

The Performance of Bidding Companies in Merger and Acquisition Deals: An Empirical Study of Domestic Acquisitions in Hong Kong and Mainland China

Abstract

This paper examined the short-term market responses of Hong Kong domestic acquisitions by separating target companies into two samples: Hong Kong targets and Mainland China targets from the period of 2012-2016. We have used asset pricing models to estimate the market reaction to the acquisition announcement. Our findings suggest that: (i) acquisition events in both target markets, bidders earn significant positive abnormal returns but market responses of Mainland China target acquirers are much better. There is an inverse relationship between bidders' post-acquisition abnormal returns and the level of competition in their targets' market; (ii) companies bidding for Hong Kong targets obtain higher abnormal returns with cash-financing acquisitions, large relative size targets, single acquisitions, related acquisitions, small market value, more free cash flows, low leverage and high profitability; (iii) firms acquiring Mainland China targets benefit more from stock payment takeover events, large relative size target, multiple acquisitions, related acquisitions, large market value, less free cash flows, high leverage and high profitability.

Key Words: Mergers and Acquisitions, Announcement date, Bidding and Firm characteristics.

JEL Classification: G34; G14; G12

1. Introduction

Examinations of the wealth effect of mergers and acquisitions have been a prominent field in financial studies for decades. The basic objective of mergers and acquisitions is to increase shareholders' value. Owing to their great influence on investors, societies and organizations, mergers and acquisitions have gradually become the largest and most observable means of business investments (Masulis et al., 2007 and Erel et al. 2015). This situation has led to the considerable interest of the community. As a highly economically developed area, Hong Kong also experienced a huge increase in merger and acquisition events (for e.g. see Goddard et al. 2012; Sun et al., 2012; Huang 2013; Reddy et al. 2014 and Erel et al. 2015). Although the short-run market response of the acquisition has been extensively investigated in the US, UK and other European countries, this issue in Hong Kong has not been examined thoroughly. Therefore, our paper is new to examine comprehensive investigation of short run market reactions of Hong Kong bidding firms in acquisition of domestic targets.

To reflect the significance of acquisitions in shaping the business community, there has been a large number of studies to investigate whether acquisitions have improved bidders' performances in the last five decades. One major direction of merger and acquisition research is to investigate the short-term operating performances of the acquiring companies. Generally, bidders' post-takeover performances are measured by abnormal returns, which are clarified as returns over a proper benchmark return. Unfortunately, based on existing research, it seems that no consensus has been achieved on this issue. According to Bradley et al. (1988), Le and Schultz (2007) and Humphery-Jenner and Powell (2011), bidding companies earn significantly positive abnormal returns in the short-term announcement period. Other research provides evidence of significant negative returns (Sudarsanam et al. 1996; Walker 2000; Antoniou et al. 2008). Moreover, Gregory (1997) and Andrade et al. (2001) argue that no significant abnormal return exists during the announcement period, while Bruner (2002) observes mixed results

from 32 studies.

Alexandridis et al. (2010) have brought a new dimension to this issue. By researching all over the globe, they indicate that the degree of competition is negatively correlated with the return of the bidder, which means acquirers are more likely to suffer from negative abnormal returns when purchasing targets in markets with intensive competition, whereas bidders tend to earn significant positive abnormal returns by acquiring targets in less competitive markets.

The Hong Kong market has always played an important role in the world because of its special historical background, economic regulations and political system. Therefore, the research of acquisition events in this market should be highly valued. As an emerging area, the Mainland China market is different from the Hong Kong market in many aspects, such as liquidity, openness, volatility, corruption, taxation and governance costs (Bruner et al. 2002). Unlike Hong Kong and other developed countries or areas, the starting point of mergers and acquisitions in China is very late (1990s), which makes the Chinese acquisition market highly immature. These differences present the primary motivation of this study. Due to various distinctions between the Hong Kong market and the Mainland China market, the short-term abnormal returns of bidders purchasing target firms from these two markets may differ greatly. Hence, the sample acquisition events used in this study to analyse Hong Kong bidding companies' announcement abnormal returns should be categorized into two groups: bidders of Hong Kong targets and bidders of Mainland China targets.

Another main intention of this study is to assess the effects of bid characteristics and firm characteristics on acquirers' announcement period abnormal returns. Some theories and existing literature provide strong evidence that bid characteristics and corporate characteristics may also affect the acquisition results directly (Conn et al. 2005). Thus, in studying the short-term operating performance of the bidding company, these factors should be examined appropriately. In doing so, this study aims to provide a comprehensive analysis of the acquirers'

operating performances around the announcement period by incorporating several conventional bid and firm characteristics.

In summary, the purpose of this study is to analyse: (i) the effect of the target location on the short-term operating performance of the acquirer; and (ii) the impact of bid and firm characteristics on the short-run operating performance of the acquirer. The remainder of this paper is designed as follows. Section 2 summarizes the relevant literature about short-term post-acquisition abnormal returns and basic theories; Section 3 presents a simple analysis of the sample, develops hypotheses, explains the methodologies used to assess abnormal returns during the takeover event announcement period; Section 4 tests the hypotheses developed based on the research findings and comprehensively explains the empirical results derived by all models. Section 5 concludes and summarizes the full study.

2. Literature Review

Over the past three decades, much research has been concentrated on merger and acquisition events. The bidders' pre-acquisition and post-acquisition performances have been examined and attempts have been made to isolate and measure the influence of mergers and acquisitions from other business activities. In general, whether mergers and acquisitions can create value is still inconclusive. Some empirical research offers evidence that bidding companies receive significant positive excess returns during the announcement period (Bradley et al. 1988; Le and Schultz 2007; Humphery-Jenner and Powell 2011) whereas some studies observe negative returns to acquirers (Sudarsanam et al. 1996; Walker 2000; Antoniou et al. 2008a). A number of other studies prove that no significant short-term cumulative abnormal returns exists (Gregory 1997; Andrade et al. 2001). An in-depth study conducted by Alexandridis et al. (2010) reports that the market response to the acquisition announcements relies on the level of competitiveness in the market for corporate control. Bidders are more

likely to contribute an excess premium when the acquisitions market is highly competitive and a lower premium if the competition is weak. Their research indicates that there is a significantly negative correlation between the level of competition and the bidding companies' post-acquisition abnormal return.

The basic theories related to mergers and acquisitions are divided into two dimensions: value maximization motives and non-value maximization motives (Halpern 1983). Common hypotheses on motivations of mergers and acquisitions include hubris, synergy, free cash flow and the market for corporate control. Hubris is introduced by Roll (1986), which excludes value-added financial motivation and focuses more on personal wealth, power and corporate control.

