Does an independent board and external monitoring prevent the pursuit of value reducing takeovers?

by

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Abstract

This study investigates whether board composition and external monitoring influences the frequency with which bidding firms complete an acquisition or raise their offer price following a negative capital market reaction to the announcement of a takeover. We find that an increasing number of blockholders restrains the pursuit of unprofitable takeovers. Institutional ownership surprisingly however increases the likelihood that acquirers will follow-up an unprofitable takeover announcement by either completing the deal or raising their offer price. Completion of a bad deal is found to be more likely when the takeover is friendly and when the bidder has a greater toehold interest in the target. There is no evidence that the level of free cash flow is related to managers' actions in takeovers that destroy shareholder value.

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1. Introduction

Takeovers are a topic that has been well studied. A noticeable feature of this research is the evidence that many acquiring firms earn negative returns around the announcement of an acquisition (e.g., Berkovitch and Narayanan, 1993; Bradley and Sundaram, 2005; Luo 2005; and Paul, 2005). Assuming that the capital market reaction provides an accurate assessment of the profitability of takeover, this decrease in value indicates that acquiring firm shareholders would have been better off without the offer. The study by Jennings and Mazzeo (1991) however finds that acquiring firm managers do not appear to learn from this negative reaction when making decisions during the takeover process. This paper extends this line of research by determining if an independent board and external monitoring influences the frequency with which Australian acquiring firms complete an acquisition following a negative announcement reaction (referred to as "bad" acquirers). This study takes the view that once the negative view of its shareholders is known the acquiring firm should consider withdrawing the bid or taking a passive stance rather than actively pursuing the completion of the deal.[1]

In addition, we examine "bad" bidders that increase their offer price during the takeover contest. This group is studied because a price revision signals that the bidder is still actively seeking to acquire the target, whereas takeover outcome is determined by other factors (e.g, competing bidders and target firm attitude) not directly controllable by the bidder.

[1] The ability of the acquiring firm to withdraw the takeover is subject to the operation of the Corporations Act. For example, section 652B indicates that unaccepted takeover offers can only be withdrawn with the written consent of the Australian Securities and Investments Commission.

This study contributes to the literature as it provides evidence on whether board composition and external monitoring of the bidding firm constrains the firm from pursing a "bad" acquisition. This discussion is particularly relevant given the recent attention given to the corporate governance practices of listed companies. Additionally, this research provides further evidence on whether the actions of acquiring firms are explained by agency reasons or are the result of the bidder having excess free cash flow (see: Jensen, 1986a).

We find conflicting results for proxies for external monitoring of the bidder. Whilst, there is evidence that the number of blockholders constrains the bidder from consummating the deal, we find that institutional ownership increases the likelihood of takeover completion. Our results also indicate that bidders that complete a "bad" acquisition do so when they are larger in size, they have a higher toehold stake and the target board recommends acceptance of the offer. Competing bidders for the target reduce the probability that a "bad bid" will be completed. Inconsistent with the arguments of Jensen (1986a) we do not find that free cash flow is positively related to the takeover outcome in "bad" offers.

The analysis of offer price increases finds that a greater number of acquiring firm blockholders prevents an increase in the offer price in "bad" bids. Unexpectedly, institutional ownership increases the chances that the bidder will raise the bid price questioning the role of institutions as an external monitor of management. As would be expected, bidders are more likely to increase their offer price when the takeover is

hostile. Once more bidder free cash flow is insignificant in explaining the actions of acquiring firm management.

Our results find that an independent board does not reduce the likelihood that the acquiring firm will complete a "bad" acquisition. Similarly, board independence does not prevent the bidding firm raising their offer price even further in a takeover that the capital market views as unprofitable.

The remainder of this study is structured as follows. The next section describes prior research relevant to this study. Section three discusses the models used to address the research question and this is followed by a description of the sample. Section five present results, whilst the final section provides a conclusion and suggests areas for future research.

2. Prior literature

Previous studies have documented that returns to acquirers around takeover announcements are generally insignificant or slightly negative (e.g., Schwert (2000) in the US and Bugeja and Walter (1995) in Australia). Within these results a substantial proportion of acquiring firms earn negative returns around the takeover announcement. For example, Luo (2005) reports that 58% of bidders have negative announcement returns over the period (-1,+7) days. Bradley and Sundaram (2005) find that the sign of acquirer announcement returns are influenced by the listing status of the target firm.

Acquirers earn significant negative returns in purchases of public targets and significant positive returns when acquiring non-public targets.

Various theories for why managers pursue acquisitions that destroy shareholder wealth have been proposed. Roll (1986) for example, argues that bids reflect hubris on the part of managers and that takeover premiums arise because of overstated acquiring firm valuations of the target. Shleifer and Vishny (1989) hypothesize that some takeovers occur as a result of managers attempting to entrench themselves in their position. Managers will purchase assets/businesses that they can run more profitably than potential replacements to reduce the likelihood that they will be replaced. Incumbent managers may be willing to over-pay for these acquisitions especially if they are underperforming.

Although many previous studies have investigated factors that influence takeover outcome these studies do not generally examine if takeover outcome is associated with the reaction of the capital market to the takeover announcement. The output of this prior research has identified the response of the target board and takeover premium as being key factors in determining bid outcome. Studies in Australia (Henry, 2004), the US (Walkling, 1985 and Cotter and Zenner, 1994) and UK (Holl and Kyriazis, 1996) all find that the probability of takeover success increases with the takeover premium and the provision of an accept recommendation by the target board.

The influence of the acquiring firm toehold on takeover outcome has produced inconsistent results. Walkling (1985), Sudarsanam (1995), Holl and Kyriazis (1996), and

Henry (2004) find that a higher toehold raises the probability of success. However, Cotter and Zenner (1994) find that toehold does not affect takeover outcome. The ownership of target firm management has also resulted in conflicting findings. Cotter and Zenner (1994) and Duggal and Millar (1994) find the probability of success increases with management ownership, whilst Holl and Kyriazis (1996) finds the opposite. In addition Henry (2004) finds that directors' ownership is unrelated to takeover outcome in Australia. Target firm institutional ownership and block shareholdings have generally been found to be unrelated to takeover outcome (see, Cotter and Zenner, 1994; Duggal and Millar, 1994; Holl and Kyriazis, 1996; Henry, 2004).[2]

The impact of competition for the target firm on takeover outcome has also produced mixed results. Competing bidders are found to increase the probability of success by Cotter and Zenner (1994), and decrease the likelihood of success by Henry (2004). Walkling (1985) and Holl and Kyriazis (1996) on the other hand find no association between the number of bidders and takeover outcome.

