Characteristics of International Acquisitions Based on Evidence in Southeast Asia

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Abstract

This study investigates large cross border deals above USD 1 billion during the 2000 to 2011 time frame to explore whether deal values, valuation multiples and payment modes differ for acquisitions by emerging market firms when compared with acquisitions by developed market acquirers; for diversified acquisitions vis-à-vis non-diversified acquisitions; or during a recessionary phase.

We find that mean deal values differ with the economy of the acquirer and target (emerging market/developed market). Contrary to expectations, valuation multiples are not impacted by either the economy of the acquirer and target or during recession. Bidders pay similar premiums when they make related and unrelated acquisitions. Payment is more likely to be in the form of cash for unrelated acquisitions and in the form of stock for higher deals. Recession and economy of acquirer and target do not impact the payment method.

There are several research studies which have looked at characteristics of acquirers, targets and market reactions to acquisition announcements. However, understanding emerging market firms’ deal characteristics vis-à-vis developed market firm’s deals and understanding the impact of recession on deal characteristics raises a significant research question which we explore.

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Keywords: Characteristics; International acquisitions; Southeast; Emerging market

Introduction

Markets react differently when developed and emerging market firms make cross border acquisitions depending on whether the acquirer and target is developed or developing [1,2]. The characteristics of acquirers and target have been studied in several research studies. However, given that acquisitions by emerging market firms have grown from a meager 2% of worldwide cross border deal volumes in 1999 to 29% of worldwide cross border deal values in 2010, understanding of emerging market firms’ deal characteristics vis-à-vis developed market firm’s deals raises a significant research question. This study investigates cross border deals above USD 1 billion during the 2000 to 2011 time frame to explore whether deal values, valuation multiples and payment modes (cash/stock) differ depending on whether the acquirer or target is from a developed market or emerging market. We also examine the impact of related and unrelated acquisitions on deal characteristics. Our data period helps us to cover another question which is whether deal characteristics are impacted by recession during the recession phase of 2001 and 2008-2009.

Figure 1 plots the cross border deals along with the share of developed and emerging market acquirers. We clearly see that recession has had an impact on the value of cross border Mergers and Acquisitions (M&A) causing it to decline in the years of recession. Hence, we make a hypothesis that recession has an impact on deal value (Figure 1).

Theory and hypothesis

Our research question is motivated by several studies on internationalization. The review of these studies can primarily be divided into several categories. Reasons for going cross border [3-6], characteristics of acquirers and targets [7,8], and value effects of going cross border [9,10]. We place our study in the literature for cross border deals where acquirers and targets belong to different kinds of economies and whether these differences in deal characteristics are significant.

Chernykh, Liebenberg and Macias document the growth of acquisitions by emerging market firms during the period 1990 to 2007 [11]. They report a sharp increase in the number and size of

Figure 1: Computed from UNCTAD World Investment Review 2011.
acquisitions by emerging market firms and note specifically the growth of acquisition of developed market targets by emerging market firms. In this study, we analyze cross border deals during the 2000 to 2011 time frame to explore whether deal values, valuation multiples and payment modes (cash(stock) differ depending on whether the acquirer or target is from a developed market or emerging market.

Hypothesis 1: There are differences between deal values, valuation multiples and payment modes between the different Acquirer-Target pairs

Our study also finds its place in literature where major economic events like recession impact the decision to go cross border for an acquisition. Acharya, Shin and Yorulmazer, Aguiar, Mark, and Gopinath have described how assets in an economy undergoing a crisis are sold off at low rates [12,13]. This study tries to explore whether individual deal characteristics are impacted by recession during the recession phase of 2001 and 2008-2009. Aguiar et al. have found that median price to book value ratios declined during the Asian financial crisis for acquisitions of Asian firms. We extend this logic to state that it is likely that worldwide assets are sold off at low valuation multiples during a recession [13].

Hypothesis 2: There are differences between deal values, valuation multiples and payment modes between the different Acquirer-Target pairs before and after recession

Jahera, Hand and Lloyd study various factors that impact acquisition premiums in controlling stake acquisitions and find that diversification has a negative influence on acquisition premium [14]. King, Dalton and Daily in their review of M&A literature found that related acquisitions have a positive impact on performance [15]. On the basis of these studies we test the hypothesis that acquisition of controlling stakes in related industries would involve a higher valuation multiple paid out.

