

# Mergers and Acquisitions: The Role of Gender\*

Maurice Levi  
Sauder School of Business  
University of British Columbia  
2053 Main Mall, Vancouver, BC V6T 1Z2  
604.822.8260  
maurice.levi@sauder.ubc.ca

Kai Li  
Sauder School of Business  
University of British Columbia  
2053 Main Mall, Vancouver, BC V6T 1Z2  
604.822.8353  
kai.li@sauder.ubc.ca

Feng Zhang  
Sauder School of Business  
University of British Columbia  
2053 Main Mall, Vancouver, BC V6T 1Z2  
604.827.5294  
feng.zhang@sauder.ubc.ca

This Version: April 21, 2008

**Abstract:** This paper examines whether the gender of CEOs or corporate directors plays a role in the pricing and form of mergers and acquisitions. We show that the bid premium over the pre-announcement target share price is statistically and economically smaller if the CEO of the bidding company is a woman: *ceteris paribus*, the bid premium is reduced by over 70 percent. Also, the bid premium is statistically and economically smaller the larger is the proportion of women on the target company's board, provided that the female directors are independent appointees: each ten-percent of independent female directors on the target board reduces the bid premium by approximately 15 percent. The strong effects of gender on the bid premium are reinforced by substantially smaller target cumulative abnormal announcement period returns. A woman CEO of the target company and a larger proportion of inside female directors of the bidding company also significantly increase the chance of a merger or acquisition taking the form of a tender offer. These observed effects are robust to the use of a larger sample and alternative measures of market price reaction.

**Keywords:** bid premium, CEO and director gender, cumulative abnormal announcement period return, independent versus inside female directors, mergers and acquisitions, tender offer

**JEL classification:** G34

---

\* We thank comments from seminar participants at McMaster University and Queens University. Levi and Li acknowledge the financial support from the Social Sciences and Humanities Research Council of Canada. We also acknowledge the financial support from the Certified Management Accounting Society of British Columbia. All remaining errors are our own.

# Mergers and Acquisitions: The Role of Gender

## Abstract

This paper examines whether the gender of CEOs or corporate directors plays a role in the pricing and form of mergers and acquisitions. We show that the bid premium over the pre-announcement target share price is statistically and economically smaller if the CEO of the bidding company is a woman: *ceteris paribus*, the bid premium is reduced by over 70 percent. Also, the bid premium is statistically and economically smaller the larger is the proportion of women on the target company's board, provided that the female directors are independent appointees: each ten-percent of independent female directors on the target board reduces the bid premium by approximately 15 percent. The strong effects of gender on the bid premium are reinforced by substantially smaller target cumulative abnormal announcement period returns. A woman CEO of the target company and a larger proportion of inside female directors of the bidding company also significantly increase the chance of a merger or acquisition taking the form of a tender offer. These observed effects are robust to the use of a larger sample and alternative measures of market price reaction.

**Keywords:** bid premium, CEO and director gender, cumulative abnormal announcement period return, independent versus inside female directors, mergers and acquisitions, tender offer

**JEL classification:** G34

## I. Introduction

The evidence is accumulating that firm financial performance, measured in any of a variety of ways, is affected by the presence of women on corporate boards. For example, in a recent study of *Fortune 500* companies in which the potential influence of gender is measured by the percentage of women serving as members of the board, a positive influence has been found for return on equity, return on sales, and return on invested capital.<sup>1</sup>

This paper provides further evidence on the effects of women in leading corporate roles by examining their impact on the pricing and form of mergers and acquisitions (M&As). Women are assumed to potentially influence M&As by serving as the CEO of the bidding or target firm, as well as via their degree of representation on boards of bidding and target companies. A distinction is also made between independent versus inside female appointees to a board. In addition to the influence of gender on the pricing of target companies, we consider whether gender makes a difference in whether the merger or acquisition takes the form of an open tender offer to target company shareholders.

Using a sample of over 400 acquisition attempts for the period 1997-2006, we find that the bid premium paid over the pre-announcement target share price when the CEO of the bidding company is a woman is, *ceteris paribus*, over 70 percent smaller than when the bidding company CEO is a man. This dampening effect of a female bidder CEO is statistically significant at the 1 percent level. Further, each ten-percent representation of women on the target company's board of directors reduces the bid premium by almost 15 percent. This effect is again statistically significant at the 1 percent level. However, this economically meaningful impact of female target board directorships occurs only if the female directors are independent appointees. Inside female directorship has no effect on the bid premium.

