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Comparison of mergers and acquisitions among developed and developing countries and explanatory factors for the differences

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Abstract

This paper studies the value creation from mergers and acquisitions made between developed and developing countries on stock market and the driving factors for abnormal returns. All the M&A transactions are divided into 4 subsets based on the country of acquirer or target and are analyzed both separately and jointly. The whole sample includes 14761 worldwide M&A transactions from 2004 and 2013. Empirical evidence from this study shows that the developed bidders that target developing firms ("D to U") create the greatest value for acquirers' shareholder, while the deals made the other way round ("U to D") return the lowest value. It is also found that developed acquirers receive generally higher abnormal returns than the developing ones. The findings with regards to payment method contrast previous literature that stock payment is always rewarded with higher CAR than the cash payment, while the result for mixed payment is ambiguous. As for size effect, cross-sectional regressions show that the returns of all deals have significantly negative relation with the market value, that is to say the smaller the acquirers the higher value they generate for shareholders through mergers and acquisitions. However, such relation is significantly less negative for developing acquirers than developed ones. In addition, deals with public listed target perform worse than those with private target in general except for "D to U" deals which show insignificant difference between these two cases.

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I. Introduction

With the rise of globalization, companies around the world have increased their appetite for cross-border M&As since the fifth takeover wave started in 1992 (Gaughan, 2010). The decision of acquiring foreign targets is usually backed up with several financial and strategic intentions, such as to realize the expansion of market share (Cloodt, Hagedoorn, & Van Kranenburg, 2006), to access strategic assets say new technology, management skills, skilled labor etc. (Graebner, 2004), to seize other opportunities on global market and diversify the products (OECD, 2010), so on and so forth.

Bidders from emerging markets, such as Eastern Europe, Asia, and Central and South America, are playing more prominent role in M&A business due to their increased liberalization (Goldstein, 2006) and privatizations (Bednarczyk, Schiereck, & Walter, 2010). It is found that during 1987-2005, the share of developing and transition economies in the global cross-border activity rose from 4% to 13% in value terms, and from 5% to 17% in terms of number (Hope, Thomas, & Vyas, 2008). In 2010, the Indian telecommunications company Airtel spent a record-breaking US$ 10.7 billion to acquire the Kuwait-based Zain Telecom which has already covered its business over 19 countries in Africa.

The paper is focused on the valuation of shareholders for mergers and acquisitions made between developed and developing economies and looks into the possible reasons behind the abnormal stock returns upon these deal announcements. There are already plenty of studies that have been made to give explanations for the driving factors for M&A activities. However, most of them are concentrated on the deals made by bidders from developed countries. Therefore, this paper will test whether these factors also exert significant impact on acquiring firms from emerging markets. Above all, the research question of this paper is

Which acquirers get better valuation upon the announcement of merger or acquisition, those from developed countries or developing ones?

To answer this question, M&A transactions are collected from all over the world within the period of 2004-2013. For the sake of simplicity, nations are categorized into two groups: developed and developing, which will be denoted as "D" and "U" respectively[1]. Based on this classification, all the observations are divided into four subsets: "D to D", "D to U", "U to D" and "U to U" in an attempt to gain deeper understanding for this research.

A general overlook of the selected sample in this paper shows that the trend of M&A activities in recent ten years is similar to the findings in other reports. As we can see in Figure 1, the number of mergers and acquisitions, following the sixth takeover wave shows a steady growth since 2004 and reached its peak in 2007. However, under the strike of financial crisis, the next two years saw a sharp decline in M&A businesses. Although the economy gradually recovers from the recession in the following years, the signs of improvement in M&A market are not obvious. Especially in the year of 2013, total number of transactions around the world falls back to the level in 2009. Similar trend was found in terms of value in billion US dollar (shown in Figure 2)[2]. Further empirical analysis for the data will be discussed later.

The rest of this article is arranged as follows: Section II reviews the literature on different factors that might influence the valuation of acquiring shareholders. Section III presents the selection of data as well as the interpretation of methodology. Then in Section IV, empirical results from analysis are explained in detail. Last but not the least, conclusions and discussions are made for further research in Sections V.

II. Literature Review

1. Method of payment

[1] According to the International Monetary Fund, the classification of advanced, emerging and frontier (pre-emerging) economies is employed. Countries or regions from advanced economies are treated as "Developed", while those from emerging and frontier market are combined as "Developing" nations. The frontier economies are referred to the countries that are smaller and less accessible but still investable. **Invalid source specified.**

[2] As KPMG puts it in their report: "The number of worldwide M&A deals completed in June 2013 was 10 percent lower than the number completed in July 2012, continuing the steady downward trend for deal volumes over the past 5 years". **Invalid source specified.**

Evidence has been found in many studies that methods of payment are closely associated with the success of M&A activity. A full cash payment for the target company would show greater confidence of a bidder in realization of benefits through the acquisition, since they believe synergies resulting from M&A would eventually bring up their stock price. On the other hand, those purchases made with only stock might signal weaker certainty of the acquirer about the success of the deal, as risks are shared with the target through exchanged stocks. From the aspect of stock market, when there is overvaluation for the acquirer's share, management is more inclined to make stock purchase for target. While in the case of undervaluation, management may prefer to pay for the acquisition by cash (Cavallaro, 2011). In accordance with the discussion above, studies show evidence that payment in stock has a negative impact on abnormal returns, especially when target are public listed (Travlos, 1987) (Chang, 1998). Loughran and Vijh found that firms, on average, earned significantly negative excess returns of -25.0 percent from stock mergers whereas firms that completed cash tender offers earned significantly positive excess returns of 61.7 percent during a five-year period following the acquisition (Loughran & Vijh, 1997). Nevertheless, in more recent years, different results are found towards the impact of payment method. According to a report from KPMG, it was found that among 311 global mergers and acquisitions announced in the year of 2007 and 2008, stock financed deals had better performance than the cash deals. Researchers believe that this might relate to a higher leveraged status of the acquirer after cash payment for the deal, which is likely to result in negative reactions from the market during the economic downturn (KPMG, 2011).

2. *Industry-specific effect*

It is also argued that industry relatedness would affect the valuation of the firm's equity during mergers and acquisitions. Evidence has shown that acquiring firms are more likely to partner with those from the same or complementary industry in domestic M&A deals (Ellwanger & Boschma). Researches also found that the reasons behind this might be the realization of the synergy effects and economic of scale and scope that stem from related resources say similar products, technologies, distribution channels etc. (Chatterjee, 1986) (Seth, P., & Pettit, 2000) (Homberg, Rost, & Osterloh, 2009). Furthermore, there are

other arguments that the higher relatedness between acquirer and target, the less efforts are needed for the integration of knowledge and operations (Nesta & Saviotti, 2005).

3. Target public status

Many studies also find correlations between public status of target and payment method and interpret its importance on the valuation of shareholders' equity. As pointed out by Capron, stock market reacts more favorably to the acquisition that targets private firms than public listed ones due to the private firm discount. Since the cash flows of private companies are harder to estimate, private sellers tend to discount them to reflect the higher risks. (Capron, The PRIVATE M&A, 2008) Studies have also shown that private firms are normally paid 20-30 percent lower than the public listed firms during the acquisitions. Moreover, there are usually less bidders competing for private targets due to their lack of transparency, invisibility and market price, which would easily put them into poor bargaining position. (Capron & Shen, 2005)It is often the case that the sales of public target are involved in auctions (Milgrom, 1987) while those of private one are made through voluntary exchange (Zingales, 1995).

4. Country-Specific Effect

Despite the fact that cross-border acquisitions have increased significantly in recent decades, domestic deals still dominate in the acquisitive growth for many businesses. The data from this study also show a majority of M&As happened within the same country. As displayed in Table 3, 10348 out of 14761 deals are domestically traded and no more than 30 percent of them are cross-border transactions. It is also reported that domestic deals made in 2007 and 2008 return greater value to shareholders (KPMG, 2011). Therefore, even though acquiring firms may benefit from market expansion, productivity improvement, gaining new technology, etc. though cross-border M&As, they could also face challenges such as host country corruption, cultural differences (Stahl & Voigt, 2003) and other governance related factors (Weitzel & Berns, 2006).

5. Deal attitude

It has been argued that the attitude of M&As is related to the performance of acquirers and targets. Generally it is believed that hostile takeovers result in more efficient and better run organizations and thus create value for acquirers' shareholders. However,

Möhlmann (2012) also found evidence showing that this is not always the case since the costs of acquisition might outweigh the realized efficiencies and synergies.

6. Size effect and Deal value

Dated back to Fama and French three-factor model, size effect has been emphasized to explain the abnormal returns in the stock market. Various studies have also shown its association with M&A transactions. Moeller, Schlingemann and Stulz (2004) documented that smaller acquirers have significantly higher CARs than their larger counterparts and they also found evidence that larger firms are more likely to subject to hubris and higher agency costs of managerial discretion. As for deal value, KPMG (2011) reported that acquisitions made by smaller companies (based on market capitalization) during 2007-2008 have better performance than the larger ones. Therefore, it could be included as a control factor.

III. Data and Methodology

1. The data

The sample of mergers and acquisitions is drawn from Thomson One financial database according to the following criteria. First, the announcement date and effective date lie within the time period of ten years from January 2004 to December 2013. Then the transactions with value lower than 10 million dollars are excluded from the sample. Also excluded are financial firms since their calculation of normal returns is ambiguous. Next, only completed deals are considered in an attempt to avoid survival bias as well as cancellation of the deal. In terms of public status, only public listed acquirers are included since the event study requires availability of stock price which is not the case for privately held companies. As for target, both public listed and unlisted firms are taken into account. Meanwhile, ambiguous deal attitude is also screened out with only "friendly", "neutral" and "hostile" left in the sample. Then Datastream is used to obtain the stock price for individual firms and also the price of market indices based on announcement date, acquirer’s sedol code and market index code. However, some data are not attainable in Datastream, which is possibly due to an event date that is too recent or missing prices for that particular firm.