Hypothesis 3: Acquisition of controlling stakes in related industries would involve a higher valuation multiple paid out Faccio and Masulis find that the method of payment cash, stock or combination of payments is influenced by deal characteristics such as shareholding of majority owners; relative size of bidder and target, leverage of bidder; whether the deal is in the same industry or not etc [16]. Faccio and Masulis report that the probability of a cash financed deal decreases when the bidder and target are in the same industry [16]. Martin studies the impact of various factor that influence the method of payment in a deal including growth opportunities of bidders, managerial stock ownership, cash levels with acquirers, institutional share ownership and business cycles [17]. They find that an increase in stock market values is associated with an increase in stock financed deals. We study the impact of deal characteristics such as deal value, industry of acquirer and bidder, economy of bidder target pairs, percentage ownership sought and recession on the method of payment.

Hypothesis 4: The choice of payment mode might depend on whether the deal is in a diversified or same industry, business cycle, economy of the target and percentage ownership sought.

Data and Methodology

We analyze large value cross-border deals above USD 1 billion listed in the Bloomberg database from 2000 to 2011. Bloomberg lists 2309 cross-border deals for the 2000 to 2011 time frame with deal values above USD 1 billion. The reason we choose 1 billion USD deals is to understand the capital flows between the economies in a more representative way. After dropping deals that are not complete or deals where the acquirer or target nation is not mentioned, we are left with a sample of 1367 observations. Acquiring and Target countries are categorized as Developed (D) or Emerging (E) on the basis of UNCTAD classification. The 1367 deals comprise of 1118 deals by developed market acquirers and 249 deals by emerging market acquirers. We classify deals by acquirer and target country pairs to arrive at 964 deals where both acquirer and target are from developed nations (DD) and 154 deals where the acquirer is developed while the target is from an emerging market. (DE) There are 131 deals where the acquirer is from an emerging country and the target is from a developed country (ED) and 118 deals by an emerging market acquirer in an emerging market target (EE) (Table 1).

This table documents the number of completed deals classified by acquirer and target economies on the basis of Bloomberg data.

We collect data from Bloomberg on various deal particulars such as target and acquirer industry sector, target and acquirer nation, percentage sought, percentage owned before deal, total announced value of deal, deal status and valuation multiples paid for the deal namely book value multiple, revenue multiple, and net income multiple.

Table 2 summarizes the deal characteristics for acquirer and target pairs. We observe that the mean deal value for DD (developed acquirer and developed target) is the highest 3.6 billion USD, followed by ED when Emerging market firms acquire developed market targets at 2.9 billion. The percentage sought in cases where the target is from a Developed country is higher, median value 100% for both DD and ED compared with cases when the target is emerging, median values are 58% for DE and 60% for EE deals. We also observe differences in the valuation multiples paid between different acquirer target pairs (Table 2).

This table summarizes the deal statistics for deal value, percentage sought, book value multiple, revenue multiple and net income multiple.

We observe from Figure 1 that there has been a dip in worldwide acquisition activity during and after recession in 2001 and then again during 2007 to 2009 time frame. We investigate the impact of the recessionary phase on mean deal values, taking the official recession phase as announced by National Bureau of Economic Research (NBER). The 9 month period from March 2001 to November 2001 and 18 month period from December 2007 to June 2009 was identified as a recessionary phase by NBER. Since, it is difficult to determine the duration of the post-recession impact phase; we have ignore that period, and only consider the official recession period for our study. We create an additional variable called recession, coded 1/0 for the recessionary phases as defined by NBER.

Table 3 describes the number of acquisitions in each target industry sector during the period 2000 to 2011 by acquirer and target country pairs. We find that acquisitions during the period in terms of numbers were led by acquisitions in the financial sector for both developed and emerging market acquirers. The next priority for developed market acquirers was consumer non-cyclical firms such as pharmaceuticals.

| Acquirer-Developed | Target-Developed | Total |
|--------------------|------------------|-------|
| DD                 | 964              | 154   | 1118          |
| ED                 | 131              | 118   | 249           |
| Total              | 1095             | 272   | 1367          |

Table 1: Description of Acquirer-Target Pairs.
and healthcare firms. While, next to financial sector firms emerging market firms chose to acquire basic material firms such as metals and plastics from developed markets and communications sector firms from emerging markets. Priority of emerging market acquirers seems to be resource seeking when they acquire in the developed world and market seeking when they acquire in the emerging markets (Table 3 and Figure 2).

This table summarizes the number of acquisitions by acquirer target pairs in each target industry sector. It provides the number of deals as well as its percentage of total deals, pair wise and industry wise.