---

<sup>1</sup> Catalyst: "The Bottom Line: Corporate Performance and Women Representation on Boards," 2007. This study, sponsored by the Chubb Corporation, can be found at <http://www.catalyst.org/knowledge/bottomline2.shtml>.

Consistent with the effect of bidder CEO gender on the bid premium, the target three-day cumulative abnormal announcement period return (CAR3) approaches zero if the bidder CEO is a woman. Again, this effect is significant at the 1 percent level. Further, each ten-percent representation of women on the target board reduces the target CAR3 by almost three percentage points. This effect is significant at the 5 percent level. Moreover, we show that the target proportion of female directors is negatively and significantly associated with the bidder CAR3. Each ten-percent representation of women on the target board reduces the bidder CAR3 by about one percentage point. This effect is significant at the 10 percent level. This economically meaningful impact of female target board directorships occurs only if the female directors are independent appointees.

Finally, the presence of a female target CEO and a larger proportion of inside female directors on the bidder board increases the likelihood that a tender offer rather than an alternative means of acquisition will be made for the target company. We find that the likelihood for a takeover taking the form of a tender offer when the target CEO is a woman is, *ceteris paribus*, over 20 percent higher than when the target CEO is a man. This heightening effect of a female target CEO is statistically significant at the 10 percent level. Further, each ten-percent representation of inside female directors on the bidder board increases the likelihood of a takeover taking the form of a tender offer by almost seven percent. This effect is statistically significant at the 5 percent level. Since, *ceteris paribus*, tender offers generally involve higher prices being paid for target companies, the inclination for women to induce and initiate the tender offer makes their overall impact of a lower bid premium particularly compelling.

To make sure that our main findings are robust, we also employ a larger sample of over 1,100 acquisition attempts that, while having information on bidder CEOs and directorships, does not have gender information on target CEOs or directors. With this sample we obtain very similar results on the effects of female bidder CEOs and directors in M&As. In addition, we find

that female representation on the bidder board is associated with a significantly higher bidder CAR3.

Our goal in this paper is to report these economically and statistically significant effects of gender rather than to postulate on what these results may imply about the difference between men and women serving in the roles of CEOs or board members in a bidder or target company. Nevertheless, we might note that the effects we identify are consistent with differential consequences of M&As for male versus female directors. For example, through their compensation packages and share or option holdings it is possible that male directors may gain more than women from being on either side of a merger or acquisition.<sup>2</sup> The effects are also consistent with different efficiencies of men versus women in price discovery of target company values. Other explanations may also be possible, but it is not our purpose here to test a hypothesis of what might lie behind our findings, just to document them. However, we are able to note that it is not simply a matter of women being better bargainers in the M&A process. While the lower price paid for the target company when the bidder firm CEO is a female, and the correspondingly lower target CAR3, do imply better bargaining ability, this conjecture is undermined by the fact that a greater proportion of independent female directors on the target board also reduces bid premiums and target CAR3s. If it were just that women are better bargainers, this second effect would have involved higher bid premiums and target CAR3s. What we hope to achieve by reporting these economically and statistically significant effects of gender is to generate an interest in whether such effects can be found elsewhere in the context of corporate decisions, and an inquiry into what might explain them.

The plan of the paper is as follows. The next section reviews the related literature on the role of female CEOs and directors in corporate decisions and firm performance. As far as we can tell, there is no prior work on the role and consequences of gender in M&As, although those

---

<sup>2</sup> Deborah Dahlen Zelechowski and Diana Bilimoria (2004) show that male inside directors are paid more than their female counterparts. Hence, if compensation for directors of successful bidders or targets is proportional to their normal compensation, they have greater incentive to complete such deals. If the greatest hurdle is target shareholder approval, male directors have an incentive to pay and receive a higher takeover price.

existing studies of CEO and director gender provide a valuable link to the work presented here. Section III describes our two M&A samples and the model specifications used to determine the gender effects of CEOs and directors. Section IV presents our main results on the role of gender in bid premiums, cumulative abnormal announcement period returns, and the choice of tender offers as the means of takeover, as well as some robustness tests. The last section summarizes and concludes.