Chatterjee's (1992) work supported the views of supporters of free markets that takeovers are value-added activities, in which these superior performances are often referred to as synergy. Synergy is also related to economies of scale, economies of scope and the growth of market power. Therefore, synergy in acquisition firms would result in enhancement of the profitability of the new economic entity, reduction in operating and financing costs as well as improvement of firms' operational performance (Sharma and Ho 2002). The theory of free cash flow argues that managers tend to use free cash flows to make negative net present value investments, which runs counter to the criteria of maximizing shareholders' wealth (Jensen 1986). The market for corporate control theory applies when bidders have supervised management teams and take over less competent managers' goals. Several management teams compete to obtain management power of the company which can at least ensure it is the most efficient team that is in charge of the company (Sharma and Ho 2002).

Some researchers believe that the inconclusive results related to the market reaction of the acquiring company may be caused by the inability to control the effect of various bid features and specific firm characteristics. Therefore, a number of bid and firm characteristics are

included in this study. Bidding features selected in this research include type of payment, relative deal size, relevance of industry and multiple bids while firm characteristics are size of the bidding firm, free cash flow, leverage and profitability.

A series of theoretical models have been proposed to interpret the difference in the returns of acquirers by using diverse means of payment. One of the main reasons for this difference is the information symmetry of the mutual valuation between the bid and the target company, which may result in valuation risk and subsequent overpaying or adverse selection (Chang 1998). Myers and Majluf (1984) also argue that managers prefer cash financing if they feel confident about the potential economic benefits of the acquisition, so that cash financing can be considered as good news to market participants. Moreover, Hansen (1987) proposes that, under information asymmetries, bidders' payment choice conveys a bargaining model, which means acquirers are more willing to choose stock-financing when they do not have precise information on the target value. Under this circumstance, a stock deal is used by acquirers to share risk (Eckbo et al. 1990).

The relative size of the target pertaining to the acquirer is shown as a related determining factor of the bidder's post-takeover performance (Alexandridis et al. 2013). Erel et al. (2015) and Kuehn (1975) argues that acquisitions of small targets require lower acquisition costs from bidders. Also, small target firms are easier to incorporate in the bidders' business activities so that they are more likely to result in positive abnormal returns (for e.g. Bhabra and Huang, 2013; Boubakri et al. 2008). However, Draper and Paudyal (2006) suggest that, compared with large firms, small targets have little effect on bidders and acquisitions of small companies would result in less synergy.

No conclusive results have been found on the influences of diversified acquisitions. In an earlier study, Jensen (1986) proposes that managers diversify enterprises to increase their private interests. Moreover, diversification of the company offers higher operational efficiency,

lower taxes and greater debt capacity (Berger and Ofek, 1995; Karampatsas et al. 2014; Phan, 2014; Ahern and Fracassi, 2015 and Arian and Stulz, 2016). On the other hand, related acquisitions are also argued as value-creating events through economies of scale, economies of scope and market power. Moreover, in order to reduce the threat of its substitution, managers would be encouraged to takeover unrelated firms to cover up the previous poor performance of the business (Shleifer and Vishny 1989).

Frequent bidders tend to perform better due to their richer experience, more abundant funds and stronger capability to carry out acquisitions events and may obtain more positive responses in subsequent bids (Fowler and Schmidt 1989). Recurrent acquisitions can also send signals to target firms that bidders are expanding and have positive and promising prospects (for e.g. see Boubakri et al. 2008; Gaur et al., 2013 and Tao et al. 2017). However, Fuller et al. (2002) point out that in follow-up transactions, the negotiation efficiency is not high and the synergistic effect is poor.

Du and Boateng, 2015 examined the influence of the bidder's size on acquisition performance. Mergers between small firms are consistent with the goal of improving efficiency through economies of scale and economies of scope, whereas mergers between large enterprises are more likely to seek greater market power (see for e.g. Gugler et al. (2003); Killing, 2013; Bena and Li, 2014; Du and Boateng, 2015 and Sherman, 2018). Agency cost also influence the acquisitions (for e.g. Ferreira et al., 2014 and Schmidt, 2015).

Moeller et al. (2004) advocate that in large enterprises, the conflict of interest between managers and shareholders is more serious. Large corporate scales can also be used as a fairly effective acquisition defensive tool, because more resources are needed to achieve larger targets (Masulis et al. 2007). However, some research also shows evidence that no significant linkage between the size of the bidding company and the post-takeover performance exists (Healy et al. 1992; Sharma and Ho 2002). Humphery-Jenner and Powell (2011) also examine

this correlation and they find that large acquirers obtain a significant positive return (0.56%) in the three-day event window.

A number of studies predict that current free cash flow has a negative relationship with post-takeover performance (Bhabra et al., 2013; Rao-Nicholson et al., 2016 and Grigorieva and Petrunina, 2015). Jensen (1986) notices that the presence of high free cash flow in firms may make managers overconfident and make it easier to obtain sufficient resources for their imperial construction. Under the premise of supporting the concept of agency costs in free cash flows, Harford (1999) finds that large companies with substantial free cash are inclined to carry out value-reducing takeovers. However, higher free cash flow may also be a signal of better corporate performance, which may be related to more capable managers who have higher possibilities to make profitable acquisitions (Moeller et al. 2004).

Leverage has an impact on managerial decision processes. High levels of debt can lead to declining future free cash flow, thereby constraining the discretion of the management. Leverage also provides managers with incentives to increase company earnings due to the requirements of managers to monitor and control creditors (Moeller et al. 2004). Some previous studies suggest that, compared with non-leveraged firms, leveraged bidders have more control over the agency problem in takeovers, which can be a proper approach to alleviate the agency problem (Jensen 1986). Maloney et al. (1993) present three merits related to leveraged enterprises' takeover decisions. Firstly, highly leveraged companies normally face a lack of sufficient free cash flow to invest in non-value-added acquisitions. Then, highly leveraged companies' managers tend to make more efforts to eliminate bankruptcy. Next, high levels of debt ratio can lead to better decision-making processes. On the contrary, based on samples in the US market, Switzer (1996) notices that the bidder's leverage has nothing to do with the post-acquisition operational performance, and Martynova et al. (2006) propose similar results in the European context.

Acquisitions can also be selected by low-margin bidding companies to cover up their poor performance as well as high-margin bidding companies looking for new ways to obtain benefits. Researchers, such as Morck et al. (1990) and Markides and Ittner (1994) prove that bidders with poor performance are more likely to make value-destructive acquisitions. Capron and Shen (2007) propose that corporates with poor performance tend to use acquisitions to cover up their bad performance, and they observe an insignificant negative correlation between pre-announcement profits and the acquirers' abnormal return.