Cotter and Zenner (1994) find that larger targets are less likely to be acquired consistent with larger targets having greater resources available to resist the offer. However, Sudarsanam (1995) obtains the opposite results in the UK, whilst Henry (2004) finds no association between target firm size and takeover outcome in Australia.

[2] Sudarsanam (1995) is an exception finding a positive association between target firm institutional shareholdings and takeover success.

Other factors that have been identified in previous studies to significantly increase the probability of success are cash being used as the method of payment (Sudarsanam, 1995) and whether the bidder revises their offer price upwards during the takeover period (Henry, 2005). The positive effect on the probability of success of cash consideration found by Sudarsanam (1995) is consistent with shareholders facing greater uncertainty on the value of the consideration when offered equity (i.e, Myers and Majluf, 1984). Henry (2004) reports however that takeover outcome is uninfluenced by the method of payment in Australia.

The relationship between board independence and takeover outcome is examined by Henry (2004). The findings indicate no association between outcome and the proportion of outside directors on the target's board, or outcome and CEO/chairperson duality

Jennings and Mazzeo (1991) study whether the actions of acquiring firm management can be explained by the takeover announcement return. Their results provide little evidence that bidding firms learn from announcement returns when making subsequent decisions. For example, the proportion of acquiring firms making an offer price revision in favour of the target is greatest amongst acquiring firms with a negative announcement reaction. The results are interpreted as being indicative of acquiring firm management viewing their information set as being superior to the information set held by the capital market.

Paul (2005) examines factors that influence the completion of "bad" takeovers using 555 completed and terminated bids in the US from 1982 to 1996. Offers are classified as "bad" if they are in the lowest quartile of CARs around the takeover announcement. Analysis of "bad" bids indicates that an independent board and more outside blockholders significantly reduce the likelihood that bad bids will be completed. The extent of bidder diversification is found to increase the likelihood that a "bad" bid will be completed. The completion of a "bad" bid is found to be unrelated to relative size, method of payment, the presence of competing bidders and acquiring firm: director ownership, board size, leverage, market-to-book ratio, and performance.

Luo (2005) investigates whether the completion decision in friendly US mergers and acquisitions is related to the market reaction around the announcement. The study finds a positive relationship between deal completion and acquiring firm CAR around the takeover announcement. The relationship between merger completion and value weighted announcement CAR is significant only for small acquirers, deals with no prior agreements and non hi-tech deals.[3] The study also finds that the probability of a bid price increase is associated positively to the bidder's announcement return.

The disciplining of "bad" bidders by external control markets is investigated by Mitchell and Lehn (1990). They find that announcement returns for acquirers that subsequently become targets are significantly lower that for those that do not become targets. Also, announcement returns for acquirers that subsequently become targets are significantly

[3] The study does not report whether these factors influence the relationship between deal completion and acquiring firm announcement CAR.

negative, compared to significantly positive for those bidders that are not later acquired. Scholten (2005) however finds that bidders that become targets do not appear to perform worse around the takeover announcement. Zhao and Lehn (2003) and Scholten (2005) examine whether bidders that complete "bad" acquisitions are disciplined internally. Both studies find a significant negative relationship between CEO turnover and the abnormal return around the takeover announcement.

Malmendier and Tate (2004) analyse whether the market reaction to a takeover announcement can be explained by whether the CEO of the bidder is over-confident. Using the timing that CEOs choose to exercise options to classify managers as over-confident, they find that the reaction to a takeover announcement for acquirers is significantly negative for over-confident CEOs.

3. Research models

This study uses the capital market reaction to the announcement of a takeover to classify takeovers as either "bad" or "good" offers. "Bad" offers are those where the buy-and-hold abnormal return (BHARs) around the announcement is negative, with all other offers classified as "good." Two models are employed to analyse if the actions of acquiring firms that are categorized as making a "bad" acquisition are influenced by board composition and external monitoring. Model (1) investigates if proxies for external monitoring and board independence are associated with the acquirer completing the acquisition, whilst the second model (i.e., model (2)) studies if these variables are associated with an increase in the offer price by the bidding firm. Price increases are

studied in addition to the ultimate outcome of the takeover, as an increase to the offer price indicates that the acquiring firm board is actively pursuing the target. A number of relevant controls are included in both models. As a means of comparison the two models are also estimated for those takeovers that are classified as "good." This provides an opportunity to determine if similar factors drive takeover completion and offer price increases across the two groups of bids.

Greater external monitoring of the bidding firm is expected to limit the ability of management to complete or pursue "bad" acquisitions. The level and likelihood of external monitoring is proxied using three variables each of which is expected to have a negative coefficient in the two models. The first variable is the number of block shareholders in the bidding firm (*BidBlock*).[4] The ownership of institutions (*BidInst*) and the extent to which the ownership structure of the acquiring firm is concentrated (*BidTop5*) are also expected to increase the level of external monitoring of corporate decisions.

The function of internal monitoring of acquiring firm management rests with the external directors on the acquiring firm board (Jensen, 1986b). Prior research for example, finds that abnormal returns for targets (see, Cotter, Shivdasani and Zenner, 1997) and acquirers (see, Byrd and Hickman, 1992) around takeover bids are higher when the board is independent. Where internal monitoring mechanisms are inadequate it increases the likelihood that a firm will pursue an unprofitable acquisition. The potential for internal monitoring is measured using the percentage of directors on the acquiring firm board that

[4] Blockholders are defined in Australia as any shareholder owning an interest of 5% or more.

are non-executive (*Nonexec*). It is hypothesized that in "bad" acquisitions this variable will be negatively related to bid completion and price revisions. Board independence is also a factor of the influence of the CEO/Managing Director. Where the CEO also holds the role of chairperson (*Biddual*) they have greater influence on the functioning and decisions of the board. In these circumstances the potential for internal monitoring is lower increasing the likelihood that a "bad" acquisition will be pursued.