Therefore, the whole process of screening and acquiring data ends up with a net result of total 14761 transactions made by firms from 70 different countries or regions. Of all these mergers and acquisitions, 12198 are "D to D" transactions, 820 are "D to U", 326 are "U to D", and 1417 are "U to U", where "D" represents developed countries or regions and "U" refers to emerging and frontier or less developed ones. The classification is based on a survey from International Monetary Fund in 2014. (IMF, 2014)

2. *Methodology*

A. Cumulative Abnormal Returns

For this empirical research, event study approach is used under the hypothesis that stock market is efficient and it reacts to new information immediately so that share prices are adjusted. In other words, the event has no impact on the behavior of the stock returns. Thus it is necessary to measure the difference between actual returns and normal returns of acquiring firms at the announcement of merger or acquisition. To estimate the normal stock returns, market model is applied which relates the return of any security to the return of market portfolio. In this way, the portion of variance related to market movement is removed, which could better capture firm-specific effects. Practically, market index is used as a proxy for market portfolio. (MacKinlay, 1997) In this study, local market index is chosen to pair with corresponding country or region since firms are usually more influenced by domestic factors than foreign ones. Table 1 displays all the developed countries or regions and their domestic market index, as well as those from emerging markets. The following formulas specify the calculation of normal returns (Rs) and abnormal returns (ARs):

$$r_{it} = \alpha_i + \beta_i \times r_{MIt} + \varepsilon_{it},\ t \in [-170, -51] \quad (1),$$

$$R_{it} = \widehat{\alpha_i} + \widehat{\beta_i} \times r_{MIt},\ t \in [-20, 20] \quad (2),$$

$$AR_{it} = r_{it} - R_{it},\ t \in [-20, 20] \quad (3),$$

Where AR_{it}, r_{it}, and R_{it} are the abnormal, actual, and normal returns for firm i and r_{MIt} represents actual return of market index at the time period of t which is set to 0 at the announcement date. In model (1), ε_{it} is the error term, while α_i and β_i indicate market model parameters that are estimated over the 120 days prior to the event. The in-between

period of 50 days before announcement date is avoided due to the possible influence from market and stock run-up (Barclay & Warner, 1993) (Schwert, 1996). Hence the control period is chosen as [-170, -51]. The estimators of parameter are denoted by $\widehat{\alpha_i}$ and $\widehat{\beta_i}$ which would be acquired from linear regression of model (1). Finally, a 41-day event window is employed with 20 days prior to the event day and 20 days after. To determine the significance of the abnormal returns in 41 days during the test period, the average of ARs across all the events is taken as shown in equation (4) and then corresponding t-statistics are calculated based on formulas (5) and (6).

$$AR_t = \frac{1}{n} \times \sum_{i=1}^{n} ar_{it} \quad (4),$$

$$s_t{}^2 = \frac{1}{n-1} \times \sum_{i=1}^{n} (ar_{it} - AR_t)^2 \quad (5), \quad t^* = \frac{AR_t - 0}{s_t/\sqrt{n}} \quad (6),$$

Where n is the total number of transaction in a sub group and time t ranges from 20 days before and after the announcement date. AR_t refers to the average abnormal return at day t, while t^* indicates the t-statistic with the calculation of standard deviation s_t through formula (5). Generally, the cumulative abnormal return for security i over event window $[t_1, t_2]$ is generated by a summation of all the abnormal returns in that window as shown in (7)

$$car_i = \sum_{t=t_1}^{t_2} ar_{it}, \quad -20 \leq t_1 < t_2 \leq 20 \quad (7)$$

$$CAAR = \frac{1}{n} \times \sum_{i=1}^{n} car_i \quad (8),$$

Where $[t_1, t_2]$ is the sub-window that might result in a significant cumulative averaged abnormal return (CAAR) which is calculated by equation (8). Finally, the event window corresponding to the most significant CAAR will be chosen and the CARs calculated based on that will be used as the dependent variable.

B. Cross-sectional Regressions

Variables

In order to verify the impact of different factors on abnormal stock returns, cross-sectional regressions are estimated. The dependent variable is derived from the methods

above. Independent variables, on the other hand, test the influence by payment method, industry relatedness and target public status. As they are discrete factors, dummies are created under each category. In terms of payment methods, 3 different dummies are included according to the given percentage of cash, stock, other and unknown factors used in the transaction. "Dum_cash" is set to 1 when the percentage of cash in the payment is 100, while "Dum_stock" is used to indicate the payment that only contains stock. "Dum_mixed" is then created to account for the mix payment of both methods. The rest includes the cases when other methods of payment are applied such as bond payment, leverage buyout etc. and when payment method is unknown. The next dummy variable, aiming to tackle the economies of scale and synergy effect for the horizontal M&As takes value 1 when acquirer and target come from the same macro industry and takes value 0 for between-industry M&As. As for target public status, a dummy variable is defined as 1 if the target company is public listed on the stock exchange and 0 for private one.

Control variables are also created to avoid the biasness from omission of related variables. The effect related to the size of acquirer is tested on two aspects. First, absolute size is determined with the market value of the acquirer 4 weeks prior to the announcement (in billions of US dollars), considering the possible early leakage of information about the deal (Rossi, 2004). According to (Marsili, 2013), the size of target could also exert influential power on the abnormal returns. Therefore, relative size is calculated by dividing market value of acquirer with that of target. However, there are quite a few number of unlisted target firms in the sample which give no market value for estimation (number given in Table 3). If this relative size is applied into regressions, all the deals that involve private target are ignored, which might cause biasness for the parameters. Thus this variable is not applied in the end. Instead, the natural logarithm of acquirer's market value is taken in order to smooth out the extreme values. Under the same intention, the natural logarithm of deal value in million dollars is also calculated. In the case of "D to D" and "U to U" transactions, many deals are made within the same country. Thus, "Dum_country" is created which takes value 1 for domestic acquisitions and 0 elsewhere. To control the possible impact from deal attitude, two dummy variables, namely "Dum_neutral" and "Dum_hostile" are generated to capture the corresponding attitudes.

Finally, "Dum_crisis" is created to control for the influence from financial crisis in 2008, thus for all the transactions taken place in the year of 2008 dummy variable will have value 1 and 0 for other years. More detailed descriptions for variable are listed in Table 2.

Univariate, multivariate and aggregated regressions

To explore the relation between abnormal returns and each influential factor, univariate regressions are applied to test the variable individually. The empirical specification is shown as follows:

$$car_i = \beta_0 + \beta_1 \times X_{1i} + \varepsilon_i \quad (9),$$

Where car_i is the chosen significant cumulative abnormal return for security i; X_{1i} stands for the factor of interest, which are payment method, industry-specific effect, target public status, deal value, size effect, domestic transaction, and deal attitude more specifically. As for multivariate regressions (10), different variables are regressed in the same model to test their joint significance.

$$car_i = \beta_0 + \beta_1 \times X_{i1} + \beta_2 \times X_{i2} + \cdots + \beta_k \times X_{ik} + \varepsilon_i \quad (10)$$

After testing four subsets separately, all the observations are combined together in the same pool using the dummy variables ("Dum_d_u", "Dum_u_d" and "Dum_u_u" more specifically) to test the significance of their difference in the aggregated regressions, which can be expressed by the following equation:

$$car_i = \beta_0 + \beta_{1dd} \times X_{i1} + \beta_{1du} \times Dum\_d\_u \times X_{i1} + \beta_{1ud} \times Dum\_u\_d \times X_{i1} + \beta_{1uu} \times Dum\_u\_u \times X_{i1} + \beta_{2dd} \times X_{i2} + \beta_{2du} \times Dum\_d\_u \times X_{i2} + \beta_{2ud} \times Dum\_u\_d \times X_{i2} + \beta_{2uu} \times Dum\_u\_u \times X_{i2} + \cdots\cdots + \beta_{kdd} \times X_{ik} + \beta_{kdu} \times Dum\_d\_u \times X_{ik} + \beta_{kud} \times Dum\_u\_d \times X_{ik} + \beta_{kuu} \times Dum\_u\_u \times X_{ik} + \varepsilon_i \quad (11)$$

Where β_{kdd} is the coefficient of factor k for group "D to D", while β_{kdu}, β_{kud}, and β_{kuu} are the differences from β_{kdd} under group "D to U", "U to D" and "U to U" respectively. The reason why the subset "D to D" is treated as basis is that this group has much more observations compared to other 3 groups.

3. Summary statistics

The summary statistics from the selected sample are displayed in Table 3. As we can see, the distribution of transactions is not that even among 4 subsets. Most deals happen within developed economies, which amount to 82.64% of all, while the subset "U_D" has the least number of transactions, only 326 in the whole sample. For the method of payment, cash is always preferred compared to stock payment and mix of both. However, it is also seen that other and unknown payment methods account for 41.25% in the sample, but those are not discussed in the study. Meanwhile, the sample of target includes 34.5% of listed firms and 65.5% of unlisted ones in terms of public status. Looking over the 4 sub groups in the table, we can find that up to 93.67% of total deals have friendly tone during mergers and acquisitions, whereas hostile acquisitions amount to 28 combing all subsets. Especially for the case of "D to U", no hostile deals are made at all, therefore "Dum_hostile" is not included in regressions under this subset in order to prevent the perfect multicollinearity problem. Next we look at the statistic summary for industry-specific factor. Apparently there are more deals happened within the same industry which are made up of 68.82% of the total transactions than those made between the different industries. Moreover, acquiring firms also tend to make M&A deal in one country. The amount of domestic transactions is around 40% greater than cross-border all over the world.

IV. Statistical Results

1. CARs as dependent variable

The AARs and CAARs for each day in the time period of [-20, 20] are given in Table 4. As we can see, all the groups show significant positive average abnormal returns around announcement date, but group "D to D" gives more significant negative returns after the announcement compared with other groups. The CAARs are accumulated from day -20 to the given day and are listed next to AARs. To get a better view of these numbers, we can check Figure 2 which plots the CAARs under each subset through the testing period. In general, there is a slow increase of cumulative abnormal returns during the pre-announcement period with "D to D" and "D to U" more obvious than the other two groups. Then all groups experience a sharp rise from day -1 to day 1. After that most

CAARs decrease on a slow pace except that of "U to D" which keeps dropping from day 3 and reaches its lowest point of -0.2% on day 18 while others are still higher than 1,5%. In general, developed acquirers outperform developing acquirers and group "U to D" shows the lowest CAAR and "D to U" gives the highest. Later on, the CAARs under different event windows are tested and corresponding average and significance are displayed in Table 5. As we can see, all the cumulated average abnormal returns from "U to U" are positive at no more than 5% significance while for group "U to D" only 4 CAARs are significant. For "D to D" and "D to U" most of them are significantly positive. In the end, the CAAR under window [-1, 1] is found to be the most significant for all subsets. Therefore, this event window is chosen and the CAR for each security is calculated based on that. It will then be used as dependent variable in regressions.