Although Hong Kong has one of the freest and most open financial markets around the globe, academia has not paid much attention to takeover activities in this area. The influence of domestic acquisitions on this area's development cannot be ignored, but few studies have focused on this field yet. Cheung and Wong (2009) examine the profitability of acquisition events in Asia from 2000 to 2007, in which acquisition announcements are found to be good news for the shareholders of bidding companies. Gu and Reed (2010) use event study methodology to investigate the influences of 145 cross-border acquisition announcements from 1994 to 2008 and observe a positive response from the market. Additionally, by a further analysis of 1,148 merger and acquisition events in the Chinese stock market, Chi et al. (2011) notice significantly positive abnormal returns prior to and upon announcements while post-takeover returns are insignificant. Reddy et al. (2014) examined the global financial crisis and its impact on cross border mergers and acquisitions including Hong Kong and concluded that sale and purchase deals have been adversely affected after two years of the 2007–2008 global financial crisis. Ahern et al. (2015) analyses cultural values on mergers around the world which included Hong Kong. They established an argument that national culture includes (trust, hierarchy, and individualism) impact on merger volume and synergy gains. Tao et al. (2017) investigated short term market performance based on cross border mergers and acquisitions. The findings indicate that the announcement of cross-border M&As results in a positive stock

market reaction; this effect is more significant in the mainland Chinese stock markets (Shanghai and Shenzhen) than that in the Hong Kong market.

3. Data and Methodology

In order to update and extend the existing research results in the Hong Kong market, this study selected successful acquisition cases announced by Hong Kong listed companies in the five fiscal years (from 2012 to 2016). Data is collected from following sources: DataStream, Bloomberg, Capital IQ and companies' annual reports. There are two criteria for the selection of sample data. Firstly, information on bid events such as deal value and event date must be available. Then, the necessary stock price and key financial ratios of the bidding firm must be available.

According to Table 1, the number of acquisitions made by Hong Kong companies in both target markets is relatively stable, in which the average number of enterprises who select Hong Kong targets each year are almost 1.5 times as many as those that choose Mainland China targets. Furthermore, bidders of Mainland China targets are more likely to go on to increase the number of acquisitions compared with acquirers of Hong Kong targets but neither of these trends is very strong. The average proportion of the outstanding shares obtained by bidding companies of targets from both markets fluctuate around 86%. A lower average deal value is paid to Mainland China targets, which is less than a third of the amount paid to Hong Kong targets. On average, the total transaction amount in the acquisition process paid by cash only occupies a majority proportion of the total announcement value in both target markets (64.90% in Hong Kong and 67.97% in Mainland China). The percentages of other payment methods in decreasing order are stock (26.53%), other types of settlement (6.94%) as well as a combination of cash and stock (2.52%) for the Hong Kong target market and cash and stock portfolio

(15.3%), others (12.37%) as well as stock (4.36%) for the Mainland China target market. The average raw return in the last column demonstrates that Hong Kong bidders have achieved positive returns within 51 days of the announcement period regardless of the market of the targets.

[INSERT TABLE 1 HERE]

Table 2 exhibits the industry categories of bidding companies. In terms of number of deals, the financial sector occupies important positions in both target markets and they predominantly increase the business focus. The industrial sector and cyclical consumer industry are also relatively major sectors, which constitute 14.45% and 16.76% in the Hong Kong target market and 20.78% and 21.65% in the Mainland China target market. Apart from these, acquirers of Hong Kong targets also focus on non-cyclical consumer industry. Bidding firms in the financial sector of both target markets have the highest deal values than all other industries. In addition, technology sector companies have the highest market value of equity, although this sector accounts for less than 3% in both markets. Bidding firms in most industry sectors earn positive returns during the announcement period.

After exploring the characteristics of acquisition and industry information, we then investigate the short-run market performance of bidding firms of Hong Kong targets and Mainland China targets around the announcement period. This research uses bidders' daily stock price to estimate the abnormal return of the acquiring company. The Hang Seng Index is used as a proxy for market portfolio in this study. Ten years' Hong Kong government bond yield is considered as a proxy for the risk-free rate. This research also collects diverse accounting data for a further analysis of influences of bid characteristics and firm

characteristics on bidders' post-acquisition abnormal returns.

[INSERT TABLE 2 HERE]

Previous studies have utilized diverse methods to calculate abnormal returns around the announcement period. In this study, we will use Brown and Warner's (1985) standard event study methodology to measure cumulative abnormal returns (CARs) during the short-term announcement period. Earlier, studies demonstrate that estimating beta will not significantly improve the calculations of abnormal returns (Timpano and Bacon, 2012 and Brown and Warner, 1980). Therefore, this study also employed the single-factor model (CAPM) and three-factor model (Fama-French) to produce market adjusted abnormal returns rather than the market model (for e.g see Kan et al., 2013; Novy-Marx, 2013; Oberndorfer et al., 2013 and Patro et al., 2013). The abnormal returns are measured on six event windows around the announcement date (day 0), which includes the far pre-announcement period (day -26 to day -10), near pre-announcement period (day -9 to -1), announcement day (0), near post-announcement period (day +1 to day +9), far post-announcement period (day +10 to day +26) and a total period (day -26 to day +26).

This study calculates daily returns of enterprises by using their stock prices under this formula:

$$R_{i,t} = \ln P_t - \ln P_{t-1} = \ln \left(\frac{P_t}{P_{t-1}} \right) \quad [1]$$

Where $R_{i,t}$ = return of security i during time period t;

P_t = closing stock price of day t.

Equations of calculating abnormal returns (ARs), Cumulative abnormal returns (CARs) and cumulative average abnormal returns (CAARs) are as shown below:

$$AR_{i,t} = R_{i,t} - E(R_{i,t})$$

$$CAR_i(t_1, t_2) = \sum_{t_1}^{t_2} AR_{i,t} \quad [2]$$

$$CAAR_i(t_1, t_2) = \frac{1}{N} \sum_1^N CAR_i(t_1, t_2)$$

This study uses value of alpha as a measure of abnormal returns. The following is the estimating formula:

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}(R_{m,t} - R_{f,t}) + \epsilon_{i,t} \quad [3]$$

Where $R_{i,t}$ = total return generated by the acquiring firm i;

$R_{f,t}$ = return of risk-free asset;

$R_{m,t}$ = return of total market index.

If α is statistically significant, the sample bidding company experiences a significant abnormal return during the investigation period.

Additionally, Fama and French (1993) three-factor model is estimated as follows:

$$R_{i,t} - R_{f,t} = \alpha + \beta_{1,i}(R_{m,t} - R_{f,t}) + \beta_{2,i}SMB_t + \beta_{3,i}HML_t + \epsilon_{i,t} \quad [4]$$

Where $R_{i,t}$, $R_{f,t}$ and $R_{m,t}$ are same meanings as above;

SMB = the size premium (difference in return between a small portfolio and a large portfolio);

HML = the value premium (difference in return between a high book-to-market ratio portfolio and a low book-to-market ratio portfolio).