Control variables

Jensen (1976) argues that where there is a separation of ownership and control managers are more likely to pursue actions that are not in the interest of shareholders. In the context of a takeover offer, acquiring firm management teams with lower share ownership are expected to be more likely to launch takeovers that are not in shareholders interest as the impact on their personal wealth of a lower share price is lower. This expectation is supported by the results in Lewellen, Loderer and Rosenfeld (1985) who find a positive association between the announcement reaction for acquiring firms and the ownership of executives and directors. As an extension of this finding we expect that managers with lower ownership will be more likely to pursue takeovers following a negative capital market reaction. It is thus hypothesized that the ownership of the acquiring firm directors (*BidDirown*) will have a negative coefficient in both models.

Jensen (1986a) describes the problems associated with the agency costs of free cash flow. He argues that firms with excess cash are more likely to undertake takeovers that destroy

value. It is thus expected that acquiring firms with free cash flow (*BidFCF*) are more likely to ignore the signal of the capital market and actively pursue a "bad" acquisition.

Bidding firm size (*BidSize*) is included in both models because as argued by Luo (2005) larger firms are more able to afford external mergers and acquisitions advice or have internal valuation specialists. In addition, large companies are expected to have the management expertise to analyse public information. As such, smaller companies are expected to pay more regard to the negative signal of the capital market. This leads to an expectation that acquiring firm size will have a positive coefficient in both models.

Where the target firm is a small listed company it is expected that less public information will be available to assist with firm valuation. The acquiring firm is therefore likely to believe that they have superior information regarding the value of the target and ignore the reaction of the capital market when deciding whether to purse the takeover. The size of the target firm (*TgtSize*) is expected to have a negative sign in both models.

An acquiring firm may choose to pursue a "bad" acquisition where they believe that the market has incorrectly valued the target firm. The potential for misvaluation is likely to be greater where the value of the target is dependent on growth options. This is proxied in both models using the target firm market-to-book ratio (*TgtMB*) measured at the financial year-end prior to the takeover announcement.

Bidding firms with a higher pre-takeover stake in the target (*Toehold*) are expected to pursue a takeover more vigorously as they already have a significant financial investment in the target. The attitude of the takeover is expected to be important in explaining whether acquirers complete the bid and increase the offer price. Where the takeover is friendly acquiring firms are more likely to continue with the acquisition as the friendly nature of the bid is likely the result of significant negotiation with target management. As the friendly attitude of target management significantly increases the probability of a successful outcome (see, Walkling, 1985; Cotter and Zenner, 1994; Holl and Kyriazis, 1996; and Henry, 2004), there is a lower likelihood that the offeror will increase the bid price (Bugeja, 2005). The attitude of target management is measured using the initial recommendation of the target board to shareholders. An indicator variable (*Friendly*) is coded as one, where this initial recommendation is that shareholders accept the takeover offer. *Friendly* is expected respectively to have a positive and negative coefficient in models (1) and (2) respectively.

The presence of other bidders (*Mult*) for the target firm is expected to raise the likelihood that the bidder will increase their offer price. Competing bidders will also reduce the probability that an acquiring firm will succeed in their takeover. Multiple bidders are noted in both models using a dummy variable set as one where competing firms make offers for a target company.

The final control variable is an indicator variable that signifies bids where the method of payment includes equity (*Payt*). Myers and Majluf (1983) argue that where a bidder

believes their stock is overvalued they will finance an acquisition with equity. The reaction of the capital market to a takeover offering equity as payment is thus a response to both the perceived economic value of the acquisition and the negative signal sent by the payment form. As the signal received by management from the capital market in equity bids is confounded by this method of payment effect, there is an expectation that takeover completion and price increases will be more frequent in "bad" bids where equity is used as consideration.

The two logit regression models can be summarized as follows:

Prob (Outcome) = *f* (Number of blockholders, ownership concentration, institutional ownership, board independence, board ownership, free cash flow, firm size, target firm size, target market-to-book ratio, toehold, target directors recommendation, multiple bidders, method of payment) **(1)**

Prob (Offer increase) = *f* (Number of blockholders, ownership concentration, institutional ownership, board independence, board ownership, free cash flow, firm size, target firm size, target market-to-book ratio, toehold, target directors recommendation, multiple bidders, method of payment) **(2)**

4. Data

The Connect 4 Mergers and Acquisitions Database was used to identify all takeovers for Australian Stock Exchange (ASX) listed targets between 1996 and 2004. This search

identified 477 takeovers. Where the bidding firm was not listed on the ASX it was necessary to exclude the takeover from the sample as it is not possible to calculate announcement returns. This reduced the sample to 254 takeovers. The announcement date for each takeover, the takeover outcome and any increase to the offer price is identified from *Tiff* images of announcements made to the ASX.

To assess the capital market reaction to the takeover BHARs around the takeover were calculated. The All Ordinaries Accumulation Index was used as the reference market return. Share prices were sourced from the Core Research Database maintained by SIRCA. As the degree to which the market anticipates the bid is uncertain abnormal returns were estimated over three event windows:

i) 60 days before until 10 days after the announcement;

ii) 10 days before until 10 days after the announcement;

iii) 1 day before until the day of the announcement.

Although, a longer event window has the advantage of capturing any information leakage prior to the offer, it is more likely than the other event windows to include the reaction to non-takeover events. Table 1 presents summary information on bidding firm abnormal returns. Panel A of Table 1 shows that mean acquiring firm BHARs are negative and significantly different from zero over the (-10,+10) window. In Panel B bidding firm abnormal returns are partitioned by the sign of the returns and takeover outcome, whilst Panel C partitions BHARs by sign and whether the offer price was increased. As acquiring firms may have returns of contrasting signs across event windows, the table

also presents the percentage of bidders that achieve negative/positive returns over any two event windows and all three event windows. This final partition includes takeovers where the message delivered by the capital market to acquiring firm management is unambiguous.

INSERT TABLE 1 HERE

For each event window more than 50% of acquiring firms experience negative takeover announcement returns, whilst 57% have negative returns across at least two event windows. Within each group of bidders the table shows the percentage of takeovers that are completed. Although the rate of completed takeovers is higher for bids with a positive announcement reaction, it is noticeable that more than half of acquiring firms ignore the negative signal sent from the capital market and complete the bid. Panel C indicates surprisingly that in each event window the proportion of bidders that increase the offer price is higher when the announcement reaction is negative. This finding is consistent with the results in Jennings and Mazzeo (1991).