2. Univariate Regressions

A. D to D transactions

The results of univariate regressions for subset "D to D" are given in Table 6 where Panel A shows relation with dummy variables and Panel B gives that with continuous variables. For payment method, we saw that the coefficient of "Dum_stock" is significantly positive while "Dum_cash" and "Dum_mixed" are insignificantly negative with the latter one slightly less negative. This means that deals paid only with stock give higher returns than those paid purely by cash, which is contradict with the previous literature. As for deal attitude, hostile deals give lower returns while the neutral ones show higher returns, however, no significant influence is found on CAR. Next, we check industry-specific effect on the M&A deal. It is found that deals happened in the same industry show negative returns than those made between different industries. The most significant impact results from target public status, we saw that acquiring firms who acquired public listed target get on average 1.4% lower valuation than those who acquired private one. Moreover, there is not much difference between cross-border deals and domestic deals. Financial crisis didn't exert significant influence on the stock returns as well. The test for size effect is based on three different variables. The relative size isn't significantly related with CARs which is probably due to too many unavailable target market values. The absolute size and the natural logarithm of absolute size are found to be negatively related to abnormal returns at the significance level lower than 1%, thus smaller acquirers

perform better than the larger ones. The R-squared of the regression with Ln(market value) is much higher than that with market value itself, indicating that the previous variable better captures the movement of CAR than the latter one. The value of transaction also has significant impact on stock returns and the smaller the deal the higher return it earns. After taking the natural logarithm, improvement of R-squared is also observed. In conclusion, payment method, industry- specific effect, target public status, size effect and deal value have significant impact on the cumulative abnormal returns.

B. "D to U" transactions

As shown in Table 7, results for "D to U" transactions differ from the previous ones. All the coefficients corresponding to distinct payment methods are positive but still only "Dum_stock" is the largest and most significant variable. Cash payment also results in the least stock return and the mixed of cash and stock payment lies between the other two methods. For deal attitude, the neutral one performs worse than the friendly one in this case. The test of industry effect compared with "D to D", gives the similar result that the same-industry deals show insignificantly better performance than the cross-industry ones. Financial crisis gives negative influence but still not significant. As for size effect, the "Ln_size" returns the highest R-squared than the other two kinds of size. The sign of all size coefficients are negative which indicates that smaller company gets higher return than the larger one. The coefficients of deal value is not significant but still negative in this sub-group with R-squared of logarithm term higher that the other.

C. "U to D" transactions

Table 8 gives result from univariate regressions for "U to D" deals. In this case, only "Dum_neutral" and "Ln_deal_val" have significant relation with CAR, which might be caused by the comparably less observations in this sample. The method of deal payment is insignificant related to CAR, but the stock funded deals still perform better than the cash funded ones. For deal attitude, "Dum_neutral" has significant positive relation with CAR while "Dum_hostile" negative. The sign of same-industry dummy becomes negative which is different from the previous cases. However the effect of target status and financial crisis is still the same, that is, deals with public target or during 2008 get lower returns than others. The size effect here is not significant for all the three size

variables. As for deal value, only the natural logarithm of value of transaction is significant however it gives the positive sign after the transformation which is also opposite to "D to D" and "D to U" deals. Therefore it is necessary to perform multivariate regressions to see whether the signs and significance stay the same.

D. "U to U" transactions

In Table 9, we could see the estimation of univariate regressions for "U to U" deals. There are two dummies under category of payment method that are positively significant which are "Dum_stock" and "Dum_mixed". However, the mixed of stock and cash payment gives higher returns than both pure payments, which seems unusual comparing with other occasion. Deal attitude doesn't exert significant influence on CAR, but the neutral deal is less valued than the friendly one in this case. Furthermore, whether the acquirer and the target are from the same industry makes not much difference. Neither public status of target nor financial crisis is strongly related to the abnormal stock return. Nevertheless, it does have significant difference between cross-border and domestic M&As. Deals that are made within the same country apparently get better returns than those between different countries. The results of size effect show that the smaller the acquiring firms the higher valuation they earn from M&A transactions. As for deal value, it was found significantly related to CAR, but larger deal size gives higher return in this case which is different from "D to D" and "D to U".

3. Multivariate Regressions

All the variables are included in the same model during this section and four groups are still tested separately (results are presented in Table 10). For the "D to D" deal, "Dum_mixed" becomes significant and it negatively influences dependent variable. The dummy that indicates same industry is no longer significant. Most signs of variable didn't change after the aggregation, except for "Dum_cash", "Dum_country" and "Ln_deal_val". The previous two variables are not significant all the time, but "Ln_deal_val" is in both univariate and multivariate regressions. The sign change of this variable may be caused by its positive correlation with "Ln_size". In the univariate regression, the coefficient of "Ln_val" combines both influence from "Ln_size" and "Ln_val", while the former negative effect is greater than the latter positive effect. Thus

the “Ln_val” coefficient shows negative in univariate model but its real correlation with CAR is positive. Moving on to “D to U” subset, the significance of every variable doesn’t change at all, therefore there are still only “Dum_stock” and “Ln_size” significantly correlated with CAR. It’s also seen that several signs of variable have changed, but considering their insignificant influence on CAR, it won’t be discussed any further in this paper. As for group “U to D”, all the signs of variable stay the same as the case in univariate models. However, the impact from two variables becomes significant, which are “Dum_stock” and “Dum_pub_tar”. In the sample of “U to U” deals, nothing has changed with respect to either significance or sign of the variable. But there is one interesting finding that has to be mentioned, that is the coefficient of “Dum_mixed” is the largest among all the payment method dummies, while in other three subsets it is the only negative one among them. Despite of that, the rest of the significant variables in “U to U” have the same signs compared with other groups. In the mean time, all the correlations between different pairs of variables for 4 subsets are displayed in Table 12.

With all the variables included in the model, there might be problems rising from redundant variables, thus it is also necessary to remove some less related factors. To do so, adjusted R-squared is used as a measurement for the goodness of model. The remove of variables starts from the one that has the greatest P-value. If the adjusted R-squared improved after this step, then repeat the process until the adjusted R-squared cannot increase no matter which variable is removed. Following this method, models with the highest adjusted R-squared are presented in Table 11. Some insignificant variables are left in the model because they are jointly significant with other variables. For instance in the model of “D to D”, none of “Dum_cash”, “Dum_ind” or “Dum_country” are not significant variables, however, the Wald F-test shows that they are jointly significant. After comparing these with previous models, it can be concluded that the deducted variables exert insufficient explanatory power on the cumulated abnormal return due to the fact that the signs and significance of the variables stay almost the same compared to the complete models in Table 10.

4. Aggregated Regressions

The results from aggregated regressions are reported in the last two tables. Table 13 presents the regressions that test each factor separately, while Table 14 displays the results when all factors are examined together. The first model is focus on the influence from payment method. There are in total three significantly positive variables (excluding constant) in this model, which are "Dum_stock", "Dum_d_u*Dum_stock", and "Dum_u_u*Dum_mixed". It means that the stock payment is positively related to CAR for group "D to D" with those in "D to U" more positively influencing CAR. For cash and mixed payment, only the mixed one in "U to U" is significantly more positive than "D to D". Model (2) returns nothing but constant significant indicating limited explanatory power of deal attitude when looking at it individually. Next, significant negative relation is shown between CAR and the industry dummy under "D to D" meaning that the horizontal deals get lower abnormal returns than the vertical ones. But this relation is found significantly more positive for group "D to U". As for public status of target, "D to D" gets lower CAR when acquiring public target than the private one, but for "D to U" and "U to U" this difference is significantly smaller. The next model shows that domestic transactions in developing countries get higher valued than those in developed countries. Then we check the influence from continuous variables. Firstly, the coefficient of "Absolute_size" is significantly negative for "D to D" and it doesn't differ much for "D to U" and "U to D", however, "U to U" is significantly less negative than "D to D". The test for "Ln_size" shows similar results except that coefficient for "D to U" is also less negative with p-value small than1%. The use of deal value directly in the regression ends up with one significant coefficient "Deal_val", showing that deal value negatively influences CAR for all subsets without much difference. Nevertheless, the natural logarithm term returns different results that "D to U" and "U to U" is significantly less negative than "D to D".

Then all the factors are tested at the same time in the next 3 models as shown in Table 14. Wald F-test is employed when multiple insignificant variables are removed from the regression, which ends up with model 12 with the highest possible adjusted R-squared. Then we can see that stock payment leads to higher CAR and "D to U" show significant greater positive influence than other three. The mixed payment of cash and stock returns negative CAR but it is not the case for "U to U". The neutral attitude of "D to D" and "U

to D" deals results in higher abnormal returns while that of "D to U" and "U to U" gives lower abnormal returns. Moreover, M&As that happen in the same industry would get less valued in general than between different industries except "D to U". As for target public status, deals with private targets, compared with public ones create more value for acquirers' shareholders, but it is different for "D to U" deals somehow. The coefficient for "Ln_size" is significantly negative, with "D to U" more negative and "U to D" and "U to U" significantly more positive. Last but not the least, the value of transaction is positively related to CAR and there is not much difference among 4 groups. The rest factors are not significantly related to stock returns.

V. Conclusion and Discussion

The main findings of this paper could be summarized as follows. The developed bidders that target developing firms ("D to U") create the greatest value for acquirers' shareholder, while the deals made the other way round ("U to D") return the lowest value. It is also found that developed acquirers receive generally higher abnormal returns than the developing ones. The findings with regards to payment method contrast previous literature that stock payment is always rewarded with higher CAR than the cash payment, while the result for mixed payment is ambiguous. As for size effect, cross-sectional regressions show that the returns of all deals have significantly negative relation with the market value, that is to say the smaller the acquirers the higher value they generate for shareholders through mergers and acquisitions. However, such relation is significantly less negative for developing acquirers than developed ones. In addition, deals with public listed target perform worse than those with private target in general except for "D to U" deals which show insignificant difference between these two cases.

Nevertheless, there are also some limitations from this study. First of all, the use of "macro industry" might be comparably too grand, since some companies from the same macro industry could still have large differences from each other. Therefore, maybe other industry indicator can be applied to further research, such as NAIC or SIC industry code. Secondly, the market and stock run-ups and volatility could also be added into the regression as other continuous variables, since they might have some influential power on

the abnormal returns according to, which could possibly improve the R-squared of the model. Then during the testing for the size effect, only the market value of acquirers and targets is used, which leads to one problem that the value of private target is not available in most cases. Thus the relative size calculated through dividing market value of acquirer by that of target is biased due to the missing value of the private target. In this sense, other size proxies, say equity value, book-to-market ratio, etc. should be considered to measure relative term.