To test the influence of bid characteristics and firm characteristics demonstrated in the literature above, this study uses the following model to do the estimation.

$$CAR_i = \beta_1 \text{cash dummy} + \beta_2 \text{stock dummy} + \beta_3 \text{Ln relative size} + \beta_4 \text{unrelated industry dummy} + \beta_5 \text{multiple bid dummy} + \beta_6 \text{Ln market value} + \beta_7 \text{free cash flow} + \beta_8 \text{leverage} + \beta_9 \text{profitability} + \epsilon_{i,t} \quad [5]$$

Where the dependent variable (CAR_i) is the three-factor model (Fama-French) cumulative abnormal returns during the entire short-term event window (day -26 to day +26).

The independent variables include four bid characteristics and four firm characteristics, which are a cash-only dummy, a stock-only dummy, the logarithm of the transaction relative size, an unrelated acquisitions dummy, a multiple bid dummy, the natural logarithm of the relative market value, profitability, leverage and free cash flow ratio.

In view of previous research methods and models from literature, two main hypotheses are proposed in this paper:

Hypothesis 1: Bidders of Hong Kong targets earn lower abnormal returns than bidders of China Mainland targets.

Hypothesis 2: The average abnormal returns fluctuating range of Hong Kong target acquirers is shorter than the average volatility period of China Mainland target bidders.

In Table 3, bidders of targets from both markets, both the stock only dummy and the Ln relative size variable have negative correlations with the cash only dummy. Also, the cash only dummy is positively related to Ln market value, free cash flow variables and profitability, which may suggest that large enterprises of this target market are more likely to use cash as a payment means in their acquisition events. Moreover, a positive correlation may exist between cash-financing and the financial condition of the bidder. The correlation matrixes also demonstrate that in both target markets, the Ln relative size variables have negative correlations with the Ln market value and free cash flow variables, and also the Ln market value coefficients are positively related with three other firm characteristics variables. Based on Gujarati (1995), if the absolute value of the correlation between independent variables is higher than 0.80, there may be a multiple collinearity problem between these variables. From correlations in Table 3, except for the correlation between SMB and HML of Hong Kong target bidders (0.982), the absolute value of other correlations between these variables are far less than 0.80. Therefore, it can be argued that the possibility of multiple collinearity problems in the estimated regression

model of this study is very limited.

[INSERT TABLE 3 HERE]

4. Empirical Analysis

Table 4 below reports the cumulative average excess returns of acquiring firms around the announcement period. This study examines Hypothesis 1 by showing a comparison between short-term post-acquisition bidders' performances for targets from different markets. As to Hong Kong target acquirers, it is shown that the abnormal return is not significant during the entire period in either the market return or single factor model. Pre-announcement cumulative average abnormal returns tend to be positive, and post-announcement average abnormal returns are non-positive; these returns are only significant in the CAMP model at the 10% level. The results from the three-factor model are more convincing. The cumulative average abnormal returns prior to the acquisition as well as on the announcement day are significantly positive, while the results for windows after the event are insignificant and negative. Moreover, the cumulative average abnormal return for the whole period is significantly positive at the 1% level. For Mainland China target bidders, the results are very similar to the above but more robust. The cumulative average abnormal returns of the entire period generated from all three models are significantly positive. Abnormal returns before acquisitions as well as on event days are significantly positive while post-acquisition outcomes are not very far from zero. Overall, for companies acquiring targets from both markets, results exhibit significantly positive market reactions during the announcement period. Bidders tend to have significantly positive abnormal returns prior and upon the acquisition and close to zero post-takeover abnormal results. However, bidding companies earn higher and more significant excess returns during the entire announcement period in acquisitions of Mainland China targets than their Hong Kong target

acquiring counterparts. This provides strong support for Hypothesis 1 and it cannot be rejected. Moreover, the abnormal returns of bidders acquiring from both target markets are significant in different time periods. On the whole, the volatility period of Hong Kong target acquirers' abnormal returns is shorter and less significant than the fluctuation time range of Mainland China target bidders. Thus, Hypothesis 2 should not be rejected. Furthermore, it is also evidenced that the three-factor model is better at capturing abnormal returns on the announcement period compared to the market return model, which supports the importance of incorporating market parameters in estimating average excess returns.

[INSERT TABLE 4 HERE]

Through analysing the data above, we find that bidders of target firms from both markets record significant excess returns in periods before the announcement, which indicates information disclosure prior to announcements. Also, the insignificant post-takeover abnormal returns of these acquirers show no delayed reaction to acquisition announcements. Additionally, bidders of Mainland China target companies realize higher abnormal returns than acquirers of Hong Kong targets. This suggests that investors believe managers of these bidding companies create more value when purchasing Mainland China targets rather than Hong Kong targets. It is clearly shown in Figure 1, which shows the cumulative average abnormal returns of acquirers during the 53-day announcement period generated from the three-factor model.

[INSERT FIGURE 1 HERE]

[INSERT TABLE 5 HERE]

Previous studies have confirmed that companies' abnormal returns can be sensitive to payment methods. As stated in the literature, the market's view of cash-financing is more favourable than stock-financing in several markets. According to our results, companies who purchase targets from the Hong Kong market tend to receive significantly greater reward from cash-payment takeovers than from stock-payment transactions. Bidders of Mainland China targets experience quite the opposite situation, in which companies earn significant and extremely higher abnormal returns from stock-payment acquisitions during the announcement period than takeover events paid by cash. This response lends support to the argument that stock financing can be regarded as a means to reduce the asymmetry of target information. Shareholders of the bidding company may believe that such transactions can create value because the stock financing the acquisitions communicates positive information on the bidding company's value in the market, as the seller would retain economic benefits in the sustained viability of the business assets or shares that have been sold (Andrew 2006). On the other hand, the results from Hong Kong target takeovers are very similar to those of the US market and UK market in this field where equity-financed acquisitions should have an inverse relationship with abnormal returns. Cash-financed takeovers of Hong Kong targets perform much better than their stock-financed counterparts. This finding supports previous arguments that stock financed takeovers are more likely to be obtained by overrated acquirers to purchase relatively less overrated targets so that these takeover events are negatively related with abnormal returns (Draper and Paudyal 1999; Shleifer and Vishny 2003; Moeller et al. 2004).