Table 2 describes the measurement of the variables used in the estimation of the logit regression models.[5] The Target's Statement was used to obtain information on the directors' recommendation to shareholders. Information on total assets, cash flow, institutional ownership and the ownership of the top 5 shareholders were hand collected from the bidder's financial statements prepared in the year prior to the bid. Offer

[5] The bidder and target firm size variables are transformed into their natural logarithm to reduce heteroskedasticity.

documents lodged by the bidder with the ASX were used to collect information on the bidder's toehold stake and type of consideration offered.

INSERT TABLE 2 HERE

5. Results

Table 3 provides the results of estimating regression model (1) predicting bidders that complete an offer after a negative announcement reaction. Five different versions of the model are estimated with each differing according to how "bad" bidders are determined. Columns (1) through (3) present results for acquiring firms with negative announcement returns in each of the respective event windows around the takeover announcement. Columns (4) and (5) show results using respectively acquirers with negative returns in any two event windows and all three event windows.

INSERT TABLE 3 HERE

Consistent with external monitoring constraining managers from completing an acquisition that reduces shareholder wealth we find the number of blockholders reduces the probability of a completed deal. This variable is significant irrespective of how a "bad" bid is defined. Surprisingly, however the findings indicate that institutional ownership significantly increases the likelihood that the acquirer will complete the takeover. Acquiring firm ownership concentration is unrelated to takeover completion. The results on the board composition variables indicate that internal monitoring is

unrelated to the completion of a "bad" takeover. The *BidDual* variable is insignificant in each regression, whilst the only significant result on *Nonexec* suggests that the proportion of non-executive directors increases, rather than decreases, the probability of takeover completion.

The results on the control variables indicate that the acquirer is more likely to complete the acquisition when they have a higher toehold and when the board of the target firm recommends offer acceptance. Additionally, the presence of competing bidders reduces the likelihood of a completed bid. These findings are consistent with prior research. There is some evidence that acquiring firm size is related to bid completion following a negative announcement reaction. The method of payment variable produces inconsistent results with significant negative and positive coefficients respectively for the (-10,+10) window and the two negative event window regressions. As predicted, higher director ownership appears to reduce takeover completion, this finding however is only significant for the (-1,0) event window. Insignificant results are found on the two target firm variables: size and growth options.

The results of estimating the model of offer price increases is shown in Table 4. As an increase to the offer price indicates that the acquiring firm board intends to complete the acquisition this model may provide a better indication than takeover outcome of boards that ignore the capital market when pursuing a takeover. Similar to the testing of model (1), five modifications of model (2) are estimated. The first three versions of model (2) use negative BHARs for each of the three event windows to determine "bad"

acquisitions. In the final two columns of Table 3 "bad" acquisitions are defined respectively as acquiring firms with negative returns in any two event windows and then negative returns in all event windows.

INSERT TABLE 4 HERE

The findings on the board composition and external monitoring variables are consistent with those presented in Table 3. Whilst the number of blockholders significantly lowers the probability of a revision in offer price, once again institutional ownership is positively related to the likelihood of a price increase. The two internal monitoring variables are both insignificant. This finding is inconsistent with an independent board restraining acquiring firm executive management from pursuing an acquisition that reduces shareholder wealth. Most of the control variables, including the presence of competing bidders, are unrelated to increases in offer price. As expected bidders are significantly more likely to increase their offer when target firm directors recommend bid rejection. The payment method variable is significant in three of the five regressions, the sign of the relationship is however inconsistent.

To determine if the variables analysed are related to bid completion and price revisions irrespective of the sign of the announcement reaction, models (1) and (2) are estimated for the balance of the acquiring firms in the sample (i.e., "good" takeovers). A similar approach to that described above is employed with acquirers classified as "good" if their BHAR in any event window is positive. The models are also then estimated after

classifying acquiring firms as "good" only if they have positive returns in respectively any two event windows or all three event windows. The results of estimating the takeover completion model are presented in Table 5, whilst the results of the price revision regression are shown in Table 6.[6]

INSERT TABLE 5 HERE

The number of blockholders is unrelated to deal completion in "good" takeovers indicating that the results documented above are driven by blockholder action following a negative capital market reaction. Institutional ownership is found (in two of the models) to be significantly positively related to deal completion. This finding suggests that acquiring firms feel a pressure to achieve growth when there is a higher institutional presence on their shareholders' register, and they will strive to achieve this growth irrespective of the attitude of the capital market to an acquisition. There is some evidence that board composition influences takeover completion in "good" bids with CEO/chairperson duality significantly increasing the probability of a completed bid in two of the models. The variable denoting an independent board produces inconsistent results.

For the control variables, similar to the findings for "bad" bidders, "good" acquiring firms are more likely to complete the takeover when the takeover is friendly and when they have a higher toehold in the target. The other significant variables however provide

[6] Due to insufficient sample size, the models could not be estimated for acquiring firms with a positive reaction in all three event windows.

a contrast to those reported in Table 3. Whilst there is only limited evidence that the ownership of directors influences the outcome of "bad" bids, increasing ownership of directors is found to reduce the probability of deal completion in "good" bids in three of the regression models. Also, the existence of multiple bidders has no association to the outcome of the takeover for "good" bids whilst it reduced the probability of completion in "bad" bids.

The findings from estimating the price revision model for "good" acquisitions are shown in Table 6. The number of blockholders is unrelated to price increases, whilst institutional ownership is positively related to increased offers only when the (-1,0) event window is used to determine "good' bidders. The two board composition variables are insignificant in all specifications of the regression model. Of the control variables multiple bidders are found to increase the likelihood of a price revision for "good" acquisitions. As this variable was insignificant in the "bad" acquisition sample the findings suggest that when competition exists for the target firm the acquirer will look to the market reaction to the takeover announcement in determining whether to increase the offer. Similar to the findings for "bad" acquisitions, an increase in price is more probable where the target board recommends bid rejection. However, for "good" acquisitions a significant finding is only found when the (-1,0) event window to classify acquisitions. The results in Table 6 provide significant results on certain variables that are insignificant in the "bad" acquisition group. For example, the two target firm variables are found in selected versions of the model to be significantly related to the probability of a revision in price. Acquirers are more likely to increase their price for larger target firms and for

targets with a lower market-to-book ratio. Bidding firms are perhaps less likely to raise their offer for targets with a higher market-to-book ratios because these firms have a greater risk of being overvalued.