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Appendix

1. Figures

Figure 1

Total number of transaction in each year during 2004-2013

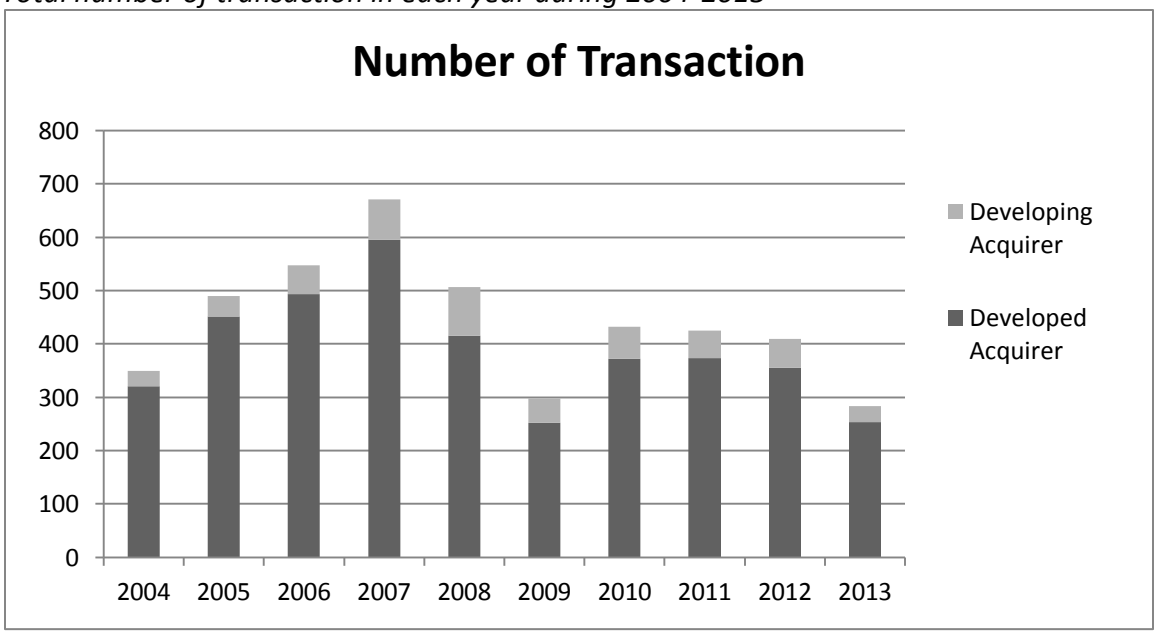


Figure 2

Total value of transaction in each year during 2004-2013

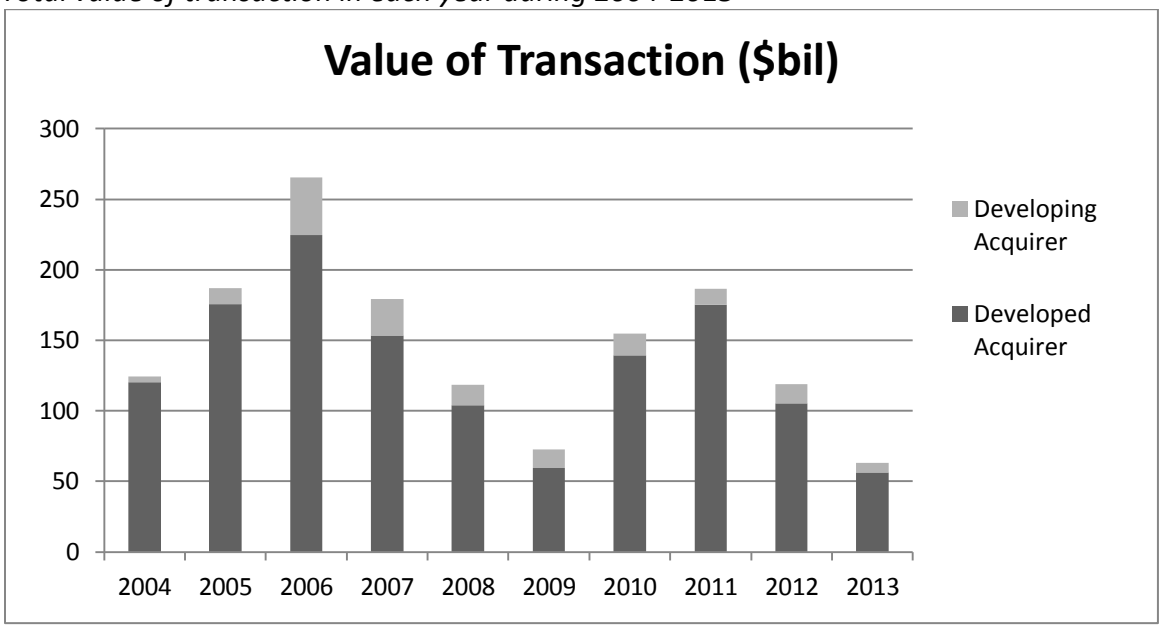
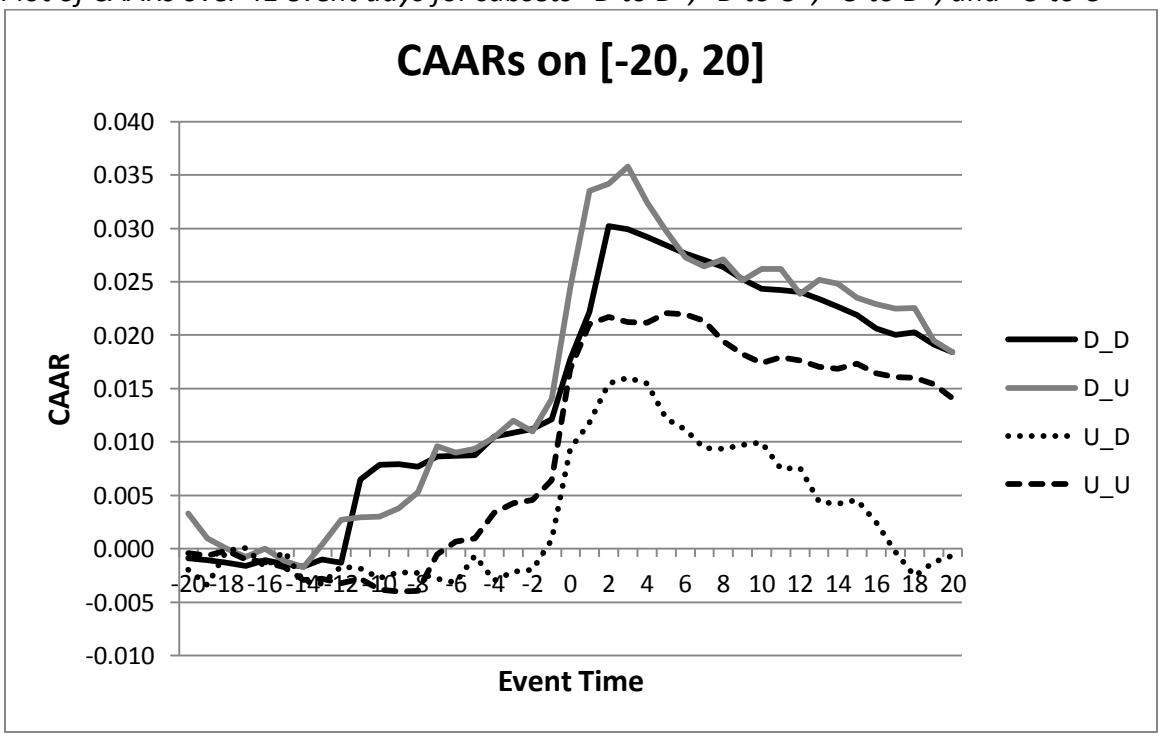


Figure 3

Plot of CAARs over 41 event days for subsets "D to D", "D to U", "U to D", and "U to U"



2. *Tables*

Table 1

Classification of Developed and Developing countries or regions

Panel A					
Developed Acquirer	**Total**	**D_D**	**D_U**	**Market Index**	**Symbol**
Australia	851	806	45	S&P/ASX 300	ASX300I
Austria	40	26	14	ATX - AUSTRIAN TRADED INDEX	ATXINDX
Belgium	68	61	7	BEL 20	BGBEL20
Canada	1424	1377	47	S&P/TSX COMPOSITE INDEX	TTOCOMP
Cyprus	8	4	4	CYPRUS GENERAL	CYPMAPM
Czech Republic	6	2	4	PRAGUE SE PX	CZPXIDX
Denmark	52	49	3	OMX COPENHAGEN (OMXC20)	DKKFXIN
Finland	107	86	21	OMX HELSINKI (OMXH)	HEXINDX
France	325	279	46	FRANCE CAC 40	FRCAC40
Germany	220	199	21	DAX 30 PERFORMANCE	DAXINDX
Greece	46	37	9	ATHEX COMPOSITE	GRAGENL
Hong Kong	136	83	53	HANG SENG	HNGKNGI
Iceland	13	10	3	OMX ICELAND ALL SHARE	ICEXALL
Ireland-Rep	87	77	10	IRELAND SE OVERALL (ISEQ)	ISEQUIT
Israel	103	102	1	ISRAEL TA 100	ISTA100
Italy	148	119	29	FTSE MIB INDEX	FTSEMIB
Japan	1551	1481	70	TOPIX	TOKYOSE
Netherlands	146	126	20	AEX INDEX (AEX)	AMSTEOE
New Zealand	52	51	1	NZX 50	NZ50CAP
Norway	130	124	6	OSLO EXCHANGE ALL SHARE	OSLOASH
Portugal	21	19	2	PORTUGAL PSI-20	POPSI20
Singapore	121	87	34	STRAITS TIMES INDEX L	SNGPORI
Slovak Rep	1	0	1	SLOVAKIA SAX 16	SXSAX16
Slovenia	5	5	0	SLOVENIAN BLUE CHIP (SBI TOP)	SLOETOP
South Korea	599	566	33	KOREA SE COMPOSITE (KOSPI)	KORCOMP
Spain	152	133	19	IBEX 35	IBEX35I
Sweden	223	197	26	OMX STOCKHOLM 30 (OMXS30)	SWEDOMX
Switzerland	134	115	19	SWISS MARKET (SMI)	SWISSMI
Taiwan	129	117	12	TAIWAN SE WEIGHED TAIEX	TAIWGHT
United Kingdom	814	728	86	FTSE 100	FTSE100
United States	5306	5132	174	S&P 500 COMPOSITE	S&PCOMP
Total (31)	13018	12198	820		
Panel B					
Developing Acquirer	**Total**	**U_D**	**U_U**	**Market Index**	**Symbol**
Argentina	23	3	20	ARGENTINA MERVAL	ARGMERV
Bahrain	2	0	2	MSCI BAHRAIN	MSBAHRL
Bermuda	13	7	6	WORLD FEDN BERMUDA SE	WFEBRUL