## II. Literature Review

Our research is closely related to two strands of literature. The first strand explores the role of female CEOs and executives in corporate decisions and firm performance, while the second strand investigates the effect of gender diversity inside corporate boardrooms on firm performance.

Under the first strand, Nancy Mohan and Carl Chen (2004) study whether there is a gender bias in the IPO market by comparing initial underpricing and firm characteristics of female-led versus male-led IPOs. Using data of 757 IPOs involving 33 female-led ones for the period 1999-2001, they find no CEO gender-related differences in IPO underpricing or in firm characteristics, including firm risk, gross proceeds of the offering, the offer price, market capitalization of the IPO firm, and the percentage of shares floated. Justin Wolfers (2006) concludes that there are no systematic differences in returns to holding stock in female-headed firms as compared to male-headed firms. His study employs *S&P 1500* firms over the period 1992-2004, and the fraction of female CEOs in his sample is 1.5 percent. Peggy Lee and Erika Hayes James (2007) show that investor reactions to the announcements of female CEOs (CAR3 at -2.47 percent) are significantly more negative than those of their male counterparts (CAR3 at -0.50 percent). Their sample involves 529 announcements of CEO appointments including 17 announcements of female CEO appointments for the period 1990-2000. Further, they show that

although investor reactions to female insiders are still negative, women who have been promoted within a firm are viewed more positively than women who come from outside.

Focusing on gender diversity among top executives instead of just CEOs, Theresa Welbourne, Cynthia Cycyota, and Claudia Ferrante (2007) show that women executives in the top management team of IPO firms appear to have a positive association with the firms' short-term performance (as measured by Tobin's Q), three-year stock price growth, and growth in earnings per share. Winnie Peng and John Wei (2007) associate gender of an executive with the degree of overconfidence and show that investments made by female CEO executives (including CEOs, Presidents, Chairpersons of the Board) are less sensitive to cash flow than are investments made by male executives. They also find that the gender effect on the investment-cash flow sensitivity is more pronounced in firms that are equity dependent.

Under the second strand of literature, Robert Gertner and Steven Kaplan (1996) compare board and director characteristics of 59 reversed leverage buyout, LBO, firms with industry- and size-matched control firms for the period 1987-1993. They choose this context to examine board composition because of the strong incentives for LBO specialists to maximize shareholder value. Relative to directors of the comparison firms, they find that directors of the reverse LBOs are younger, have shorter tenure, are as likely to serve on other boards, and most importantly for our paper, are less likely to be women. Using *Fortune 500* firms during the decade of the 1990s, Kathleen Farrell and Phillip Hersch (2005) show that women tend to serve on better performing firms, but they also document that there is no wealth effect associated with the announcement of a woman being added to the board. Thus they cannot conclude that more gender diverse boards generate better firm performance. Using a cross-sectional sample of boards of directors of 1,024 publicly traded US firms, Renée Adams and Daniel Ferreira (2007) show that firms facing less uncertainty (as measured by return volatility) have more women directors. They also find that boards with gender diversity are associated with more director pay-performance incentives and more board meetings. Their evidence suggests that gender composition plays an important role in

compensation and organization design for corporate boards. A study in *Catalyst* sponsored by the Chubb Corporation (2007) document that *Fortune 500* companies with more women board directors experience better financial performance in terms of return on equity, return on sales, and return on invested capital. Further, there is notably stronger-than-average performance at companies with three or more women board members.

The effects of board diversity, which extends beyond gender to include other forms of demographic diversity, have recently been examined by David Carter, Betty Simkins, and Gary Simpson (2003). Using *Fortune 1000* firms in 1997, and after controlling for firm size, industry, and other corporate governance measures as well as possible endogeneity between firm value and diversity, they find significant positive relationships between the proportion of women or minorities—African Americans, Asians and Hispanics—on company boards and firm value as measured by Tobin's Q. They also show that the proportion of women or minorities on boards increases with firm size and board size, but decreases as the number of insiders increases. Niclas Erhardt, James Werbel, and Charles Shrader (2007) are interested in the role of diversity in firm performance which they evaluate with measures of return on assets and return on investment for 112 large US companies. Diversity is measured by the percentage of women and minorities on the board of directors. They conclude that board diversity is positively associated with these financial indicators of firm performance.