INSERT TABLE 6 HERE

5.1 Sensitivity analysis

Classification of "bad" acquisitions

In the previous analysis acquisitions were classified as "bad" if announcement returns were negative. As it is possible that the acquiring firm board may simply ignore small negative returns when making decisions on whether to pursue the takeover, the sub-sample of takeovers with negative returns for each of the event windows was partitioned at the median. Models (1) and (2) were then re-estimated for the sample of takeovers with negative returns below the median. The results are presented in Table 7 for the takeover completion model and Table 8 for the price increase model.

INSERT TABLE 7 HERE

The results on the external monitoring and board composition variables are consistent with the results using the full sample. Takeover completion and price increases are positively associated to institutional ownership and negatively related to the number of blockholders. There is again no evidence that board independence constrains managers from pursuing a takeover that reduces shareholder wealth. For the control variables the

results are generally consistent with those using the full sample. Interestingly and inconsistent with expectations, there is some evidence that higher *BidFCF* reduces the probability that a "bad" takeover will be completed. Also, the results support the argument that acquirers that use equity as payment are more likely to view the capital market reaction as delivering a confounding signal with evidence that these bidders are more likely to complete the takeover and raise their offer price.

INSERT TABLE 8 HERE

Learning from the announcement reaction

The focus of this study is whether external monitoring and board composition constrains the actions of bidding firm management following a negative capital market reaction to a takeover announcement. The analysis has not investigated per se whether the board considers or "learns" from the reaction of the capital market when determining whether to complete the bid or increase the offer price. To determine if any learning occurs the two regression models are estimated for the complete sample with the inclusion of the BHAR around the takeover announcement. Each model is estimated in turn for each of the three event windows. If any learning takes place then BHAR will enter the regression model with a positive coefficient. The results of re-estimating the regression models (not tabulated) for each event window provides an insignificant coefficient on the BHAR variable. This finding is consistent with the conclusion of Jennings and Mazzeo that managers do not take into account the announcement reaction when making decisions during the takeover contest.

As an additional method of determining whether acquiring firms consider the reaction of their shareholders when making decisions on the takeover we isolate those takeovers in our sample that were withdrawn by acquiring firm management. This search identifies 37 takeovers (i.e., 14.6% of the sample). Of this group of acquirers all but 4 firms have a negative BHAR for at least one of the three announcement event windows. For this remaining sub-sample of 33 firms we identify the date of the takeover withdrawal from announcements made to the ASX. We then read through the announcement of the takeover withdrawal lodged with the ASX to determine if the reaction of shareholders is provided as a reason for the withdrawal of the offer. Additionally, we use the Factiva database and obtain and scan all media articles regarding these firms for one week either side of the takeovers withdrawal. From this analysis the most common reasons provided for the withdrawal of the takeover is the presence of a competing bidder (7 bids) and regulatory intervention preventing the continuance of the bid (6 bids). From the perspective of this study it is notable that not one firm mentioned the negative reaction of its shareholders as a reason for withdrawing the bid.

5.2 Limitations of this study

The results in this study indicate that board composition does not constrain acquiring firm executives from following through with acquisitions that capital market believes are not in the interest of shareholders. An obvious limitation with this result is that this study can only analyse takeovers that have been publicly announced. It is of course possible that internal monitoring mechanisms have halted unprofitable acquisitions prior to their public announcement.

6. Conclusion and discussion

Using a sample of takeovers from 1996 to 2004 this study analyses whether external monitoring and board independence prevents acquiring firms from completing and pursuing takeovers that are considered by the capital market to be value reducing. We find mixed results on the relationship between proxies for external monitoring and the pursuit of "bad" offers. Whilst the number of blockholders with an interest in the acquiring firm restrains the actions of bidder management, our findings on institutional ownership are inconsistent with expectations. Both increases in offer price and deal completion in "bad" offers are found to be positively associated with institutional ownership. This finding is an area that warrants future research. Our results indicate that internal monitoring through non-executive directors does not reduce the pursuit of "bad" bids. In fact, the only significant result suggests that the proportion of non-executive directors on the acquiring firm board increases the likelihood that a "bad" deal will be completed. This result stands in contrast to the US findings in Paul (2005) and suggests that the focus of the ASX on increasing board independence does not constrain acquirers from following through on acquisitions that reduce shareholder wealth.

We find that "bad" takeovers are more likely to be completed when the acquiring firm has a higher toehold and the nature of the bid is friendly. As these factors are also significant when the takeover is categorized as a "good" offer these variables are related to takeover completion irrespective of the market reaction to the bid. Our findings provide no support of Jensen's (1986a) arguments that the pursuit of "bad" takeovers by acquirers is a result of excess free cash flow.

Our results show that acquiring firms do not place importance on the reaction of the capital market when making decisions during a takeover contest. An area that warrants future research is to investigate whether the signal sent by the capital market is also ignored in other contexts (e.g., share buy-backs, corporate divestitures, appointments of executives) and to study further the characteristics of those firms that place shareholder wealth first and make decisions that are informed by the capital market.

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Table 1

Abnormal returns, takeover completion and price increases

The table shows announcement BHARs for bidding firms over three event windows around the takeover announcement. The sample also shows the percentage of takeovers completed and the percentage of takeovers with price increases after partitioning the sample by the sign of the announcement return. Takeover outcome and revisions in offer price are identified from documents lodged with the ASX.

Panel A: Descriptive statistics on BHARs

Event window	Mean (%)	Median (%)	Std Dev (%)
-60,+10	-0.29	-0.38	30.78
-10,+10	-2.02***	-0.93	11.40
-1,0	0.65	-0.15	8.23

Panel B: BHARs partitioned by sign and takeover outcome

Event window	% offers negative	% negative offers completed	% positive offers completed
-60,+10	51.57	58.78	64.23
-10,+10	56.69	60.42	62.73
-1,0	53.54	56.62	66.95
At least 2 windows neg.	57.48	56.85	-
All 3 windows neg.	21.26	62.96	-

Panel C: BHARs partitioned by sign and offer price increase

Event window	% offers negative	% negative offers with increase	% positive offers with increase
-60,+10	51.57	31.15	28.46
-10,+10	56.69	33.07	24.78
-1,0	53.54	31.50	25.42
At least 2 windows neg.	57.48	30.88	-
All 3 windows neg.	21.26	36.17	-

*** Significant at the 1% level

Table 2

Description and measurement of variables used in this study

Block ownership (BidBlock): the number of block shareholders disclosed in the bidder disclosed in the financial statements in the year prior to the offer

Ownership concentration (BidTop5): the aggregate percentage shareholding of the top 5 shareholders in the bidder disclosed in the financial statements in the year prior to the offer

Institutional ownership (BidInst): the aggregate percentage shareholding of institutions in the bidder disclosed in the financial statements in the year prior to the offer

Board independence (Nonexec): the proportion of the bidding firm board that are non-executive as disclosed in the financial statements in the year prior to the offer

Board independence (BidDual):): a binary variable coded as one if the bidder firm CEO and chairperson roles are held by the same person as disclosed in the financial statements in the year prior to the offer.