Brazil	193	16	177	BRAZIL BOVESPA	BRBOVES
Chile	45	4	41	CHILE SANTIAGO SE GENERAL	IGPAGEN
China	442	41	401	SHANGHAI SE A SHARE	CHSASHR
Colombia	28	9	19	MSCI COLOMBIA	MSCOLML
Croatia	2	0	2	CROATIA CROBEX	CTCROBE
Egypt	14	7	7	EGYPT HERMES FINANCIAL	EGHFINC
Guernsey	6	5	1	FTSE 100	FTSE100
Hungary	1	1	0	BUDAPEST (BUX)	BUXINDX
India	262	101	161	CNX 500	ICRI500
Indonesia	54	3	51	IDX COMPOSITE	JAKCOMP
Isle of Man	14	13	1	FTSE 100	FTSE100
Jersey	15	10	5	FTSE 100	FTSE100
Jordan	4	0	4	AMMAN SE FINANCIAL MARKET	AMMANFM
Kazakhstan	1	0	1	MSCI KAZAKHSTAN	MSKZKTL
Kenya	1	0	1	KENYA NAIROBI SE (NSE20)	NSEINDX
Kuwait	27	3	24	KUWAIT KIC GENERAL	KWKICGN
Malaysia	87	17	70	FTSE BURSA MALAYSIA KLCI	FBMKLCI
Mauritius	1	0	1	MSCI MAURITIUS	MSMAURL
Mexico	47	7	40	MEXICO IPC (BOLSA)	MXIPC35
Morocco	4	0	4	MSCI MOROCCO	MSMORCL
Oman	3	0	3	OMAN MUSCAT SECURITIES MKT.	OMANMSM
Panama	1	1	0	PANAMA SE BVPSI	PABVPSI
Peru	13	2	11	LIMA SE GENERAL(IGBL)	PEGENRL
Philippines	41	8	33	PHILIPPINE SE I(PSEi)	PSECOMP
Poland	50	7	43	WARSAW GENERAL INDEX	POLWIGI
Qatar	10	0	10	MSCI QATAR	MSQATAL
Russian Fed	122	20	102	RUSSIAN MICEX INDEX	RSMICEX
Saudi Arabia	19	1	18	MSCI SAUDI ARABIA DOM	MSSARDL
South Africa	86	28	58	MSCI SOUTH AFRICA	MSSARFL
Sri Lanka	4	0	4	COLOMBO SE ALL SHARE	SRALLSH
Thailand	58	7	51	BANGKOK S.E.T.	BNGKSET
Turkey	24	1	23	BIST NATIONAL 100	TRKISTB
Ukraine	2	0	2	MSCI UKRAINE	MSUKRNL
Utd Arab Em	15	4	11	MSCI UAE	MSUAEIL
Vietnam	8	0	8	MSCI VIETNAM	MSVIETL
Zambia	1	0	1	ZAMBIA LUSAKA ALL SHARE	ZAMALSH
Total (39)	1743	326	1417		

Table 2

Definition of Variables

Driving Factor	Variable Name	Description
Dummy Variables		
Payment Method	Dum_cash	Dummy variable that takes value 1 for deals paid only in cash
	Dum_stock	Dummy variable that takes value 1 for deals paid

		with only stock
	Dum_mixed	Dummy variable that takes value 1 for deals that both cash and stock are envolved in the payment
Industry-Specific Effect	Dum_ind	Dummy variable that takes value 1 when acquirer and target are from the same macro industry
Target Public Status	Dum_pub_tar	Dummy variable that takes value 1 when target is public listed
Deal Attitude	Dum_neutral	Dummy variable that takes value 1 when deal attitude is neutral
	Dum_hostile	Dummy variable that takes value 1 when deal attitude is hostile
Domestic Deal	Dum_domastic	Dummy variable that takes value 1 for domestic M&As
Financial Crisis	Dum_crisis	Dummy variable that takes value 1 for the deals announced in 2008
Sub groups	Dum_d_d	Dummy variable that takes value 1 for M&As between developed economies
	Dum_d_u	Dummy variable that takes value 1 for developed bidder acquiring developing target deals
	Dum_u_d	Dummy variable that takes value 1 for developing bidder acquiring developed target deals
	Dum_u_u	Dummy variable that takes value 1 for M&As between developing economies
Continuous Variables		
Size Effect	Absolute_size	Acquirer market value 4 weeks prior to announcement in million US dollar
	Relative_size	Acquirer market value 4 weeks prior to announcement ($mil) divided by Target market value 4 weeks prior to announcement ($mil)
	Ln_size	Natural logarithm of Acquirer market value 4 weeks prior to announcement ($mil)
Deal Value	Deal_val	Value of transaction in million US dollar
	Ln_deal_val	Natural logarithm of Value of transaction ($mil)

Table 3

Summary Statistics for subsets "D to D", "D to U", "U to D", and "U to U"

Driving Factors		**D_D**	**D_U**	**U_D**	**U_U**	**Total**	**Ratio**
Payment Method	Cash	4472	266	134	393	5265	35.67%
	Stock	1613	58	15	204	1890	12.80%
	Mixed	1367	50	18	82	1517	10.28%
	Other	4746	446	159	738	6089	41.25%
Industry-specific	Same	8319	629	248	962	10158	68.82%
	Different	3879	191	78	455	4603	31.18%
Target Public Status	Public	4202	247	134	509	5092	34.50%

	Private	7996	573	192	908	9669	65.50%
Deal Attitude	Friendly	11590	729	304	1204	13827	93.67%
	Neutral	582	91	21	212	906	6.14%
	Hostile	26	0	1	1	28	0.19%
Country-specific	Same	9137	0	0	1211	10348	70.10%
	Different	3061	820	326	206	4413	29.90%
Total		12198	820	326	1417	14761	100.00%

Table 4

AARs and CAARs over 41 days for subsets "D to D", "D to U", "U to D", and "U to U"

	D_D		D_U		U_D		U_U	
Days	**AAR**	**CAAR**	**AAR**	**CAAR**	**AAR**	**CAAR**	**AAR**	**CAAR**
-20	-0.001***	-0.001	0.003	0.003	-0.002	-0.002	0.000	0.000
-19	0.000	-0.001	-0.002*	0.001	-0.001	-0.003	0.000	-0.001
-18	0.000	-0.001	-0.001	0.000	0.003*	0.000	0.000	0.000
-17	0.000	-0.002	-0.001	-0.001	0.000	0.000	-0.001	-0.001
-16	0.000	-0.001	0.001	0.000	-0.002	-0.002	0.000	-0.001
-15	0.000	-0.001	-0.001	-0.001	0.001	0.000	0.000	-0.002
-14	0.000	-0.002	-0.001	-0.002	-0.003*	-0.003	-0.001	-0.003
-13	0.001	-0.001	0.002	0.000	0.000	-0.003	0.000	-0.003
-12	0.000	-0.001	0.002**	0.003	0.002	-0.002	0.000	-0.003
-11	0.008	0.007	0.000	0.003	0.000	-0.002	0.000	-0.003
-10	0.001	0.008	0.000	0.003	-0.001	-0.003	-0.001	-0.004
-9	0.000	0.008	0.001	0.004	0.001	-0.002	0.000	-0.004
-8	0.000	0.008	0.001	0.005	0.000	-0.002	0.000	-0.004
-7	0.001*	0.009	0.004	0.010	-0.001	-0.003	0.003	-0.001
-6	0.000	0.009	-0.001	0.009	0.000	-0.003	0.001*	0.001
-5	0.000	0.009	0.000	0.009	0.002	-0.001	0.000	0.001
-4	0.002	0.010	0.001	0.010	-0.002*	-0.003	0.002***	0.003
-3	0.000	0.011	0.002	0.012	0.001	-0.002	0.001	0.004
-2	0.000	0.011	-0.001	0.011	0.000	-0.002	0.000	0.005
-1	0.001***	0.012	0.003**	0.014	0.003*	0.001	0.002**	0.006
0	0.006***	0.018	0.010***	0.024	0.009***	0.009	0.010***	0.017
1	0.004***	0.022	0.009**	0.034	0.002	0.012	0.004***	0.021
2	0.008	0.030	0.001	0.034	0.004	0.016	0.001	0.022
3	0.000	0.030	0.002	0.036	0.001	0.016	0.000	0.021
4	-0.001**	0.029	-0.003***	0.032	-0.001	0.015	0.000	0.021
5	-0.001***	0.028	-0.003***	0.030	-0.003**	0.012	0.001	0.022
6	-0.001***	0.028	-0.002*	0.027	-0.001	0.011	0.000	0.022
7	-0.001**	0.027	-0.001	0.026	-0.002	0.009	-0.001	0.021
8	-0.001***	0.026	0.001	0.027	0.000	0.009	-0.002***	0.019

9	-0.001***	0.025	-0.002*	0.025	0.000	0.010	-0.001*	0.018
10	-0.001***	0.024	0.001	0.026	0.000	0.010	-0.001	0.017
11	0.000	0.024	0.000	0.026	-0.002	0.007	0.001	0.018
12	0.000	0.024	-0.002*	0.024	0.000	0.008	0.000	0.018
13	-0.001**	0.023	0.001	0.025	-0.003**	0.004	-0.001	0.017
14	-0.001**	0.023	0.000	0.025	0.000	0.004	0.000	0.017
15	-0.001***	0.022	-0.001	0.024	0.000	0.005	0.001	0.017
16	-0.001***	0.021	-0.001	0.023	-0.002	0.002	-0.001	0.016
17	-0.001**	0.020	0.000	0.022	-0.003**	0.000	0.000	0.016
18	0.000	0.020	0.000	0.023	-0.002	-0.003	0.000	0.016
19	-0.001***	0.019	-0.003*	0.020	0.001	-0.001	-0.001	0.015
20	-0.001**	0.018	-0.001	0.018	0.001	-0.001	-0.001*	0.014

*****, ** and * indicate significance at 1%, 5% and 10% respectively**

Table 5

CAARs under different event windows for subsets "D to D", "D to U", "U to D", and "U to U"

