. An upside to emerging markets is that their performance is generally less correlated with developed markets. As such, they can play a role in diversifying a portfolio (and thus reducing overall risk). Market size, liquidity, and industry grouping among other factors determine the members of the S&P 500. The S&P 500 is designed to be a leading indicator of US equities and to reflect the risk/return characteristics of the large cap universe.[3] The MSCI Taiwan Index is a free float-adjusted market capitalization weighted index whose purpose is to track the equity market performance of large- and mid-cap securities listed on the Taiwan Stock Exchange and the GreTai Securities

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[2] According to information published on the website of the Taiwan Stock Exchange Corporation, the ratio of total daily trading volume of individual investors accounted for the total market trading volume reached more than 70% from 1999 to 2007.
[3] http://www.investopedia.com/terms/s/sp500.asp#axzz1nsiLPWAF.

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Market. The screening factors for MSCI index members are size, liquidity, and minimum free float. Contrary to the S&P 500, the MSCI does not target a specific number of securities for its indices. Therefore, an addition does not automatically lead to a deletion. The difference between Taiwan and US stock markets and the features of adjusted stock indices might generate different results in analysts' forecasts when stocks are added or deleted. This study examines whether earnings forecasts by analysts of the MSCI Taiwan Index differ from the earnings forecasts by analysts of the S&P 500. The study also examines whether the earnings forecasts of analysts differ between newly added stocks and their matched stocks.

Additionally, this study analyzes the differences between foreign analysts and local ones of the MSCI Taiwan Index. The study classifies an analyst as a "local (foreign) analyst" if he or she works for a local (foreign) firm regardless of whether the country location of the analyst is the same as the firm he or she reports on. To examine whether local and foreign analysts have the same earnings forecasts, this study uses absolute forecast error as a proxy for "forecast accuracy" to test for the accuracy of local and foreign analysts. To the best of our knowledge, the results of the study represent the first documentation so far of whether local or foreign analysts outperform one another in their forecast accuracy on index changes. The results can provide more information for investors and management to make better decisions.

The empirical results show that for firms newly added to the MSCI Taiwan Index, the magnitudes of changes in analysts' EPS forecasts are similar to those of their two benchmarks. Therefore, in our sample there is no significant information effect from MSCI Taiwan Index additions. The absolute forecast errors analysts make for "all other firms" and "industry, size, and liquidity (ISL) matched firms" are larger than those analysts make for "newly added firms." This finding demonstrates that newly added firms in the MSCI Taiwan Index lead to greater monitoring of investors and that they respond with a greater effort to improve their performance. Our finding is similar to the finding of Chang (2003) in that analysts working for foreign institutions have the advantage of belonging to more sophisticated and resourceful organizations.

The paper proceeds as follows. Section 2 reviews the literature. Section 3 presents the data and method used in this study. Section 4 displays the changes in analysts' EPS forecasts. Section 5 tests for differences in absolute forecast errors and Section 6 concludes.

2. Literature review

2.1. The price and volume effects of changes on stock-index adjustments

The literature that studies the effects of trading volume and return changes on the additions and deletions of stocks to major stock indices is sizable. Harris and Gurel (1986), Shleifer (1986), Dhillon and Johnson (1991), and Wurgler and Zhuravskaya (2002) find strong price effects for S&P 500 additions. Kaul, Mehrotra, and Morck (2000) and Okada, Isagawa, and Fujiwara (2006) find similar effects in the Toronto Stock Exchange TSE 300 and Nikkei 225 indices respectively.

Harris and Gurel (1986) find strong effects for S&P 500 additions, but unlike the permanent volume effect, the price effect reverses over time. Therefore, they summarize that these effects are due to price pressures. Shu et al. (2004) analyze price–volume relation for Taiwanese-listed firms that are added to or deleted from the MSCI free indices in the sampling period from May 17, 1999, to May 21, 2001. They find additions (deletions) to the MSCI free indices have positive (negative) abnormal returns in the run-up window from the announcement day up to one day before the changes were implemented. Significant reversals in the change days follow these returns. Shankar and Miller (2006) find that newly added firms to the S&P 600 index experience a significant price increase at announcement. However, the price and volume effects are temporary and are fully reversed within 60 days. Okada et al. (2006) find that the stock prices of newly added firms rise on the announcement date. They continue to rise until the day before the effective change date, and then decline beginning on the change date. Hence, their results also support the temporary price-pressure hypothesis.

On the other hand, Shleifer (1986) finds more permanent price changes and attributes them to the downward sloping demand curve for stocks—the fact that stocks are imperfect substitutes for one another. Wurgler and Zhuravskaya (2002) observe that stocks with no close substitutes experience a higher rise in returns on additions to the S&P 500, their finding strongly corroborates evidence for the downward sloping demand curve view. Kaul, Mehrotra, and Morck (2000) also report results consistent with the downward sloping demand curve but based on weight changes in the Toronto Stock Exchange—the TSE 300. Dhillon and Johnson (1991) argue that there might be an information effect in the addition or deletion of stocks of a major index. Chakrabarti et al. (2005) document the effect of changes in a common set of country indices—the MSCI country indices. They indicate that developing countries (including Taiwan) have significantly positive abnormal returns of 4.84% in the run-up window and 4.57% in the post-announcement day permanent window.

Chen et al. (2004, 2006) study the price effects of changes to the S&P 500 and witness asymmetric price responses. Consistent with prior work, they find permanent price increases for firms added to the S&P 500. However, the authors find that the firms deleted from the index do not experience permanent negative price effects. They ascribe the possible reason for the asymmetric price responses to the effects arising from the changes in investors' awareness.

Unlike the above studies, Denis et al. (2003) calculate the cumulative excess returns and examine earning expectations and realized earnings around the time period in which stocks are newly added to the S&P 500. The analytical result shows that addition to the S&P 500 appears to have an association with an increase in investors' earnings expectations and with an improvement in the actual earnings relative to comparable companies. This result indicates that addition to the S&P 500 is not an information-free event. Therefore, this paper extends the work of Denis et al. (2003) by using adjustments to the MSCI Taiwan Index to study the EPS forecast changes and absolute forecast errors of analysts.

2.2. The performances of local and foreign analysts

Does distance influence the quality of information that investors get? A large number of papers find local investors have an information advantage (Brennan & Cao, 1997; Hau, 2001). However, some papers suggest that foreign investors who participate in a market can be better informed than local investors (Froot, O'Connell, & Seasholes, 2001; Seasholes, 2000). These studies provide mixed conclusions regarding whether local or foreign investors have an information advantage.

In contrast with investors' information advantage, Bae, Stulz, and Tan (2008) directly examine analysts' forecast accuracy. They observe whether analysts that are residents in a country make more precise earnings forecasts for firms in that country than analysts who do not reside in that country. They find local analysts have a significant information advantage over foreign analysts for a large sample of countries. The result is the same as Malloy (2005) who observes US analysts who are closer to the headquarters of firms have an information advantage.

However, Bacmann and Bolliger (2001) investigate the relative performances of local and foreign financial analysts in Latin American emerging markets. They find that foreign financial analysts outperform local analysts in these markets. Foreign analysts produce more timely and accurate forecasts. They observe a significant price reaction after analysts' downward forecast revisions. Chang (2003) compares the stock recommendations of local, foreign, and expatriate analysts for Taiwanese firms. He finds a local advantage in that expatriate