Referring to other bid variables, generally acquisitions of high relative size targets can create more synergies than acquisitions of low relative size targets. Therefore, high relative

size bidders are more likely to earn higher excess returns (Asquith et al. 1983; Draper and Paudyal 2006). The findings on acquisitions of targets from both markets is consistent with this theory, which presents that high relative size acquirers receive significant positive abnormal returns whilst low relative size bidders obtain significant negative earnings. The literature also shows that bidders involved in multiple acquisitions are more experienced in this field so that positive reactions may occur in subsequent bids (Antoniou et al. 2007). Results from Mainland China target multiple bidders also show significantly higher abnormal returns while single bidders earn relatively lower returns. However, Hong Kong target acquirers yield negatively in subsequent acquisitions whereas first bidders obtain significant positive returns, which indicates that multiple takeover attempts are not seen as favourably as single takeover attempts by the capital market. In addition, one prominent argument of the relationship between acquirers' announcement period returns and the relevance of industry is that, in contrast to focus increasing acquisitions, the diversification of acquisitions in bidding companies would lead to lower earnings (Morck et al. 1990; Servaes 1996; Maquieira et al. 1998; Draper and Paudyal 2006). Results from acquirers of targets from both markets are consistent with this argument, which shows a higher and more significant abnormal return in related acquisitions and a lower and insignificant excess return in unrelated takeovers.

As to firm characteristics, the size of the acquiring company has been considered as an important determining factor of the abnormal returns generated by these companies. According to the results, the abnormal returns achieved by small size bidders are higher than those of large bidders who acquire targets from Hong Kong markets. However, when these firms purchase targets from the Mainland China market, there is no difference between the abnormal returns of large acquirers and small acquirers. This supports the argument to a certain extent that large acquirers yield significantly lower than their small counterparts as managers of large acquiring companies are more likely to be motivated by hubris (Roll 1986). Then, based on Jensen's

(1986) free cash flow theory, highly authorized managers are more willing to invest overmuch free cash flow in projects with negative net present value (NPV) rather than paying them to shareholders. The results relating to Mainland China target acquirers is quite conspicuous within the literature, in which bidders who lack cash make significantly higher positive returns than companies with excess cash. As Jensen (1986) emphasized, the market is more willing to accept takeover programmes of corporates with less free cash flow as value enhancing activities. Cash-rich companies tend to participate in value decreasing acquisitions (Harford 1999). However, cumulative abnormal returns generated by bidders of Hong Kong targets present adverse outcomes but the difference is relatively low. Moreover, previous research shows that high leverage would limit management discretion due to the decreasing trend of future free cash flows (Masulis et al. 2007). As a result, managers of highly leveraged companies are more likely to improve their performances to avoid financial crisis (Maloney et al. 1993). Consistently, results from Mainland China target acquirers show that highly leveraged bidders observe significant positive abnormal returns whereas low leveraged bidders observe significant negative excess returns. On the basis of free cash flow theory (Jensen 1986), managers of highly leveraged companies should make decisions that aim to create value, including acquisition decisions. But findings from acquirers of Hong Kong targets run counter to the above argument, as they do not show a positive association between highly leveraged enterprises and acquirers' short-run post-acquisition abnormal returns. Additionally, regarding acquiring firms of targets from both markets, there is evidence that the magnitude of average abnormal returns generated by low-margin acquirers is lower than that of high-margin acquirers. This can be supportive to Morck et al. (1990), who argue that acquirers with poor performance are more likely to earn negative abnormal returns.

In Table 6, coefficients of the Ln relative size variables are significantly positive for bidders of targets from both markets. The market seems to regard acquisitions of large size

targets as synergy increasing activities. The Ln market value variable from bidders of Mainland China targets generates a positive coefficient whose estimated significance is just above the 10% level. This shows that bidders under this category obtain higher abnormal returns than their small counterparts. As to the profitability variable in Mainland China target samples, it presents a negative coefficient which is slightly above the 10% level. In other words, there is an inverse correlation between profitability and abnormal returns of acquirers in this sample.

[INSERT TABLE 6 HERE]

5. Conclusion

This study examines short-term market responses to domestic acquisition announcements made by Hong Kong bidders. Prior research has proposed that abnormal returns of acquiring firms are related to the level of development and competition in the target market, which has laid the foundation of this study (Alexandridis et al. 2010). Accordingly, this study focuses on short-term market responses to acquisitions of Hong Kong target firms (targets from a developed and highly competitive market) and Mainland China target firms (targets from a developing and less competitive market) in five financial years (2012-2016). The main finding of this research is that short-term abnormal returns received by acquiring companies are largely dependent on the locations of acquiring targets. The acquisition events which select targets from both the Hong Kong market and Mainland China market earn positive average abnormal returns, but bidders of Mainland China targets perform better. In other words, acquisitions in both markets are perceived as value increasing actions, but events that take place between Hong Kong bidders and Mainland China targets create more value for shareholders. This finding is confirmed by all three models used in this study. The results of this study show strong support to the first hypothesis that bidders of Mainland China targets earn higher excess returns than acquirers of Hong Kong targets. A reasonable interpretation is that the market for corporate

control of Hong Kong firms is increasingly competitive (Asquith 1983). Therefore, bidders in this market tend to purchase more aggressively and pay higher prices to target companies, in which these targets actually receive the majority of takeover benefits and enjoy significant price appreciations. In addition, the existence of competition may intensify the negative impact of agency issues (Jensen 1986, 2005). Overall, bidders who purchase targets in the developed markets are significantly underperforming compared to those acquiring in the emerging markets. Hypothesis 2 that the fluctuating period of Hong Kong target acquirers is shorter than the volatility period of Mainland China target bidders is also not rejected. This suggests that the speed of information flow depends on the location of targets and information dissemination tends to be faster in developed markets. In conclusion, managers of Mainland China target bidding firms are more involved in value creating acquisition events than their counterparts who purchase Hong Kong targets.

Regarding bid characteristics considered in this research, it has been noticed that significant correlations exist between abnormal returns of acquiring companies and their payment methods, the targets' relative size, industry and number of acquisitions. As to mode of payment, the market's view of cash financing acquisitions is more favourable than stocks for Hong Kong target acquirers, while bidders of Mainland China targets experience the opposite situation. With respect to the relative size of the target, it has been revealed that bidders of relatively large targets from both markets obtain higher abnormal returns, which may be due to the fact that large size targets are more likely to create more synergies. Then, single bidders of Hong Kong targets obtain higher abnormal returns compared with multiple bidders, whilst multiple bidders of Mainland China targets are associated with better performances. With regard to the relevance of the industry, both market targets' bidders benefit more from focus increasing acquisitions.