Studies that focus on gender rather than the broader matter of diversity have frequently been concerned with differences between men and women in senior corporate roles along such dimensions as qualifications and compensation. One such investigation that examines corporate inside directors of *Fortune 1000* companies finds no significant differences between women and men in experience-based qualifications in terms of board tenure or corporate tenure (Deborah Dahlen Zelechowski and Diana Bilimoria (2004)). However, women insiders are found to hold fewer directorships of other corporations, to have lower-level titles, to occupy more staff functions, to be less likely among the top income earners in their companies, and to earn



substantially less than male inside directors. Similar gaps in executive compensation have been found in studies of earnings that extend beyond members of corporate boards to executive compensation in general (Marianne Bertrand and Kevin Hallock (2001)).

In summary, while women may earn less than their male counterparts, either as members of the board or in other corporate executive positions, there is gathering evidence, as surveyed above, that representation of women as corporate directors has a distinct and strongly positive association with firm financial performance.

An important dimension of CEO and director gender that has not previously been examined concerns the role women play in the pricing and form of corporate acquisitions. As we shall see in what follows, women in their capacity as CEOs or as board members have a significant and economically important influence.

### **III. Our Data and Research Framework**

In this section we describe how our two samples are formed and present our empirical specifications to examine the role of gender in mergers and acquisitions.

#### *Samples Employed*

To form our main M&A sample, we begin with all US acquisition attempts with announcement dates between January 1, 1997 and December 31, 2006 as identified by the Mergers and Acquisitions database of Thomson Financial's SDC database. The above time frame is chosen because the data on corporate boards from the RiskMetrics Group are available during this period. We identify all deals where both the bidder and the target are public firms and where the form of deal was coded as a merger, an acquisition of majority interest, or an acquisition of assets. After applying the above filters, we obtain 4,916 deals.

Next, we match our bidders and targets with the RiskMetrics data to retrieve information on CEOs and members of the boards. The RiskMetrics data contains detailed board information for *S&P 1500* firms (including *S&P 500*, *S&P Midcap 400*, and *S&P Small Cap 600*) for the proxy seasons of 1997-2006. Specifically, it covers director identity and affiliation, director gender and age, director compensation and equity ownership, director tenure, committee membership, whether the CEO is the Chairman of the Board (COB), whether cumulative voting is allowed, whether there is a provision that staggers the terms and elections of directors, and much more. The director information within the dataset allows us to compute board size, director independence, the fraction of female directors, and the fraction of independent or inside female directors. Our final sample of 403 acquisition attempts is an intersection of RiskMetrics for director information, Compustat for accounting information, and CRSP for stock prices for the period 1997-2006. Among the 403 deals, there are four unique female bidder CEOs making four acquisition bids and six unique female target CEOs.

For a robustness check, we also employ a larger sample of acquisition attempts for the period 1997-2006 with data provided only on the gender of bidder CEOs and directors. We end up with 1,164 deals. Among the 1,164 deals, there are eight unique female bidder CEOs making eleven acquisition bids.

### Sample Overview

Table 1 presents descriptive statistics on the announced deals, the bidder CEOs and boards, the target CEOs and boards, and other firm characteristics in our main sample of 403 acquisition attempts. We show that on average, the bidder pays a premium of 32.8 percent above the market price of the target, measured four weeks before the bid. The average three-day cumulative abnormal announcement period return (CAR3) for the target is 18.2 percent, while the average CAR3 for the bidder is -2.9 percent. The average seven-day cumulative abnormal announcement period returns (CAR7) for the target and bidder are 19.2 percent and -3.1 percent,

respectively. This uneven distribution of takeover returns is typical. See, for example, Sandra Betton, Espen Eckbo, and Karin Thorburn's (2008) study of close to 10,000 US control contests for the period 1973-2002 which shows that the sample average of target CAR3 is 13.4 percent, while the sample average of bidder CAR3 is -1.2 percent.

We focus on the bid premium and cumulative abnormal announcement period returns as valid and meaningful measures of CEO and board member performance in the M&A process. For example, it would generally be considered an achievement for a bidder CEO or board member to acquire a target for a smaller premium over the recent target share price. A direct consequence of a lower premium is a smaller cumulative abnormal return for target shareholders around the announcement date. It would also be considered an achievement for a target CEO or board member to be associated with a higher premium. This would mean a higher cumulative abnormal announcement period return for their shareholders.