Board ownership (BidDirown): the percentage holding of bidder firm directors' disclosed in target firm documents lodged with the ASX.

Free cash flow (BidFCF): bidder free cash flow calculated as cash flow from operations less dividends in the year prior to the takeover. Free cash flow is scaled by total assets

Bidder Size (BidSize): bidder firm size measured as the natural logarithm of market capitalization measured at the financial year end prior to the takeover announcement

Target Size (TgtSize): target firm size measured as the natural logarithm of market capitalization measured at the financial year end prior to the takeover announcement

Target market-to-book ratio (TgtMB): target firm market-to-book ratio calculated at the financial year-end prior to the takeover announcement.

Toehold stake (Toehold): the share ownership of the bidder at the date of the takeover announcement disclosed in bidder firm documents lodged with the ASX.

Friendly attitude (Friendly)): a binary variable coded as 1 where the initial recommendation of the target board to shareholders is to accept the offer.

Multiple bidders (Mult): a binary variable coded as one if competing takeover offers are announced for the target firm.

Method of payment (Payt): a binary variable coded as one if the consideration offered to target shareholders includes equity

Table 3
Model of takeover completion for "bad" takeovers

The table presents the results of estimating regression model (1) examining factors that influence takeover completion for takeovers that have negative announcement returns (i.e., "bad" takeovers). The model is estimated in turn for "bad" takeovers so classified using three separate event windows, and then for takeovers that have negative returns in any two of the event windows and then negative returns in all three event windows. The dependent variable is a binary variable set to 1 if the takeover is successful. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Negative (-60,+10)	Negative (-10,+10)	Negative (-1,0)	Negative any two event windows	Negative all three event windows
	(1)	(2)	(3)	(4)	(5)
Intercept	-6.2757	-7.9876	-5.7342	-6.6644	-13.4430
	(-1.81)*	(-2.56)**	(-1.53)	(-2.21)**	(-1.22)
BidBlock	-0.1318	-0.3141	-0.1938	-0.2031	-0.4605
	(-1.82)*	(-1.77)*	(-2.11)**	(-1.98)**	(-1.70)*
BidTop5	0.0127	0.0039	0.0160	0.0067	0.0362
	(0.66)	(0.19)	(1.01)	(0.39	(0.79)
BidInst	0.0464	0.0437	0.0606	0.0490	0.0699
	(1.90)*	(1.70)*	(2.15)**	(1.84)*	(1.97)*
Nonexec	2.6250	-1.0245	-2.3635	-0.4316	-3.1770
	(1.68)*	(-0.66)	(-1.32)	(-0.29)	(-0.54)
BidDual	-0.3227	-0.6646	-0.7498	-0.6868	-0.5622
	(-0.47)	(-0.99)	(-1.00)	(-1.04)	(-0.54)
Toehold	0.0745	0.0575	0.0641	0.0548	0.0658
	(2.71)***	(2.46)**	(2.72)***	(2.27)**	(1.12)
Friendly	3.1289	2.8088	2.6974	2.5191	1.5432
	(4.22)***	(4.34)***	(4.16)***	(4.24)***	(1.36)
TgtSize	0.0280	0.2167	-0.0433	0.0472	0.3001
	(0.13)	(1.03)	(-0.18)	(0.25)	(0.58)
TgtMB	0.0860	0.0695	0.1292	0.1020	0.1650
	(0.94)	(0.79)	(1.26)	(1.11)	(0.97)
BidDirown	-0.0081	-0.0016	-0.0274	-0.0096	0.0007
	(-0.51)	(-0.10)	(-1.77)*	(-0.70)	(0.02)
BidSize	0.1282	0.2537	0.3524	0.2407	0.4634
	(0.70)	(1.26)	(1.69)*	(1.31)	(0.82)
BidFCF	0.9337	-1.7431	-1.9862	-1.0426	0.5223
	(0.52)	(-1.19)	(-1.19)	(-0.63)	(0.09)
Mult	-1.4197	-1.4043	-1.7867	-1.2178	-5.1232
	(-2.02)**	(-2.11)**	(-2.64)***	(-1.95)*	(-2.06)**
Payt	-0.6113	-1.0539	-0.8832	0.8763	1.5167
	(-1.04)	(-1.85)*	(-1.55)	(1.66)*	(1.12)
N	122	127	127	135	47
Log-likelihood ratio	72.68	72.42	75.34	71.51	29.56
McFadden R^2	0.4339	0.4214	0.4303	0.3839	0.4725
% Correctly classified	83.61	82.68	84.25	82.96	80.85