Pertaining to firm characteristics, for bidders of Hong Kong targets, the size of the bidding

company has an inverse relationship with the market performance of its acquisition. However, this difference is not significant for Mainland China target acquirers. Findings on the free cash flow of bidding firms are opposite in these two samples of targets, in which cash rich bidders of Hong Kong targets benefit more while cash tight acquirers of Mainland China targets obtain higher abnormal returns around the announcement period. Referring to leverage, Hong Kong target bidders with low leverage are more advantageous in takeover events. On the contrary, acquirers of Mainland China targets perform better when their leverage is high. Furthermore, findings about the relationship between bidders' pre-acquisition profitability and their announcement period abnormal returns is consistent in Hong Kong sample targets and Mainland China sample targets, which reveals that acquirers with high pre-acquisition profitability have better market performance than their low profitable counterparts.

In conclusion, the results from this study demonstrate that bidders' short-term average abnormal returns substantially depend on the location of target companies. Moreover, the abnormal return is strongly related to the payment method, relative size, bidder status and relevance of the industry. This gain is also related to the size of the acquiring firm, bidders' free cash flow holdings, leverage and pre-takeover profitability. However, some limitations still exist in this study since only four bid characteristics and four firm characteristics are included in the analysis. It may be interesting to consider more influencing factors and see how they affect the results.

Finally, to the best knowledge of the authors, this is the first Hong Kong study that investigates the market response of domestic acquisition announcements, and has categorized targets into two groups based on their different locations. Consistent with Alexandridis et al. (2010), managers can create higher value through purchasing targets in a less competitive market than by acquiring targets in a market with fierce competition. Furthermore, this research tests the relationship between several bid and firm characteristics and bidders' announcement

period abnormal returns. The findings in this paper have implications for other merger and acquisition studies, especially for those in emerging markets.

Mergers and acquisitions events have significant influences on various stakeholders, such as investors and regulators. Thus, reinforcing and developing the existing literature through further research on the influences of mergers and acquisitions to determine whether these decisions increase value for shareholders of the bidding company seem to be necessary. This study attempts to expose actual economic benefits related to acquisitions. Recent development of Fama and French (2016) five-factor model could be used as robustness in further studies which adds profitability and investment factors to the three-factor model of Fama and French (1993). Our findings will help regulators to develop strategies that can encourage businesses to conduct mergers and acquisitions events under certain conditions and provide protection against managers who tend to concentrate more on their own interests at the expense of shareholders' value. Findings from this research can also help shareholders and other investors understand the nature of potential benefits related to these companies' activities. As a result, investors can estimate their investment income when coming to similar business decisions. Stakeholders will be better at identifying potential synergies in terms of the operational and financial efficiency of acquisitions.

6. References

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Table 1: Sample Description: Bid and Firm characteristics

Table 1 shows a year-by-year analysis of characteristics of acquisition transactions, which is divided into two parts based on the location of the target company (in Hong Kong or in Mainland China). Number of acquisition mentioned separately for Hong Kong and Mainland China. Relatedness (%) is defined when the bidding corporate and the target corporate are in the same business and unrelated (%) explained bidding corporate and target corporate are in different business. The average deal value represented into HK\$ (m) proportion of the outstanding shares obtained by bidding companies of targets from both markets. Moreover, method of payment classified into four categories such as cash, stock and combination of cash & stock and others. Acquirer's average market value of four weeks prior to acquisition represented in HK\$ (m) and last column demonstrates acquirer's average returns within 51 days of the announcement period.

Different target sample analysis

Target	Number of acquisition	Industry: proportion		(% of shares acquired	Average deal value (mHK\$)	Method of payment: Percentage				Acquirer's Avg. market value 4 weeks prior to acquisition (mHK\$)	Acquirer's average raw return: Day -25 to Day +25 (%)
		Related (%)	Unrelated (%)			Cash only (%)	Stock only (%)	Cash and Stock (%)	Others (%)		
Hong Kong											
2012	65	30.77	69.23	86.79	210.65	85.80	2.50	4.50	7.19	2204.41	0.47
2013	70	38.57	61.43	87.89	746.23	80.46	6.70	3.31	9.53	3078.18	15.22
2014	65	32.31	67.69	82.83	367.90	77.55	10.68	3.91	7.86	7294.67	1.06
2015	73	34.25	65.75	89.65	4922.30	3.95	92.32	0.56	3.17	8763.00	2.80
2016	64	28.12	71.88	81.82	1365.74	76.72	20.46	0.31	2.51	12811.19	-1.15
Average	67	32.80	67.20	85.80	1522.56	64.90	26.53	2.52	6.94	6830.29	3.68
Mainland China											
2012	41	46.34	53.66	88.62	669.20	74.97	1.42	11.32	12.29	7946.11	3.88
2013	56	37.50	62.50	79.07	349.06	55.78	12.34	1.41	30.47	6907.81	5.04
2014	50	60.00	40.00	86.56	720.52	57.16	0.09	34.89	7.86	6067.39	3.90
2015	55	38.18	61.82	94.44	452.79	77.88	4.14	6.74	11.24	7249.94	3.92
2016	29	37.93	62.07	88.54	416.49	74.06	3.80	22.14	0	13789.00	-1.45
Average	46	43.99	56.01	87.45	521.61	67.97	4.36	15.3	12.37	8392.05	3.06

Table 2: Sample Description: Industry Sectors

Table 2 shows descriptive analysis based on sector wise characteristics of acquisition transactions, which is divided into two parts based on the location of the target company (in Hong Kong or in Mainland China). Number of acquisition mentioned separately for Hong Kong and Mainland China. Relatedness (%) is defined when the bidding corporate and the target corporate are in the same business and unrelated (%) explained bidding corporate and target corporate are in different business. The average deal value represented into HK\$ (m) proportion of the outstanding shares obtained by bidding companies of targets from both markets. Moreover, method of payment classified into four categories such as cash, stock and combination of cash & stock and others. Acquirer's average market value four weeks prior to acquisition represented in HK\$ (m) and last column demonstrates acquirer's average returns within 51 days of the announcement period.