Event Window	D_D	D_U	U_D	U_U
(-20,1)	0.023182***	0.033641***	0.008321	0.023299***
(-20,5)	0.029342**	0.029874**	0.009774	0.024784***
(-20,10)	0.025203**	0.026374**	0.005892	0.020294***
(-20,20)	0.019061	0.018304	-0.00519	0.017625**
(-14,1)	0.024685***	0.034699***	0.009103	0.023698***
(-14,5)	0.030845***	0.030932***	0.010556	0.025183***
(-14,10)	0.026706**	0.027433**	0.006673	0.020693***
(-14,20)	0.020565*	0.019362	-0.00441	0.018024**
(-4,1)	0.014734***	0.024432***	0.012112***	0.020559***
(-4,5)	0.020893**	0.020665***	0.013565*	0.022044***
(-4,10)	0.016754**	0.017166**	0.009682	0.017554***
(-4,20)	0.010613	0.009096	-0.0014	0.014885***
(-1,1)	0.010805***	0.022896***	0.014973***	0.016469***
(-1,5)	0.016965**	0.019129***	0.016426***	0.017954***
(-1,10)	0.012826	0.01563**	0.012544	0.013465***
(-1,20)	0.006684	0.00756	0.001461	0.010796**

*****, ** and * indicate significance at 1%, 5% and 10% respectively**

Table 6

Univariate regressions for "D to D"

Panel A. Univariate Regression with Dummy Variables for D_D

Factor	Variable	(1)	(2)	(3)	(4)	(5)	(6)
Constant	C	0.0109***	0.0107***	0.0135***	0.0158***	0.0104***	0.0108***
		(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Payment Method	DUM_CASH	-0.0030					
		(0.1803)					
	DUM_STOCK	0.0105***					
		(0.0008)					
	DUM_MIXED	-0.0017					
		(0.6072)					
Deal Attitude	DUM_NEUTRAL		0.0067				
			(0.1516)				
	DUM_HOSTILE		-0.0245				
			(0.2538)				
Industry Effect	DUM_IND			-0.0037*			
				(0.0836)			
Target Status	DUM_PUB_TAR				-0.0140***		
					(0.0000)		
Country Effect	DUM_ DOMESTIC					0.0007	
						(0.7429)	
Financial Crisis	DUM_CRISIS						0.0016
							(0.6258)
Observations		12198	12198	12198	12198	12198	12198
R-squared		0.0015	0.0003	0.0002	0.0037	0.0000	0.0000
Adjusted R-squared		0.0013	0.0001	0.0002	0.0036	-0.0001	-0.0001

Panel B. Univariate Regression with Continuous Variables for D_D

Factor	Variable	(7)	(8)	(9)	(10)	(11)
Constant	C	0.0113***	-0.0006	0.0586***	0.0116***	0.0246***
		(0.0000)	(0.6384)	(0.0000)	(0.0000)	(0.0000)
Size Effect	ABSOLUT_SIZE	-1.16E-07***				
		(0.0025)				
	RELATIVE_SIZE		9.06E-08			
			(0.9495)			
	LN_SIZE			-0.0070***		
				(0.0000)		
Deal Value	DEAL_VAL				-1.66E-06***	
					(0.0005)	
	LN_DEAL_VAL					-0.0032***
						(0.0000)
Observations		11473	3772	11473	12198	12198
R-squared		0.0008	0.0000	0.0187	0.0010	0.0020
Adjusted R-squared		0.0007	-0.0003	0.0186	0.0009	0.0019

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 7

Univariate regressions for "D to U"

Panel A. Univariate Regression with Dummy Variables for D to U						
Factor	Variable	(1)	(2)	(3)	(4)	(5)
Constant	C	0.0118**	0.0241***	0.0137	0.0257***	0.0240***
		(0.0419)	(0.0000)	(0.1409)	(0.0000)	(0.0000)
Payment Method	DUM_CASH	0.0002				
		(0.9816)				
	DUM_STOCK	0.1453***				
		(0.0000)				
	DUM_MIXED	0.0060				
		(0.7447)				
Deal Attitude	DUM_NEUTRAL		-0.0143			
			(0.3143)			
	DUM_HOSTILE		/			
			/			
Industry Effect	DUM_IND			0.0116		
				(0.2730)		
Target Status	DUM_PUB_TAR				-0.0105	
					(0.2819)	
Financial Crisis	DUM_CRISIS					-0.0128
						(0.3729)
Observations		820	820	820	820	820
R-squared		0.0843	0.0012	0.0015	0.0014	0.0010
Adjusted R-squared		0.0809	1.70E-05	0.0002	0.0002	-0.0003
Panel B. Univariate Regression with Continuous Variables for D to U						
Factor	Variable	(6)	(7)	(8)	(9)	(10)
Constant	C	0.0286***	0.0139***	0.1342***	0.0247***	0.0428***
		(0.0000)	(0.0048)	(0.0000)	(0.0000)	(0.0023)
Size Effect	ABSOLUTE_SIZE	-3.43E-07**				
		(0.0427)				
	RELATIVE_SIZE		-3.35E-05			
			(0.5022)			
	LN_SIZE			-0.0147***		
				(0.0000)		
Deal Value	DEAL_VAL				-9.65E-06	
					(0.2337)	
	LN_DEAL_VAL					-0.0048
						(0.1276)
Observations		747	184	747	820	820

R-squared	0.0055	0.0025	0.0733	0.0017	0.0028
Adjusted R-squared	0.0042	-0.0030	0.0721	0.0005	0.0016

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 8

Univariate regressions for "U to D"

Panel A. Univariate Regression with Dummy Variables for U to D						
Factor	Variable	(1)	(2)	(3)	(4)	(5)
Constant	C	0.0123***	0.0124***	0.0140**	0.0157***	0.0146***
		(0.0074)	(0.0002)	(0.0320)	(0.0002)	(0.0001)
Payment Method	DUM_CASH	0.0023				
		(0.7340)				
	DUM_STOCK	0.0145				
		(0.3515)				
	DUM_MIXED	-0.0025				
		(0.8595)				
Deal Attitude	DUM_NEUTRAL		0.0253*			
			(0.0509)			
	DUM_HOSTILE		-0.0667			
			(0.2452)			
Industry Effect	DUM_IND			-0.0003		
				(0.9647)		
Target Status	DUM_TARGET				-0.0047	
					(0.4698)	
Financial Crisis	DUM_CRISIS					-0.0041
						(0.6055)
Observations		326	326	326	326	326
R-squared		0.0031	0.0160	0.0000	0.0016	0.0008
Adjusted R-squared		-0.0062	0.0099	-0.0031	-0.0015	-0.0023
Panel B. Univariate Regression with Continuous Variables for U to D						
Factor	Variable	(6)	(7)	(8)	(9)	(10)
Constant	C	0.0184***	0.0127**	0.0276**	0.0138***	-0.0032
		(0.0000)	(0.0381)	(0.0373)	(0.0000)	(0.7317)
Size Effect	ABSOLUTE_SIZE	-3.49E-07				
		(0.3616)				
	RELATIVE_SIZE		1.27E-05			
			(0.5956)			
	LN_SIZE			-0.0015		
				(0.3983)		
Deal Value	DEAL_VAL				-1.38E-07	
					(0.9609)	

	LN_DEAL_VAL					0.0040*
						(0.0558)
Observations		267	104	267	326	326
R-squared		0.0031	0.0028	0.0027	0.0000	0.0112
Adjusted R-squared		-0.0006	-0.0070	-0.0011	-0.0031	0.0082

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 9

Univariate regressions for "U to U"

Panel A. Univariate Regression with Dummy Variables for U to U							
Factor	Variable	(1)	(2)	(3)	(4)	(5)	(6)
Constant	C	0.0097***	0.0177***	0.0191***	0.0182***	0.0024	0.0168***
		(0.0001)	(0.0000)	(0.0000)	(0.0000)	(0.6211)	(0.0000)
Payment Method	DUM_CASH	0.0022					
		(0.6017)					
	DUM_STOCK	0.0235***					
		(0.0000)					
	DUM_MIXED	0.0486***					
		(0.0000)					
Deal Attitude	DUM_NEUTRAL		-0.0081				
			(0.1144)				
	DUM_HOSTILE		-0.0477				
			(0.4874)				
Industry Effect	DUM_IND			-0.0039			
				(0.3214)			
Target Status	DUM_TARGET				-0.0049		
					(0.2010)		
Country Effect	DUM_DOMESTIC					0.0165***	
						(0.0014)	
Financial Crisis	DUM_CRISIS						-0.0065
							(0.4577)
Observations		1417	1417	1417	1417	1417	1417
R-squared		0.0363	0.0021	0.0007	0.0012	0.0072	0.0004
Adjusted R-squared		0.0342	0.0007	-1.10E-05	0.0004	0.0065	-0.0003
Panel B. Univariate Regression with Continuous Variables for U to U							
Factor	Variable	(7)	(8)	(9)	(10)	(11)	
Constant	C	0.0160***	0.0091***	0.0302***	0.0166***	-0.0013	
		(0.0000)	(0.0085)	(0.0000)	(0.0000)	(0.8148)	
Size Effect	ABSOLUTE_SIZE	-9.68E-09					
		(0.6101)					
	RELATIVE_SIZE		-3.42E-06				

			(0.7734)			
	LN_SIZE			-0.0021**		
				(0.0346)		
Deal Value	DEAL_VAL				-4.63E-07	
					(0.7728)	
	LN_DEAL_VAL					0.0043***
						(0.0006)
Observations		1244	322	1244	1417	1417
R-squared		0.0002	0.0003	0.0036	0.0001	0.0082
Adjusted R-squared		-0.0006	-0.0028	0.0028	-0.0006	0.0075

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 10

Multivariate regressions with all the variables for subsets "D to D", "D to U", "U to D", and "U to U"

Multivariate Regression with all variables					
Factor	Variable	D_D	D_U	U_D	U_U
Constant	C	0.0561***	0.0798***	0.0105	0.0070
		(0.0000)	(0.0002)	(0.4918)	(0.4792)
Payment Method	DUM_CASH	0.0036	0.0009	0.0032	0.0035
		(0.1339)	(0.9338)	(0.6745)	(0.4439)
	DUM_STOCK	0.0068*	0.0995***	0.0343*	0.0202***
		(0.0549)	(0.0000)	(0.0654)	(0.0009)
	DUM_MIXED	-0.0095***	-0.0216	-0.0069	0.0414***
		(0.0062)	(0.2786)	(0.6523)	(0.0000)
Deal Attitude	DUM_NEUTRAL	0.0140***	-0.0142	0.0228*	-0.0058
		(0.0043)	(0.3496)	(0.0812)	(0.2852)
	DUM_HOSTILE	-0.0123	/	-0.0938	-0.0529
		(0.5664)	/	(0.1080)	(0.4268)
Industry Effect	DUM_IND	-0.0034	0.0162	-0.0019	-0.0054
		(0.1230)	(0.1375)	(0.8201)	(0.1836)
Target Status	DUM_PUB_TAR	-0.0133***	0.0056	-0.0131*	-0.0107**
		(0.0000)	(0.6233)	(0.0980)	(0.0155)
Country Effect	DUM_COUNTRY	-0.0033	/	/	0.0082
		(0.1650)	/	/	(0.1536)
Financial Crisis	DUM_CRISIS	0.0001	-0.0160	-0.0102	-0.0050
		(0.9775)	(0.2870)	(0.2598)	(0.5687)
Size Effect	LN_SIZE	-0.0081***	-0.0120***	-0.0026	-0.0025**
		(0.0000)	(0.0000)	(0.2313)	(0.0224)