As for our interest in the form of the M&A process, we are interested in the choice between the two major ways of implementing takeovers: mergers and tender offers. Michael Jensen and Richard Ruback (1983) in their seminal survey of the market for corporate control suggest that mergers are negotiated directly with the target management and approved by the target board before going to a vote by the target shareholders. In contrast, tender offers are offers to buy shares made directly to the target shareholders. They show the stock market price reactions to tender offers are higher than to merger announcements. Betton, Eckbo, and Thorburn (2008) also find that the premium paid in tender offers is higher than in mergers. William Schwert (2000) in his comprehensive study of hostile takeovers concludes that tender offers are more likely to be used in hostile takeovers. About 15 percent of our M&A deals take place in the form of a tender offer.

Important to our study, the sample fraction of female bidder CEOs is 1.0 percent, and the sample fraction of female target CEOs is 1.5 percent. Wolfers (2006) shows that in a sample of *S&P 1500* firms, the fraction of female CEOs is 1.5 percent, so our sample average of female top

executives is similar to his. We also note that it is not surprising that the fraction of female bidder CEOs is lower than that of female target CEOs as bidder companies on average tend to be larger than targets.

Compared to female CEOs, women have greater representation on corporate boards. On average, about 11 percent of bidder directors are women (excluding the female CEO if this is the case), with the proportion of women ranging from zero at the 5<sup>th</sup> percentile to 25 percent at the 95<sup>th</sup> percentile. On average, about 9 percent of target directors are women. These numbers are consistent with the study by Farrell and Hersch (2005) who find that female directors comprise 8.6 percent of board members in a sample of *Fortune 500* firms.

Anil Shivdasani (1993), James Cotter, Anil Shivdasani, and Marc Zenner (1997), and Benjamin Hermalin and Michael Weisbach (1998) show that boards dominated by independent directors are more likely to make decisions that are in the interest of shareholders. Thus, unique to our study, we further break down the fraction of female directors into the fraction of independent female directors and the fraction of inside female directors. Inside directors are current and former members of the top management team and employees of the company or its subsidiaries. If independence of directorships affects both genders differently, we expect M&A pricing, CARs, and possibly the form of takeover to differ depending on whether a female director is an independent or an inside director. In our sample, female directors primarily come from outside, consistent with findings in Farrell and Hersch (2005). On average, the fraction of independent female directors in the bidder is 10.1 percent, compared to the fraction of all female directors in the bidder of 11.1 percent. That is, the average fraction of inside female directors (excluding the female CEO if this is the case) in the bidder is only 1.0 percent. Similarly, on average, the fraction of independent female directors in the target firm is 7.8 percent, compared to the fraction of all female directors in the target firm of 8.5 percent. The average fraction of inside female directors (excluding the female CEO if this is the case) in the target firm is less than one percent.

The average bidder board size is 11.5 and the average target board size is 9.7, consistent with the fact that bidder firms are generally larger than targets, and larger firms typically have larger boards. On average, 69 percent of the bidder boards and 68 percent of the target boards are occupied by independent directors. In 80 percent of the bidders and 71 percent of the targets, the CEO is also the Chairman of the Board.

Less than 20 percent of the deals use only cash as the method of payment, and 36 percent of the deals are pure stock swaps. About a third of the deals are diversifying, i.e., the bidder and target belong to different industry classifications as defined by Eugene Fama and Kenneth French (1997). The mean relative deal size, defined as the ratio of the transaction value to the market capitalization of the bidder, is 60 percent.

Finally, we present summary statistics on the bidders in our main sample. The mean (median) Tobin's Q is 2.2 (1.5). The mean (median) book leverage ratio is 40 (42) percent. The mean (median) ratio of operating cash flow to total assets is 31 (45) percent. The mean (median) bidder total assets is \$48 (\$11) billions, measured in 2006 dollars.