Industry classification in Bidders' of Hong Kong Target											
Industry	Number of acquisition	Proportion		(% of shares acquired)	Average deal value (mHK\$)	Method of payment: percentage				Acquirer's avg. market value 4 weeks prior to acquisition (mHK\$)	Acquirer's average raw return: Day - 25 to Day 25(%)
		Related (%)	Unrelated (%)			Cash only (%)	Stock only (%)	Cash and Stock (%)	Others (%)		
Basic Materials	19	10.53	89.47	91.51	219.30	60.42	0	1.08	38.5	3179.76	-5.59
Communications	28	28.57	71.43	86.34	747.28	94.48	0.23	0	5.29	2060.30	0.81
Consumer, Cyclical	58	32.76	67.24	84.11	348.55	63.53	13.51	13.37	9.59	3853.62	4.42
Consumer, Non-cyclical	58	17.24	82.76	84.33	253.31	47.78	27.19	10.02	15.01	1942.34	7.82
Diversified	18	16.67	83.33	85.95	1780.90	93.33	0.87	0	5.8	11925.06	18.98
Energy	6	33.33	66.67	78.33	429.48	96.12	0	0	3.88	146.97	-0.49
Financial	78	69.23	30.77	85.10	5498.56	16.81	81.01	0.28	1.9	17063.38	-2.43
Industrial	50	18	82	85.56	263.69	60.07	21.75	7.62	10.56	1335.82	9.74
Technology	28	17.86	82.14	90.97	105.00	66.65	1.13	8.31	23.91	2884.90	-2.61
Technology	3	33.33	66.67	83.33	465.37	4.88	95.12	0	0	28316.33	14.48

Industry classification in Bidders' of Mainland China Target

Industry	Number of acquisition	Proportion		(% of shares acquired)	Average deal value (mHK\$)	Method of payment: percentage				Acquirer's avg. market value 4 weeks prior to acquisition (mHK\$)	Acquirer's average raw return: Day -25 to Day 25(%)
		Related (%)	Unrelated (%)			Cash only (%)	Stock only (%)	Cash and Stock (%)	Others (%)		
Basic Materials	7	42.86	57.14	87.29	834.20	7.18	0	40.15	52.67	3920.88	-15.89
Communications	7	42.86	57.14	80.14	303.96	94.17	0	5.83	0	1201.23	-1.78
Consumer, Cyclical	50	34.00	66.00	90.76	429.24	57.64	8.58	12.23	21.55	10831.54	7.31
Consumer, Non-cyclical	20	40.00	60.00	83.79	179.60	92.30	0	6.03	1.67	3022.61	7.24
Diversified	11	0.09	90.91	89.18	153.18	93.47	0	0	6.53	5100.64	3.79
Energy	22	40.91	59.09	89.47	302.37	93.54	0	1.03	5.43	4749.76	-7.44
Financial	45	64.44	35.56	83.42	1122.95	88.41	3.69	4.62	3.28	14107.88	8.80
Industrial	48	35.42	64.58	87.85	455.92	26.38	2.78	53.00	17.84	2767.88	3.54
Technology	15	20.00	80.00	89.55	255.77	43.54	0.30	0.91	55.26	2230.32	3.36
Technology	6	33.33	66.67	83.67	396.69	100	0	0	0	35828.56	-11.50

Table 3: Correlation Matrix

Table 3 shows two different correlation matrixes based on bidders' of Hong Kong and based on Mainland China target for all independent variables. Variables in this matrix are: $R_{i,t} - R_{f,t}$ = security risk premium for entire short-term event window (day -26 to day +26); $R_{m,t} - R_{f,t}$ = market risk premium for entire short-term event window; SMB = the return differences between small and big portfolio; HML = the differences in return between high book-to-market ratio portfolio and low book-to-market ratio portfolio; Cash-only dummy = 1 if bidder uses cash payment only and 0 otherwise; Stock-only dummy = 1 if the bidder pay selling firm stock only and 0 otherwise; Ln relative size = the natural logarithm of the relative acquirers' size and target size; Unrelated acquisition dummy = 1 when bidding firms and target firms are in different industry sector and 0 otherwise; Multiple bid dummy = 1 where there were multiple bids either from the same bidder or from different bidders and 0 otherwise; Ln market value = the logarithm of acquirers' equity market value one year before the announcement (calculated by multiplying share price with the number of ordinary shares issued); Free cash flow = the cash income and net expenses incurred by the company's operations divided by total assets of last financial year; Leverage = the total amount of net debt of the bidder divided by enterprise's total assets of the most recent financial year; Profitability = acquirer's net profit dividing company's total assets of last financial year.

Bidders' of Hong Kong Target	01	02	03	04	05	06	07	08	09	10	11	12	13
$R_{i,t} - R_{f,t}$(%) (01)	1.000												
$R_{m,t} - R_{f,t}$(%) (02)	0.241	1.000											
SMB (03)	-0.024	0.024	1.000										
HML (04)	-0.023	0.026	0.982	1.000									
Cash-only dummy (05)	-0.128	-0.032	0.055	0.057	1.000								
Stock-only dummy (06)	0.031	0.111	-0.176	-0.102	0.001	1.000							
Ln relative size (07)	-0.013	-0.017	0.001	-0.017	-0.174	-0.090	1.000						
Unrelated acquisition dummy (08)	0.044	-0.037	0.019	0.026	0.027	0.054	0.080	1.000					
Multiple bid dummy (09)	-0.115	0.037	-0.026	-0.020	0.103	-0.035	-0.071	-0.114	1.000				
Ln market value (10)	0.003	-0.043	0.030	0.046	0.151	0.111	-0.307	-0.127	0.046	1.000			
Free cash flow (11)	-0.004	0.057	0.064	0.060	0.112	-0.052	-0.012	-0.060	0.040	0.248	1.000		
Leverage (12)	-0.057	-0.098	0.032	0.004	-0.003	-0.109	0.022	-0.050	0.049	0.160	0.033	1.000	
Profitability (13)	0.009	0.110	0.009	0.009	0.092	0.017	0.034	-0.061	0.037	0.219	0.408	-0.057	1.000

Bidders of Mainland China Target	01	02	03	04	05	06	07	08	09	10	11	12	13
$R_{i,t} - R_{f,t}(\%)$ (01)	1.0000												
$R_{m,t} - R_{f,t}(\%)$ (02)	0.035	1.000											
SMB (03)	0.068	-0.066	1.000										
HML (04)	0.109	-0.030	-0.595	1.000									
Cash-only dummy (05)	-0.038	-0.097	0.067	-0.086	1.000								
Stock-only dummy (06)	-0.052	0.039	0.006	0.050	-0.364	1.000							
Ln relative size (07)	0.069	0.049	0.094	-0.113	-0.364	0.053	1.000						
Unrelated acquisition dummy (08)	0.056	0.004	-0.035	0.072	-0.096	-0.018	0.085	1.000					
Multiple bid dummy (09)	0.079	-0.016	-0.038	0.105	0.102	-0.045	-0.036	0.175	1.000				
Ln market value (10)	-0.106	0.006	0.071	-0.132	0.178	0.021	-0.305	-0.210	-0.006	1.000			
Free cash flow (11)	0.070	-0.089	0.097	-0.105	0.124	-0.282	-0.046	-0.157	-0.010	0.227	1.000		
Leverage (12)	-0.075	-0.105	-0.001	0.082	-0.041	0.002	0.108	-0.084	0.044	-0.017	-0.109	1.000	
Profitability (13)	0.009	-0.294	0.085	-0.085	0.180	-0.092	-0.006	-0.182	-0.013	0.066	0.244	-0.067	1.000

Table 4: Bidder's abnormal returns over various event windows

Table 4 reports the cumulative average excess returns of acquiring firms around the announcement period for both bidders from Hong Kong target and China Mainland target. We have implemented three asset pricing models i.e. market return, single factor model (CAPM) and three factor model (Fama-French). Moreover, table consist of entire period of event (day -26 to day +26), far pre-announcement period (-26 to -10), near pre-announcement period (-9 to -1), announcement day (day 0), near post announcement period (+1 to +9) and far post announcement period (+10 to +26). Further, t statistics are presented (in brackets).