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level

Table 4
Model of increase in offer price for "bad" takeovers

The table presents the results of estimating regression model (2) examining factors that influence offer price increases for takeovers that have negative announcement returns (i.e., "bad" takeovers). The model is estimated in turn for "bad" takeovers so classified using three separate event windows, and then for takeovers that have negative returns in any two of the event windows and then negative returns in all three event windows. The dependent variable is a binary variable set to 1 if the offer price is increased. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Negative (-60,+10)	Negative (-10,+10)	Negative (-1,0)	Negative any two event windows	Negative all three event windows
	(1)	(2)	(3)	(4)	(5)
Intercept	0.7797	-1.5947	-0.1215	-1.8258	4.7627
	(0.27)	(-0.63)	(-0.04)	(-0.71)	(0.81)
BidBlock	-0.3024	-0.1970	-0.1165	-0.1972	-0.3169
	(-1.84)*	(-2.03)**	(-1.88)*	(-1.99)**	(-1.75)*
BidTop5	0.0014	-0.0024	-0.0006	-0.0021	-0.0537
	(0.88)	(-0.16)	(-0.05)	(-0.15)	(-1.24)
BidInst	0.0752	0.0407	0.0369	0.0597	0.0543
	(2.59)***	(1.75)*	(1.77)*	(2.64)***	(1.74)*
Nonexec	-0.3961	0.4115	-0.4415	-0.0239	-4.0016
	(-0.28)	(0.33)	(-0.32)	(0.02)	(-1.06)
BidDual	-0.1090	0.0306	0.2792	0.2938	-0.7080
	(-0.18)	(0.06)	(0.55)	(0.57)	(-0.96)
Toehold	-0.0025	-0.0136	0.0021	-0.0096	-0.0335
	(-0.16)	(-1.03)	(0.42)	(-0.68)	(-0.85)
Friendly	-2.5070	-1.2734	-1.1596	-1.5249	-4.3181
	(-3.60)***	(-2.38)**	(-2.30)**	(-2.72)***	(-3.09)***
TgtSize	0.2424	0.2050	0.0980	0.2084	-0.2731
	(1.19)	(1.17)	(0.53)	(1.16)	(-0.74)
TgtMB	0.0741	0.0278	0.0480	0.0868	0.0667
	(0.95)	(0.40)	(0.75)	(1.05)	(0.67)
BidDirown	-0.0142	-0.0121	-0.0081	-0.0080	-0.0303
	(-0.95)	(-0.84)	(-0.67)	(-0.65)	(-0.85)
BidSize	-0.2131	-0.0930	-0.0776	-0.1586	0.3359
	(-1.21)	(-0.57)	(-0.52)	(-0.96)	(0.93)
BidFCF	2.1275	1.0261	1.0347	1.8060	3.6776
	(1.24)	(0.78)	(0.83)	(1.15)	(1.27)
Mult	0.1014	0.5482	0.1684	0.4590	-1.8166
	(0.17)	(0.95)	(0.33)	(0.83)	(-1.47)
Payt	-1.5164	-0.7339	-0.9373	1.2846	1.5209
	(-2.68)***	(-1.48)	(-1.96)**	(2.55)**	(1.36)
N	122	127	127	135	47
Log-likelihood ratio	44.89	30.44	18.02	35.09	26.25
McFadden R^2	0.2966	0.1888	0.1139	0.2096	0.4268
% Correctly classified	82.79	80.32	72.44	78.52	85.11

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level

Table 5
Model of takeover completion for "good" takeovers

The table presents the results of estimating regression model (1) examining factors that influence takeover completion for takeovers that have positive announcement returns (i.e., "good" takeovers). The model is estimated in turn for "good" takeovers so classified using three separate event windows, and then for takeovers that have positive returns in any two of the event windows. The dependent variable is a binary variable set to 1 if the takeover is successful. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Positive (-60,+10) (1)	Positive (-10,+10) (2)	Positive (-1,0) (3)	Positive any two event windows (4)
Intercept	-1.1064	-6.9601	-15.5290	-11.4030
	(-0.27)	(-1.48)	(-2.67)***	(-0.81)
BidBlock	-0.3463	0.1538	-0.2064	-0.4001
	(-1.14)	(0.62)	(-0.45)	(-0.57)
BidTop5	0.0256	0.0389	0.0315	0.0312
	(0.96)	(1.75)*	(0.90)	(0.64)
BidInst	0.0778	0.0973	-0.0001	0.0313
	(1.66)*	(1.90)*	(0.02)	(0.42)
Nonexec	-4.7845	-1.9011	6.7691	3.9969
	(-1.70)*	(-0.73)	(2.06)**	(0.60)
BidDual	-0.1740	-0.2261	4.5015	9.6225
	(-0.13)	(-0.13)	(2.13)**	(1.81)*
Toehold	0.0664	0.0915	0.0616	0.1572
	(2.34)**	(2.68)***	(2.19)**	(2.02)**
Friendly	7.4385	6.7010	9.4887	18.2510
	(3.61)***	(3.90)***	(1.23)	(1.06)
TgtSize	0.0216	0.0038	0.1122	0.7478
	(0.19)	(0.03)	(0.84)	(2.00)*
TgtMB	0.0024	0.0031	-0.3940	-0.7906
	(0.03)	(0.04)	(-1.18)	(-1.08)
BidDirown	-0.0936	-0.0651	-0.0081	-0.4738
	(-2.33)**	(-1.97)**	(-0.25)	(-2.09)**
BidSize	0.1066	0.1675	0.3140	-0.3145
	(0.53)	(0.86)	(1.49)	(-0.62)
BidFCF	0.2244	0.9707	2.3095	0.9811
	(0.12)	(0.42)	(1.01)	(0.21)
Mult	-1.1786	-1.0000	-0.3726	-1.0723
	(-1.31)	(-1.19)	(-0.39)	(-0.76)
Payt	-0.2456	-0.3920	-0.0084	0.8999
	(-0.27)	(-0.48)	(-0.01)	(0.55)
N	123	113	118	108
Log-likelihood ratio	94.92	91.42	97.77	102.58
McFadden R^2	0.6374	0.6252	0.6880	0.7988
% Correctly classified	89.47	88.99	89.29	96.08

