THE IMPACT OF STRATEGIC ALLIANCES ON EARNINGS PREDICTABILITY

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INTRODUCTION

Strategic alliance has often been argued as a more flexible means to achieving some of the same benefits as mergers and acquisitions. Though the empirical studies have examined the market response to both the mergers & acquisitions and the strategic alliances, not many studies have attempted to understand how the market participants decipher the information that is released in these announcements. In the case of mergers and acquisitions, some studies have documented that the earnings predictability deteriorates after merger, whereas other studies show that this deterioration is merger-specific. However, in the case of strategic alliances, we do not have any studies that document how financial analysts incorporate the information in the strategic alliances in their earnings forecasts, and if the earnings predictability improves or deteriorates after the strategic alliance.

The purpose of this study is to examine the impact of strategic alliances (henceforth SA) on analysts' ability to forecast earnings. It is important for managers to understand these effects because the future level and variance of earnings of a firm impacts its stock price and cost of capital. If the ability to forecast future earnings deteriorates (improves) significantly after the SA, then this cost (benefit) should be considered by the management in evaluating the SA decision. The issue of examining earnings predictability is an important one in other ways as well. Investors and financial analysts alike, focus on forecast of firms' earnings to make investment decisions, and in generating buy/sell/hold recommendations for the stock. If SA affects earnings forecasts, then understanding this effect will improve these decisions.

We compare the financial analysts' forecasts of earnings before and after the strategic alliance to assess the impact of SA on the overall earnings predictability. We control for firm-size and firm-industry to examine the impact of the alliance on earnings uncertainty.

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To the best of our knowledge, no prior study has examined the impact of SA on earnings predictability. However, prior related research on the impact of mergers and acquisitions on analyst forecast accuracy documents that the predictive accuracy subsequent to mergers deteriorates (Haw, Jung and Ruland 1994). Our main focus is on the implications of SA on the transparency of the future profitability of the firm, and its impact on analysts' forecast error.

The predictive accuracy of analysts' consensus forecast, constructed by combining the forecasts of financial analysts covering the firm, is a function of several factors. We compare the pre-alliance and post-alliance forecast accuracy of consensus analysts' forecasts before and three years after the SA to address the following research questions:

1. Does the forecast accuracy of financial analysts deteriorate subsequent to SA?
2. Is the deterioration larger because of some SA characteristics?
3. Does the forecast accuracy improve or further deteriorate in periods subsequent to the SA?
4. Finally, does the forecast accuracy ever reach pre-SA levels, and if so how long does it take to reach those levels?

HYPOTHESES DEVELOPMENT

There are several arguments that suggest that earnings forecasting accuracy will diminish after SA. For instance, SA interrupts the time series of old earnings, and the underlying forecasting assumptions. Because most analysts follow a specific industry, SA across industries may make earnings more difficult to understand, decipher, and forecast by analysts who followed only of the two industries. These arguments suggest that analysts will have difficulty in forecasting earnings subsequent to SA. Should all SA result in diminished forecasting accuracy? We argue that this depends, to a large extent, on the nature of the alliance. Some of the arguments previously raised do not apply in all alliances. For instance, the firm could grow significantly in size after the SA. Because larger firms, in general, are subject to more scrutiny by the press and the financial community, there could be an increase in the amount of information available to the analysts. This increased media coverage can result in enhanced ability to forecast earnings. Usually, larger firms also have higher analyst following. Therefore, after SA, we can also expect an increase in the number of analysts following the firm, resulting in an aggregate forecast that is relatively free of idiosyncratic error associated with individual analysts. Furthermore, if the two firms were in the same industry, we would expect the analysts to have better understanding of the profits generated by the alliance than when the SA involves firms in two different industries. These arguments suggest that SA within the same industry coupled with an increase in available information and analyst following, keeping other factors constant, should result in an increased precision of firms' consensus earnings forecast. This discussion is summarized by the following hypotheses that are the basis for the empirical analysis.

Hypothesis 1: Earnings predictability will **decrease** subsequent to SA.
Hypothesis 2: Earnings predictability will **decrease** by a larger amount subsequent to SA in which the two firms are *from different industries* relative to SA from the *same industries*.
Hypothesis 3: After the SA, earnings predictability will improve over time.
Hypothesis 4: After the SA, earnings predictability will improve faster for two firms that had prior history of successful SA relative to those firms that never had a SA.

DATA AND SAMPLE

Variable Definition:
   For each firm in the sample, we constructed the following variables one year prior to the SA, and three years after the SA. The year of SA is not considered for analysis.

 1. **_Apfe_i:** *Absolute Percentage Forecast Error* of firm i in any year, is defined as absolute value of the most recent consensus forecast of earnings minus the actual earnings divided by the absolute value of the actual earnings for the same year.
$$Apfe_i = |F_i - A_i| * 100 / |A_i|$$

To avoid distortions due to scaling factor, we set Apfe equal to 100 in those instances where the Apfe exceeded 100, as done in the prior literature (Foster 1977).

2. ***Dapfe_{it}***: *Apfe* of firm i, in year t minus the *Apfe* of the same firm one year prior to the SA. The variable *Dapfe* is defined as follows:

$$Dapfe_{it} = Apfe_{it} - Apfe_{i(-1)}$$

Where, $Apfe_{i(-1)}$ is absolute percentage forecast one year *prior* to the SA, $Apfe_{it}$ is absolute percentage forecast t years *after* the SA, and $Dapfe_{it}$ is computed one, two, and three years after the SA.

3. ***Analyst_I_i***: is a dichotomous variable taking a value of 1 for firms with increased analyst following and equals zero otherwise.

4. ***Industry_i***: is a dichotomous variable taking a value of 1 for SA involving firms in same industry and equals zero otherwise.

5. ***SA_Exp_i***: is a dichotomous variable taking a value of 1 for SA involving firms with no prior alliance experience and equals zero otherwise.

TESTS

The following estimation model is used to test some of the hypotheses:

$$Dapfe_{it} = \beta_1 (Analyst\_I_{it}) + \beta_2 (Industry_i) + \beta_3 (SA\_Exp_i) + \beta_4 (Firm\_Size_i) + \varepsilon_{it} \tag{1}$$

Firm_Size a dichotomous variable that equals 1 for the largest firms in the sample, based on the median market capitalization of the firms involved in SA. The model is estimated for t equal to 1, 2, and 3. This enables us to compare for changes in forecast accuracy one, two and three years after the SA. We make the following predictions with respect to the signs of the estimated parameters:

β_1 will be less than zero, as we expect the forecast accuracy of SA with increased analysts' following to improve;

β_2 will be less than zero as we expect the accuracy of these firms to in the same industry to be smaller than the accuracy of firms in different industries after the SA.

β_3 will be negative because we expect forecast errors for the firms with prior SA experience to be smaller than the firms with no prior SA experience.

β_4 will be negative because we expect forecast errors for the larger firms to be smaller than the smaller firms.

REFERENCES

Foster, G., 1977, "Quarterly Accounting Data: Time Series Properties and Predictive-Ability Results." *Accounting Review*, Vol. 52, 1-21.

Haw, In-Mu, Kooyul Jung and William Ruland, 1994, "The Accuracy Of Financial Analysts' Forecasts After Mergers." *JAAF*, Vol. 9(3), 465-483.

Sinha, P., Brown, L.D., Das, S., 1997. "A Re-examination of Financial Analysts' Differential Earnings Forecast Accuracy." *Contemporary Accounting Research, Vol.* 14, 1-42.