Bidders' of Hong Kong Target						
	Entire Period	Far Pre-announcement Period	Near Pre-announcement Period	Announcement Day	Near Post-announcement Period	Far Post-announcement Period
	Day -26 to day +26	Day -26 to day -10	Day -9 to day -1	0	Day +1 to day +9	Day +10 to day +26
Market Return						
CAAR	0.0235 (1.24)	0.0154 (1.43)	0.0127 (1.63)	0.0028 (1.08)	-0.0120 (-1.54)	0.0047 (0.44)
Single Factor Model (CAPM)						
CAAR	0.0216 (1.15)	0.0181* (1.71)	0.0128* (1.66)	0.0032 (1.24)	-0.0150* (-1.94)	0.0024 (0.23)
Three-factor Model (Fama-French)						
CAAR	0.0453** (2.49)	0.0370*** (3.60)	0.0203*** (2.71)	0.0041* (1.65)	-0.0098 (-1.30)	-0.0064 (-0.62)
Bidders of Mainland China Target						
	Entire Period	Far Pre-announcement Period	Near Pre-announcement Period	Announcement Day	Near Post-announcement Period	Far Post-announcement Period
	Day -26 to day +26	Day -26 to day -10	Day -9 to day -1	0	Day +1 to day +9	Day +10 to day +26
Market Return						
CAAR	0.0339* (1.79)	0.0257** (2.39)	0.0083 (1.06)	0.051* (1.95)	-0.0111 (-1.43)	0.0061 (0.56)
Single Factor Model (CAPM)						
CAAR	0.0373** (2.00)	0.0251** (2.37)	0.0089 (1.16)	0.0053** (2.08)	-0.0091 (-1.18)	0.0070 (0.66)
Three-factor Model (Fama-French)						
CAAR	0.1070*** (5.93)	0.0611*** (5.97)	0.0369*** (4.96)	0.0091*** (3.68)	0.0005 (0.07)	-0.0006 (-0.06)

Significance Level: *p<0.10, **p<0.05, ***p<0.010

Table 5: Bid Characteristics, Firm Characteristics and Announcement Period Abnormal Returns

Table 5 includes the abnormal return generated by the bidding company depends on some bid features and firm features. Therefore, sample acquiring companies are divided into two groups based on these variables, and cumulative average abnormal returns are estimated by three-factor (Fama-French) model for each group during the whole period. Moreover, t statistics are presented (in brackets).

Variable	Bidders' of Hong Kong Target	Bidders of Mainland China Target
Payment Method		
Cash-only (CAAR)	0.0764*** (3.72)	0.0559*** (2.72)
Stock-only (CAAR)	0.0289 (0.44)	0.5123*** (5.93)
Relative Size		
High 30% (CAAR)	0.1964*** (6.06)	0.6420*** (20.16)
Low 30% (CAAR)	-0.1010*** (-3.01)	-0.0834** (-2.33)
Bidder status		
Single Bidder	0.0853*** (3.79)	0.0285 (1.16)
Multiple Bidder	-0.0084 (-0.28)	0.2055*** (7.72)
Industry Analysis		
Related acquisition (CAAR)	0.0605** (2.12)	0.2029*** (7.43)
Unrelated acquisition (CAAR)	0.0378 (1.63)	0.0431* (1.80)
Market Value		
Large (Top 30% market value) (CAAR)	-0.0088 (-0.42)	0.2210*** (8.81)
Small (Bottom 30% market value) (CAAR)	0.0563 (1.42)	0.2031*** (5.15)
Free Cash Flow		
High (Top 30% free cash flow) (CAAR)	0.0582** (2.27)	0.2414*** (7.82)
Low (Bottom 30% free cash flow) (CAAR)	0.0527 (1.22)	0.2959*** (8.03)
Net Debt		
High (Top 30% net debt) (CAAR)	-0.0720** (-2.43)	0.4865*** (14.87)
Low (Bottom 30% net debt) (CAAR)	0.2020*** (5.92)	-0.0729* (-1.89)
Profitability		
High (Top 30% ROA) (CAAR)	0.2970*** (10.99)	0.3256*** (10.78)
Low (Bottom 30% ROA) (CAAR)	0.0055 (0.13)	0.0083 (0.22)

Significance Level: *p<0.10, **p<0.05, ***p<0.010

Table 6: Multiple Regression Estimates (Bid Characteristics and Firm Characteristics)

In Table 6, multiple regression analysis is taken to examine the impact of bid and firm characteristics. It indicates the outcomes on bidding companies' performances from bidders' of Hong Kong and bidders of Mainland China. Moreover, independent variables include four bid characteristics and four firm characteristics, which are a cash-only dummy, a stock-only dummy, the logarithm of the transaction relative size, an unrelated acquisitions dummy, a multiple bid dummy, the natural logarithm of the relative market value, free cash flow ratio, leverage and profitability. Moreover, t statistics are presented (in brackets).

Variable	Bidders' of Hong Kong Target	Bidders of Mainland China Target
	Coefficient	Coefficient
Cash payment	0.1485(1.10)	0.1444(0.50)
Stock payment	0.0203(0.10)	0.5260(0.85)
Ln relative size	0.0648*(1.74)	0.1646**(2.58)
Unrelated dummy	-0.0504(-0.42)	-0.2176(-1.01)
Multiple bid dummy	-0.0658(-0.55)	0.2508(1.14)
Ln market value	0.0215(0.97)	0.0630(1.60)
Free cash flow	0.3108(0.88)	0.7802(0.96)
Leverage	-0.0627(0.37)	0.1440(0.43)
Profitability	-0.1217(-0.78)	-0.3394(-1.64)
No. of observations	336	230
R ²	0.0155	0.0578
Adjusted R ²	-0.0085	0.0237

Significance Level: *p<0.10, **p<0.05, ***p<0.010

Figure 1. Cumulative Average Abnormal Returns (CAAR) for the Two Sample Targets