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level

Table 6
Model of increase in offer price for "good" takeovers

The table presents the results of estimating regression model (2) examining factors that influence offer price increases for takeovers that have positive announcement returns (i.e., "good" takeovers). The model is estimated in turn for "good" takeovers so classified using three separate event windows, and then for takeovers that have positive returns in any two of the event windows and then positive returns in all three event windows. The dependent variable is a binary variable set to 1 if the offer price is increased. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Positive (-60,+10) (1)	Positive (-10,+10) (2)	Positive (-1,0) (3)	Positive any two event windows (4)
Intercept	-3.5164	-3.1111	-5.9244	-3.6011
	(-1.10)	(-0.81)	(-1.59)	(-0.98)
BidBlock	-0.0560	-0.0977	-0.3785	-0.3120
	(-0.80)	(-0.51)	(-1.16)	(-1.39)
BidTop5	0.0196	0.0187	0.0374	0.0211
	(1.31)	(1.18)	(1.95)*	(1.25)
BidInst	0.0116	0.0321	0.0862	0.0110
	(0.46)	(0.99)	(2.18)**	(0.32)
Nonexec	1.2106	-1.7526	-0.5934	0.4815
	(0.76)	(-1.02)	(-0.37)	(0.26)
BidDual	-0.7391	-0.2193	-0.4953	-1.2486
	(-0.77)	(-0.23)	(-0.52)	(-1.04)
Toehold	0.0043	0.0049	0.0070	0.0044
	(0.74)	(0.70)	(0.45)	(0.66)
Friendly	0.0248	-0.5580	-1.6750	-0.3337
	(0.04)	(-0.95)	(-2.40)**	(-0.55)
TgtSize	0.3008	0.3275	0.5166	0.3922
	(1.35)	(1.29)	(1.95)*	(1.59)
TgtMB	-0.5805	-0.0871	-0.7345	-0.6223
	(-1.82)*	(-0.63)	(-2.18)**	(-1.78)*
BidDirown	0.0093	-0.0007	-0.0061	0.0085
	(0.62)	(-0.04)	(-0.31)	(0.48)
BidSize	-0.1662	-0.1667	-0.1653	-0.2063
	(-0.94)	(-0.97)	(-0.76)	(-1.10)
BidFCF	0.9682	1.1827	1.7527	0.8800
	(0.72)	(0.84)	(0.97)	(0.65)
Mult	1.5044	1.0782	1.3892	1.2474
	(2.54)**	(1.90)*	(2.03)**	(2.02)**
Payt	-0.6551	-1.1900	-0.3805	-0.7237
	(-1.10)	(-2.02)**	(-0.52)	(-1.10)
N	123	113	118	108
Log-likelihood ratio	23.93	24.05	43.73	27.88
McFadden R^2	0.1859	0.1937	0.3414	0.2325
% Correctly classified	76.42	78.90	82.14	77.45

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level

Table 7

Model of takeover completion for "bad" takeovers with returns below median

The table presents the results of estimating regression model (1) examining factors that influence takeover completion for takeovers that have negative announcement returns (i.e., "bad" takeovers) below the median. The model is estimated in turn for "bad" takeovers so classified using three separate event windows. The dependent variable is a binary variable set to 1 if the takeover is successful. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Negative (-60,+10) (1)	Negative (-10,+10) (2)	Negative (-1,0) (3)
Intercept	-12.9280	-34.1750	-21.3190
	(-0.94)	(-1.92)*	(-2.21)**
BidBlock	-0.2942	-0.2277	-0.2059
	(-1.86)*	(-1.80)*	(-1.82)*
BidTop5	-0.0303	-0.0197	0.0470
	(-0.56)	(-0.23)	(1.23)
BidInst	0.0259	0.1486	0.1648
	(0.27)	(2.24)**	(2.58)**
Nonexec	6.2933	1.4277	2.3315
	(1.69)*	(0.26)	(0.70)
BidDual	-1.1555	-2.4087	1.9085
	(-0.69)	(-1.13)	(0.94)
Toehold	0.1839	0.1748	0.0593
	(2.01)**	(1.49)	(1.13)
Friendly	5.8533	7.4386	3.7711
	(2.75)***	(2.43)**	(3.03)***
TgtSize	0.6232	1.4673	-0.0725
	(0.85)	(1.58)	(-0.16)
TgtMB	0.2130	0.3504	-0.0385
	(1.10)	(1.67)	(-0.14)
BidDirown	0.0412	-0.0343	-0.0057
	(1.11)	(-0.64)	(-0.21)
BidSize	-0.3319	0.1725	0.7701
	(-0.67)	(0.22)	(1.65)
BidFCF	-6.3693	-13.1900	-12.4450
	(-1.23)	(-1.73)*	(-2.39)**
Mult	-27.9600	0.0413	-2.3775
	(-0.01)	(0.02)	(-1.58)
Payt	3.7797	7.5418	0.9497
	(1.83)*	(1.82)*	(0.94)
N	61	64	64
Log-likelihood ratio	55.82	65.34	48.08
McFadden R^2	0.6613	0.7412	0.5419
% Correctly classified	88.53	92.19	84.38

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level

Table 8

Model of increase in offer price for "bad" takeovers with returns below median

The table presents the results of estimating regression model (2) examining factors that influence offer price increases for takeovers that have negative announcement returns (i.e., "bad" takeovers) below the median. The model is estimated in turn for "bad" takeovers so classified using three separate event windows. The dependent variable is a binary variable set to 1 if the offer price is increased. Variables included in the model are as defined in Table 2. *t*-statistics are provided in parentheses.

	Negative (-60,+10) (1)	Negative (-10,+10) (2)	Negative (-1,0) (3)
Intercept	3.7766	-0.6587	-3.3713
	(0.68)	(-0.17)	(-0.68)
BidBlock	-0.1919	-0.4548	-0.3940
	(-1.72)*	(-1.83)*	(-1.78)*
BidTop5	-0.0040	-0.0410	-0.0120
	(-0.15)	(-1.81)*	(-0.53)
BidInst	0.1139	0.0450	0.0332
	(2.22)**	(1.88)*	(1.03)
Nonexec	-1.2684	-0.3258	-3.3107
	(-0.55)	(-0.17)	(-1.30)
BidDual	-1.3535	-0.2999	0.5054
	(-1.12)	(-0.48)	(0.43)
Toehold	0.0228	-0.0074	-0.0095
	(0.79)	(-0.39)	(-0.32)
Friendly	-3.3094	-1.9914	-1.9506
	(-2.69)**	(-2.04)**	(-1.80)*
TgtSize	0.0840	0.1177	0.4722
	(0.21)	(0.47)	(1.42)
TgtMB	0.1632	0.0601	-0.3100
	(1.16)	(0.79)	(-0.64)
BidDirown	-0.0108	-0.0055	-0.0420
	(-0.54)	(-0.25)	(-1.62)
BidSize	-0.3242	0.0478	-0.0848
	(-0.95)	(0.20)	(-0.36)
BidFCF	0.8239	-0.2523	0.4921
	(0.25)	(-0.19)	(0.24)
Mult	-1.2284	0.2140	-0.4326
	(-0.61)	(0.22)	(-0.45)
Payt	2.7375	1.2107	2.3112
	(2.57)**	(1.44)	(2.65)**
N	61	64	64
Log-likelihood ratio	30.70	16.73	23.87
McFadden R^2	0.4148	0.2149	0.3066
% Correctly classified	86.89	73.44	79.69

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 1% level