Table 4 summarizes the deals values in each target sector by acquirer target pairs. Interestingly, when we look at the deals in terms of value deals in a particular industry sector, for all completed deals above USD 1 billion, we find that financial sector does not have the highest number of deals. Consumer non-cyclical deals are of the highest value followed by financial sector deals. When developed acquirers acquired firms in developed markets the highest total deal value was in consumer, non-cyclical sector, while they spent the maximum amount on financial sector targets when they made acquisitions in emerging markets. Acquisitions by emerging market firms in developed markets were resource seeking as they have spent 25% in value terms on energy sector followed by 20% on basic materials. Emerging market acquisitions in other emerging markets were with a view to expand markets as they have made the largest acquisitions in communications sector (Table 4 and Figure 3).
This table summarizes the deal values in billion USD in each target industry sector by acquirer target pairs. It provides the deal values for the industry as well as its percentage of total deals pair wise.

Next, we examine the type of deals (diversified/non-diversified) made by developed and emerging market firms. Figure 4 provides the distribution of diversified and non-diversified deals for each of the acquirer target pair. We observe that the proportion of same industry deals is similar for all acquirer target pairs at around 70% of deals (Figure 4).

Morck, Shleifer and Vishney found that acquiring firms suffered negative abnormal returns when they made diversifying acquisitions. We analyze acquisition multiples paid to test whether they are influenced by whether the deal is diversified or horizontal [18].

For testing the first three Hypothesis, we adopt a multifactor analysis of variance (ANOVA) test. We use the ANOVA test to test the hypothesis that the mean announced deal values, deal multiples do not vary with deal characteristics such as acquirer-target pairs, recession and diversification.

For our fourth Hypothesis, we use a multinomial logistic model. We have three categories of payment modes – stock, cash and combination. Since they are unordered, we can use multinomial logit model. The probability in other categories is compared to the probability of payment in the reference category. In our case, the reference category is payment by cash.

\[
\ln \left( \frac{P(\text{payment} = \text{stock})}{P(\text{payment} = \text{cash})} \right) = \beta_0 + \beta_1(\text{diversified}) + \beta_2(\text{deal value}) + \beta_3(\text{control}) + \beta_4(\text{country pair}) + \beta_5(\text{recession})
\]

\[
\ln \left( \frac{P(\text{payment} = \text{combination})}{P(\text{payment} = \text{cash})} \right) = \beta_0 + \beta_1(\text{diversified}) + \beta_2(\text{deal value}) + \beta_3(\text{control}) + \beta_4(\text{country pair}) + \beta_5(\text{recession})
\]

Results

We test for the analysis of variance in deal characteristics and analyze whether they are influenced by the economy of target and acquirer, by whether the acquisition is diversified or in the same industry sector, and during recession (Table 5).

Deal value is impacted by acquirer target pairs and by whether the deal is diversified or horizontal. However, surprisingly mean deal values are not impacted by recession. Hence we find that though number of deals fell during recession as depicted in Figure 1, the mean deal values for large deals above USD 1 billion were not impacted by recession (Table 6).

We find that there is a significant difference in mean deal values between diversified and non-diversified deals. Mean deal values of horizontal deals during the 2000 to 2011 time frame are 3.6 billion while diversified deals are for 2.4 billion.

Next we study the impact of acquirer target economies, diversification and recession on three valuation multiples – book value

| Source | Partial SS | df | MS  | F    | Prob > F |
|--------|------------|----|-----|------|----------|
| Model  | 29.76      | 5  | 5.95| 11.98| 0.00***  |
| pair_no| 13.42      | 3  | 4.47| 9.00 | 0.00***  |
| diversified | 16.53 | 1  | 16.53| 33.28| 0.00*** |
| recession | 0.23 | 1  | 0.23| 0.46 | 0.50 |
| Residual | 676.24 | 1361 | 0.50 | Total | 705.99 | 1366 | 0.52 |

(*** p<0.01, ** p<0.05, * p<0.1).

Table 5: Results of a multi factor ANOVA with the log of announced deal value as the dependent variable.

| Mean (USD million) | Std. Dev. | Freq. |
|--------------------|-----------|-------|
| Horizontal Deals   | 3626.028  | 4677.821 | 976  |
| Diversified Deals  | 2464.209  | 2909.14  | 391  |
| TTotal             | 3293.715  | 4279.098 | 1367 |

Table 6: Summary of announced total value.
multiple, revenue multiple and net income multiple for controlling stake acquisitions defined as cases where percentage acquisition sought is more than 50%. We also limit our analysis to cases where all three multiples are available for a deal. The analysis of variance results for valuation multiples are tabulated in Table 7. We find that the economy of acquirer and targets, diversification and recession have no impact on valuation multiples. This seems to indicate that emerging market economies stand at par with developed market acquirers in large acquisitions. Similarly the hypothesis that assets may have been sold at fire sale prices during recession is not true in the case of high value acquisitions. Similarly the hypothesis that assets may have been sold at fire sale prices during recession is not true in the case of high value acquisitions. 