Deal Value	LN_DEAL_VAL	0.0042***	0.0040	0.0070**	0.0050***
		(0.0000)	(0.2898)	(0.0109)	(0.0017)
Observations		11473	747	267	1244
R-squared		0.0241	0.1192	0.0643	0.0588
Adjusted R-squared		0.0231	0.1085	0.0277	0.0504

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 11

Multivariate regressions with the highest Adjusted R-squared for subsets "D to D", "D to U", "U to D", and "U to U"'

Multivariate Regression with the highest Adj. R-squared					
Factor	Variable	D_D	D_U	U_D	U_U
Constant	C	0.0562***	0.0776***	0.0089	0.0078
		(0.0000)	(0.0002)	(0.5281)	(0.4230)
Payment Method	DUM_CASH	0.0036			
		(0.1342)			
	DUM_STOCK	0.0068*	0.0993***	0.0330*	0.0187***
		(0.0535)	(0.0000)	(0.0675)	(0.0012)
	DUM_MIXED	-0.0096***	-0.0221		0.0403***
		(0.0061)	(0.2594)		(0.0000)
Deal Attitude	DUM_NEUTRAL	0.0141***		0.0231*	-0.0055
		(0.0041)		(0.0746)	(0.3095)
	DUM_HOSTILE			-0.0922	
				(0.1120)	
Industry Effect	DUM_IND	-0.0034	0.0167		-0.0056
		(0.1214)	(0.1247)		(0.1697)
Target Status	DUM_PUB_TAR	-0.0133***		-0.0126*	-0.0102**
		(0.0000)		(0.1000)	(0.0195)
Country Effect	DUM_ COUNTRY	-0.0033			0.0086
		(0.1685)			(0.1322)
Financial Crisis	DUM_CRISIS		-0.0160	-0.0104	
			(0.2874)	(0.2456)	
Size Effect	LN_SIZE	-0.0081***	-0.0118***	-0.0023	-0.0025**
		(0.0000)	(0.0000)	(0.2686)	(0.0195)
Deal Value	LN_DEAL_VAL	0.0042***	0.0043	0.0068**	0.0050***
		(0.0000)	(0.2426)	(0.0116)	(0.0016)
Observations		11473	747	267	1244
R-squared		0.0240	0.1180	0.0623	0.0576
Adjusted R-squared		0.0233	0.1108	0.0369	0.0515

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 12

Correlation matrices among different variables for subsets "D to D", "D to U", "U to D", and "U to U"'

Panel A. Correlation Matrix for "D to D"

Correlation Probability	DUM_ CASH	DUM_ CRISIS	DUM_ HOSTILE	DUM_ MIXED	DUM_ NEUTRAL	DUM_ STOCK	DUM_IND	DUM_ PUB_TAR	DUM_ COUNTRY	LN_SIZE	LN_VAL
DUM_CASH	1.000										
	(-----)										
DUM_CRISIS	0.012	1.000									
	(0.187)	(-----)									
DUM_HOSTILE	0.013	0.003	1.000								
	(0.149)	(0.714)	(-----)								
DUM_MIXED	-0.275	-0.006	0.017	1.000							
	(0.000)	(0.513)	(0.070)	(-----)							
DUM_NEUTRAL	0.034	0.019	-0.010	-0.028	1.000						
	(0.000)	(0.043)	(0.263)	(0.003)	(-----)						
DUM_STOCK	-0.300	-0.002	-0.008	-0.144	-0.040	1.000					
	(0.000)	(0.820)	(0.378)	(0.000)	(0.000)	(-----)					
DUM_IND	-0.061	-0.014	0.021	0.037	-0.013	0.022	1.000				
	(0.000)	(0.130)	(0.027)	(0.000)	(0.176)	(0.018)	(-----)				
DUM_PUB_TAR	0.149	-0.003	0.066	-0.049	0.142	0.249	0.034	1.000			
	(0.000)	(0.733)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(-----)			
DUM_COUNTRY	-0.011	-0.019	-0.024	0.026	-0.038	0.123	-0.005	0.038	1.000		
	(0.224)	(0.043)	(0.010)	(0.006)	(0.000)	(0.000)	(0.605)	(0.000)	(-----)		
LN_SIZE	0.218	-0.018	0.040	-0.148	0.048	-0.193	0.020	0.226	-0.116	1.000	
	(0.000)	(0.058)	(0.000)	(0.000)	(0.000)	(0.000)	(0.031)	(0.000)	(0.000)	(-----)	
LN_DEAL_VAL	0.043	-0.020	0.097	0.059	0.046	0.022	0.100	0.339	-0.052	0.502	1.000
	(0.000)	(0.029)	(0.000)	(0.000)	(0.000)	(0.017)	(0.000)	(0.000)	(0.000)	(0.000)	(-----)

Panel B. Correlation Matrix for "D to U"

Correlation Probability	DUM_CASH	DUM_CRISIS	DUM_HOSTILE	DUM_ MIXED	DUM_NEUTRAL	DUM_STOCK	DUM_IND	DUM_PUB_TAR	LN_SIZE	LN_DEAL_VAL
DUM_CASH	1.000									
	(-----)									
DUM_CRISIS	-0.036	1.000								
	(0.324)	(-----)								
DUM_HOSTILE	NA	NA	NA							
	(NA)	(NA)	-----							
DUM_MIXED	-0.180	-0.003	NA	1.000						
	(0.000)	(0.930)	(NA)	(-----)						
DUM_NEUTRAL	0.054	-0.021	NA	-0.022	1.000					

	(0.138)	(0.575)	(NA)	(0.552)	(-----)					
DUM_STOCK	-0.195	0.000	NA	-0.076	0.015	1.000				
	(0.000)	(0.990)	(NA)	(0.037)	(0.690)	(-----)				
DUM_IND	0.058	0.031	NA	-0.015	-0.028	-0.003	1.000			
	(0.112)	(0.399)	(NA)	(0.681)	(0.452)	(0.932)	(-----)			
DUM_PUB_TAR	0.221	-0.027	NA	-0.091	0.150	-0.035	0.049	1.000		
	(0.000)	(0.469)	(NA)	(0.012)	(0.000)	(0.342)	(0.179)	(-----)		
LN_SIZE	0.166	-0.006	NA	-0.223	0.071	-0.437	0.077	0.332	1.000	
	(0.000)	(0.876)	(NA)	(0.000)	(0.051)	(0.000)	(0.036)	(0.000)	(-----)	
LN_DEAL_VAL	0.110	-0.029	NA	-0.057	0.071	-0.073	0.075	0.343	0.446	1.000
	(0.003)	(0.423)	(NA)	(0.118)	(0.054)	(0.046)	(0.041)	(0.000)	(0.000)	(-----)

Panel C. Correlation Matrix for "U to D"

Correlation Probability	DUM_CASH	DUM_CRISIS	DUM_HOSTILE	DUM_MIXED	DUM_NEUTRAL	DUM_STOCK	DUM_IND	DUM_PUB_TAR	LN_SIZE	LN_DEAL_VAL
DUM_CASH	1.000									
	(-----)									
DUM_CRISIS	-0.018	1.000								
	(0.775)	(-----)								
DUM_HOSTILE	0.069	-0.029	1.000							
	(0.258)	(0.632)	(-----)							
DUM_MIXED	-0.223	0.041	-0.015	1.000						
	(0.000)	(0.509)	(0.801)	(-----)						
DUM_NEUTRAL	-0.006	0.074	-0.018	-0.015	1.000					
	(0.927)	(0.230)	(0.771)	(0.805)	(-----)					
DUM_STOCK	-0.183	0.094	-0.013	-0.052	0.009	1.000				
	(0.003)	(0.127)	(0.836)	(0.394)	(0.878)	(-----)				
DUM_IND	-0.035	0.000	0.034	-0.043	-0.064	0.116	1.000			
	(0.574)	(0.996)	(0.575)	(0.484)	(0.297)	(0.058)	(-----)			
DUM_PUB_TAR	0.163	-0.018	0.069	-0.096	0.078	0.159	0.213	1.000		
	(0.008)	(0.775)	(0.258)	(0.119)	(0.201)	(0.009)	(0.001)	(-----)		
LN_SIZE	0.198	0.002	0.114	-0.143	-0.017	-0.123	0.121	0.309	1.000	
	(0.001)	(0.978)	(0.062)	(0.020)	(0.788)	(0.045)	(0.049)	(0.000)	(-----)	
LN_DEAL_VAL	0.135	-0.082	0.219	0.018	0.040	-0.018	0.171	0.324	0.482	1.000
	(0.027)	(0.180)	(0.000)	(0.770)	(0.511)	(0.764)	(0.005)	(0.000)	(0.000)	(-----)

Panel D. Correlation Matrix for "U to U"

Correlation Probability	DUM_CASH	DUM_CRISIS	DUM_HOSTILE	DUM_MIXED	DUM_NEUTRAL	DUM_STOCK	DUM_IND	DUM_PUB_TAR	DUM_COUNTRY	LN_SIZE	LN_DEAL_VAL
DUM_CASH	1.000										
	(-----)										
DUM_CRISIS	0.056	1.000									
	(0.048)	(-----)									
DUM_HOSTILE	-0.017	-0.006	1.000								

	(0.546)	(0.821)	(-----)								
DUM_MIXED	-0.161	-0.015	-0.008	1.000							
	(0.000)	(0.589)	(0.791)	(-----)							
DUM_NEUTRAL	0.096	-0.030	-0.012	-0.064	1.000						
	(0.001)	(0.285)	(0.680)	(0.025)	(-----)						
DUM_STOCK	-0.255	-0.075	0.067	-0.112	-0.072	1.000					
	(0.000)	(0.008)	(0.018)	(0.000)	(0.011)	(-----)					
DUM_IND	-0.054	0.000	0.020	-0.036	-0.048	0.050	1.000				
	(0.055)	(0.991)	(0.486)	(0.208)	(0.094)	(0.076)	(-----)				
DUM_PUB_TAR	0.086	-0.077	0.039	-0.109	0.093	0.217	0.021	1.000			
	(0.002)	(0.007)	(0.164)	(0.000)	(0.001)	(0.000)	(0.466)	(-----)			
DUM_COUNTRY	0.036	-0.055	0.011	0.074	0.079	0.117	-0.113	0.048	1.000		
	(0.208)	(0.051)	(0.698)	(0.009)	(0.005)	(0.000)	(0.000)	(0.090)	(-----)		
LN_SIZE	-0.023	0.002	-0.009	-0.043	-0.028	-0.041	0.028	0.235	-0.073	1.000	
	(0.419)	(0.951)	(0.745)	(0.133)	(0.318)	(0.149)	(0.326)	(0.000)	(0.011)	(-----)	
LN_DEAL_VAL	-0.105	-0.027	-0.005	0.113	-0.005	0.265	0.048	0.343	-0.030	0.414	1.000
	(0.000)	(0.333)	(0.853)	(0.000)	(0.873)	(0.000)	(0.092)	(0.000)	(0.297)	(0.000)	(-----)

P-value is included in parenthesis

Table 13

Aggregated regressions using dummy variables to indicate different subsets detecting factors separately

Panel A. Regression with Dummy Variables with 4 subsets combined					
Variable	(1)	(2)	(3)	(4)	(5)
C	0.0108***	0.0120***	0.0140***	0.0166***	0.0125***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
DUM_CASH	-0.0030				
	(0.1486)				
DUM_D_U*DUM_CASH	0.0042				
	(0.5251)				
DUM_U_D*DUM_CASH	0.0068				
	(0.4637)				
DUM_U_U*DUM_CASH	0.0040				
	(0.4688)				
DUM_STOCK	0.0106***				
	(0.0004)				
DUM_D_U*DUM_STOCK	0.1358***				
	(0.0000)				
DUM_U_D*DUM_STOCK	0.0055				
	(0.8422)				

DUM_U_U*DUM_STOCK	0.0118				
	(0.1349)				
DUM_MIXED	-0.0017				
	(0.5948)				
DUM_D_U*DUM_MIXED	0.0087				
	(0.5696)				
DUM_U_D*DUM_MIXED	0.0006				
	(0.9800)				
DUM_U_U*DUM_MIXED	0.0491***				
	(0.0000)				
DUM_NEUTRAL		0.0053			
		(0.2392)			
DUM_D_U*DUM_NEUTRAL		-0.0075			
		(0.5302)			
DUM_U_D*DUM_NEUTRAL		0.0203			
		(0.3895)			
DUM_U_U*DUM_NEUTRAL		-0.0077			
		(0.3655)			
DUM_HOSTILE		-0.0258			
		(0.2159)			
DUM_U_D*DUM_HOSTILE		-0.0406			
		(0.7081)			
DUM_U_U*DUM_HOSTILE		-0.0162			
		(0.8809)			
DUM_IND			-0.0042**		
			(0.0295)		
DUM_D_U*DUM_IND			0.0155***		
			(0.0004)		
DUM_U_D*DUM_IND			0.0039		
			(0.5659)		
DUM_U_U*DUM_IND			0.0054		
			(0.1336)		
DUM_PUB_TAR				-0.0148***	
				(0.0000)	
DUM_D_U*DUM_PUB_TAR				0.0134*	
				(0.0532)	
DUM_U_D*DUM_PUB_TAR				0.0092	
				(0.3211)	
DUM_U_U*DUM_PUB_TAR				0.0115**	
				(0.0204)	
DUM_COUNTRY					-0.0014
					(0.4759)
DUM_U_U*DUM_COUNTRY					0.0077**

					(0.0176)
Observations	14761	14761	14761	14761	14761
R-squared	0.0104	0.0003	0.0011	0.0039	0.0004
Adjusted R-squared	0.0096	-0.0001	0.0008	0.0036	0.0003
Panel B. Regression with Continuous Variables with 4 subsets combined					
Variable	(6)	(7)	(8)	(9)	
C	0.0127***	0.0605***	0.0128***	0.0224***	
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	
ABSOLUTE_SIZE	-1.31E-07***				
	(0.0004)				
DUM_D_U*ABSOLUTE_SIZE	-4.91E-09				
	(0.9696)				
DUM_U_D*ABSOLUTE_SIZE	2.81E-08				
	(0.9650)				
DUM_U_U*ABSOLUTE_SIZE	1.25E-07***				
	(0.0085)				
LN_SIZE		-0.0072***			
		(0.0000)			
DUM_D_U*LN_SIZE		0.0014***			
		(0.0059)			
DUM_U_D*LN_SIZE		0.0013			
		(0.1388)			
DUM_U_U*LN_SIZE		0.0011**			
		(0.0129)			
DEAL_VAL			-1.76E-06***		
			(0.0001)		
DUM_D_U*DEAL_VAL			-3.08E-07		
			(0.9608)		
DUM_U_D*DEAL_VAL			1.87E-06		
			(0.7092)		
DUM_U_U*DEAL_VAL			2.05E-06		
			(0.4037)		
LN_DEAL_VAL				-0.0028***	
				(0.0000)	
DUM_D_U*LN_DEAL_VAL				0.0023***	
				(0.0074)	
DUM_U_D*LN_DEAL_VAL				0.0014	
				(0.2839)	
DUM_U_U*LN_DEAL_VAL				0.0020***	
				(0.0034)	
Observations	13731	13731	14761	14761	
R-squared	0.0010	0.0204	0.0010	0.0022	

Adjusted R-squared	0.0007	0.0202	0.0007	0.0019	

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**

Table 14

Aggregated regressions using dummy variables to indicate different subsets combining all the factors

Multivariate Regression with 4 subsets combined						
Variable	(10)		(11)		(12)	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
C	0.0527***	(0.0000)	0.0529***	(0.0000)	0.0502***	(0.0000)
DUM_CASH	0.0040*	(0.0941)	0.0035	(0.1091)	0.0033	(0.1212)
DUM_D_U*DUM_CASH	-0.0008	(0.9325)				
DUM_U_D*DUM_CASH	-0.0040	(0.7783)				
DUM_U_U*DUM_CASH	-0.0042	(0.5813)				
DUM_STOCK	0.0074**	(0.0303)	0.0072**	(0.0324)	0.0082***	(0.0096)
DUM_D_U*DUM_STOCK	0.1025***	(0.0000)	0.1049***	(0.0000)	0.1053***	(0.0000)
DUM_U_D*DUM_STOCK	0.0156	(0.6471)	0.0180	(0.5900)		
DUM_U_U*DUM_STOCK	0.0125	(0.2180)	0.0121	(0.1953)		
DUM_MIXED	-0.0090***	(0.0076)	-0.0092***	(0.0059)	-0.0091***	(0.0051)
DUM_D_U*DUM_MIXED	-0.0055	(0.7374)	-0.0039	(0.8053)		
DUM_U_D*DUM_MIXED	-0.0072	(0.7992)	-0.0044	(0.8708)		
DUM_U_U*DUM_MIXED	0.0499***	(0.0002)	0.0494***	(0.0001)	0.0452***	(0.0003)
DUM_NEUTRAL	0.0142***	(0.0029)	0.0143***	(0.0028)	0.0146***	(0.0018)
DUM_D_U*DUM_NEUTRAL	-0.0276**	(0.0411)	-0.0276**	(0.0413)	-0.0278**	(0.0389)
DUM_U_D*DUM_NEUTRAL	0.0034	(0.8905)	0.0042	(0.8630)		
DUM_U_U*DUM_NEUTRAL	-0.0217**	(0.0280)	-0.0222**	(0.0239)	-0.0238**	(0.0133)
DUM_HOSTILE	-0.0127	(0.5417)				
DUM_U_D*DUM_HOSTILE	-0.0583	(0.5951)				
DUM_U_U*DUM_HOSTILE	-0.0435	(0.6871)				
DUM_IND	-0.0029	(0.1651)	-0.0029	(0.1639)	-0.0039*	(0.0538)
DUM_D_U*DUM_IND	0.0227**	(0.0108)	0.0233***	(0.0077)	0.0245***	(0.0046)
DUM_U_D*DUM_IND	-0.0066	(0.6642)	-0.0057	(0.6997)		
DUM_U_U*DUM_IND	-0.0084	(0.1954)	-0.0091	(0.1568)		
DUM_PUB_TAR	-0.0136***	(0.0000)	-0.0135***	(0.0000)	-0.0132***	(0.0000)
DUM_D_U*DUM_ PUB_TAR	0.0160*	(0.0906)	0.0166*	(0.0733)	0.0160*	(0.0819)
DUM_U_D*DUM_ PUB_TAR	0.0054	(0.7126)	0.0049	(0.7324)		
DUM_U_U*DUM_ PUB_TAR	0.0065	(0.3725)	0.0050	(0.4835)		
DUM_ COUNTRY	-0.0026	(0.2619)	-0.0025	(0.2774)		
DUM_U_U*DUM_ COUNTRY	-0.0039	(0.6245)	-0.0055	(0.4712)		
DUM_CRISIS	0.0003	(0.9204)				
LN_SIZE	-0.0079***	(0.0000)	-0.0078***	(0.0000)	-0.0077***	(0.0000)

DUM_D_U*LN_ SIZE	-0.0023	(0.1865)	-0.0018*	(0.0918)	-0.0016	(0.1112)
DUM_U_D*LN_ SIZE	0.0012	(0.7041)	0.0014	(0.4530)	0.0015*	(0.0946)
DUM_U_U*LN_ SIZE	0.0027*	(0.0769)	0.0020*	(0.0729)	0.0010**	(0.0347)
LN_DEAL_VAL	0.0044***	(0.0000)	0.0043***	(0.0000)	0.0043***	(0.0000)
DUM_D_U*LN_DEAL_VAL	0.0013	(0.6806)				
DUM_U_D*LN_ DEAL_VAL	0.0010	(0.8339)				
DUM_U_U*LN_ DEAL_VAL	-0.0017	(0.5087)				
Observations	13731		13731		13731	
R-squared	0.0335		0.0333		0.0328	
Adjusted R-squared	0.0308		0.0314		0.0316	

*****, ** and * indicate significance at 1%, 5% and 10% respectively; P-value is included in parenthesis**