Payment Type: Next we investigate whether the payment type (cash/stock/ combination of stock/cash) is influenced by whether the acquirer and target are from developed or emerging countries, deal values, percentage sought and whether the deal is diversified or not.

We code deals with 1 for cash deals, 2 for stock deals and 3 for cash and stock combinations, debt, debt combinations, etc. 117 deals do not have payment data which are excluded from our analysis.

The deals break up by payment type and acquirer target economy is as follows (Figure 5).

We observe that cash is the primary mode of payment in most deals. However, in case of emerging markets acquisition of developed market targets the largest proportion of deals are in cash followed by combination deals. The proportion of stock deals for emerging market acquisitions in developed market targets is very low. This seems to be arising from the reluctance of developed market targets to hold shares in emerging market firms or from regulatory and listing issues.

We run a multinomial logit with the base outcome as cash deal, second outcome as stock deal and the third as combination deals to determine the factors that would impact the livelihood of a firm going for a cash or stock or combination deal depending on the deal characteristics.

We find that deals are more likely to involve stock payment if announced deal values and percentage of the target sought to be acquired is higher (Table 8).

This table presents the results from a multi nominal logit test with payment in cash as the base outcome, and payment in stock and combination of cash and stock and other payment modes as the alternate outcome.

We interpret these results to mean that if the deal is diversified then the log odds for a stock deal decrease by 1.429 units and a combination deal decrease by 0.745 units keeping all other deal characteristics constant. While if the log of the deal value is increased by 1 unit then the log odds of the deal being a stock deal increase by 0.925 units and by .497 units for a combination deal. If the percentage sought is increased by 1 unit, the log odd of the deal being a stock deal increase by 0.0136 units and a combination deal increase by .0123 units. Whether the acquirer and target are developing or emerging and whether there is a worldwide recession does not impact the payment mechanism.

Conclusions

Cross border deals have gained in importance over the last decade, with an exponential growth in acquisition by emerging market firms. Researchers have studied characteristics of acquirers and targets and announcement effect of acquisitions. However, there has been a limited focus on understanding emerging market firm deal characteristics vis-à-vis developed market firms.

Our results indicate that mean deal values differ between acquisition target pairs. As per expectations the highest mean deal values are for developed market acquisitions of developed market targets. We also observe that diversification impacts deal values; horizontal deals have higher mean deal values than diversified deals.

| Deal Characteristics | Stock          | Combination     |
|----------------------|----------------|-----------------|
| diversified         | -1.429***      | -0.745***       |
|                      | -0.329         | -0.231          |
| log_dealvalue        | 0.295**        | 0.497***        |
|                      | -0.13          | -0.111          |
| percent sought       | 0.0136***      | 0.0123***       |
|                      | -0.00405       | -0.00343        |
| pair no              | -0.0211        | 0.0163          |
|                      | -0.0297        | -0.0233         |
| recession            | -0.155         | -0.254          |
|                      | -0.283         | -0.251          |
| Constant             | -5.059***      | -6.786***       |
|                      | -1.161         | -0.998          |
| Observations         | 1,250          | 1,250           |

Table 8: Results from a multi nominal logit test with payment in cash.

We focus on understanding emerging market firm deal characteristics vis-à-vis developed market firms.
It is interesting to note that deal valuation multiples are not significantly impacted by either the economy of the acquirer or target, by whether the deal is diversified of not and whether the deal took place during recession. This seems to indicate that emerging markets are not worse off than developed markets with respect to negotiations on price, and should be explored further.

There has been a dip in acquisitions during recession phases during 2000 to 2010. Research on exploring the impact of recession on mean deal values has been limited. Contrary to expectations, mean deal values during recession are not significantly different from values during a non-recessionary phase. This result needs to be analyzed further as there could be a post-recession impact phase which has been ignored in our study.

Cash has been the primary form of payment for all acquirer target pairs; however the probability for stock payments increases for larger deal values and cases where a higher percentage of ownership is sought. The likelihood of cash payment is higher for diversified acquisitions which are in line with expectations.

Our studies bring out some interesting stylized facts about mergers and acquisitions over the 2000 to 2011 time frame. We address research questions on deal characteristics and raise questions for further research in this area. The way forward could be to look at the universe of all the cross border deals and then test the robustness of our results. In future research we would also like to explore other characteristics of acquirer and target like the different characteristics of the countries and the value created for each kind of pair. The results in this study motivate us to further our study in understanding the regulations of the countries which might be one of the reasons for the payment mode adopted by the firms. However, this study brings forth a new dimension to the cross border deals literature and provides an incremental path in this area for further exploration.

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