### Model Specification

To explore the role of gender in M&As, we run the following cross-sectional regressions:

$$\begin{aligned}
 \text{Bid Characteristic}_i = & \alpha_0 + \beta_1 \text{Bidder CEO is Female}_i + \beta_2 \text{Target CEO is Female}_i \\
 & + \beta_3 \text{Bidder Proportion of Female Directors}_i + \beta_4 \text{Target Proportion of Female Directors}_i \\
 & + \beta_5 \text{Bidder Board Size}_i + \beta_6 \text{Target Board Size}_i \\
 & + \beta_7 \text{Bidder Proportion of Independent Directors}_i \\
 & + \beta_8 \text{Target Proportion of Independent Directors}_i \\
 & + \beta_9 \text{Bidder CEO is COB}_i + \beta_{10} \text{Target CEO is COB}_i \\
 & + \text{Other Controls} + e_i,
 \end{aligned} \tag{1}$$

where "Bid Characteristic" could be the bid premium, target CAR3, bidder CAR3, or the use of a tender offer. The key variables of interest are the gender variables of CEOs and directors in the bidder and target firms. The governance-related variables and controls for bid- and firm-characteristics are motivated by prior findings in studies by John Byrd and Kent Hickman

(1992), Anil Shivdasani (1993), James Cotter, Anil Shivdasani, and Marc Zenner (1997), William Schwert (2000), Mary Bange and Michael Mazzeo (2004), and Xia Chen, Jarrad Harford, and Kai Li (2007). Bid characteristics include dummies for all cash, all stock, diversifying deals, and relative size. Bidder characteristics include Tobin's Q, book leverage, operating cash flow, and firm size.

We employ three different model specifications when reporting our estimation results. In the first specification we exclude measures of CEO and director gender to provide our baseline results. In the second specification, we employ equation (1) and estimate the model without the year fixed effects and with robust standard errors. In the final specification, we employ equation (1) and estimate the model with the year fixed effects and robust standard errors. While the gender of CEOs and board members may vary by industry, there is no reason *a priori* for effects of gender to differ. In the interest of preserving degrees of freedom we do not include any industry fixed effects in our empirical estimation.

As we have mentioned, we are also interested in exploring the potentially differential role of female directors when they are independent versus when they are inside. As indicated, extending the conclusions from earlier studies of director independence, we expect that independent female directors are more likely to work in the interest of their shareholders, thereby possibly affecting the bid premium, CARs, and the form of takeover employed. As a result, we run the following cross-sectional regressions:

$$\begin{aligned}
 \text{Bid Characteristic}_i = & \alpha_0 + \beta_1 \text{Bidder CEO is Female}_i + \beta_2 \text{Target CEO is Female}_i \\
 & + \beta_3 \text{Bidder Proportion of Independent Female Directors}_i \\
 & + \beta_4 \text{Bidder Proportion of Inside Female Directors}_i \\
 & + \beta_5 \text{Target Proportion of Independent Female Directors}_i \\
 & + \beta_6 \text{Target Proportion of Inside Female Directors}_i \\
 & + \beta_7 \text{Bidder Board Size}_i + \beta_8 \text{Target Board Size}_i \\
 & + \beta_9 \text{Bidder Proportion of Independent Directors}_i \\
 & + \beta_{10} \text{Target Proportion of Independent Directors}_i \\
 & + \beta_{11} \text{Bidder CEO is COB}_i + \beta_{12} \text{Target CEO is COB}_i \\
 & + \text{Other Controls} + e_i,
 \end{aligned} \tag{2}$$

where “Bid Characteristic” could be the bid premium, target CAR3, bidder CAR3, or the use of a tender offer. The key variables of interest are the gender variables of CEOs and of independent and inside directors in the bidder and target firms.

Before proceeding with our multivariate analysis, we examine the correlation between our four dependent variables and all right-hand side variables. Table 2 presents the correlation matrix. There is economically significant correlation between the bid premium and target CAR3, which is not surprising as the target price reaction is conditional on the size of bid premium. There is also significant positive correlation between the use of a tender offer and the bid premium (at 0.281), and between the use of a tender offer and target CAR3 (at 0.280). The correlation between target (bidder) CAR3 and CAR7 is 0.955 (0.843). The correlation between bidder (target) fraction of female directors and bidder (target) fraction of independent female directors is 0.937 (0.939) suggesting, as we have indicated, that most of the female directors are independent directors. The correlation between bidder (target) fraction of independent female directors and bidder (target) fraction of independent directors is 0.360 (0.329). Other than the significantly high correlation between bidder board size and firm size (at 0.613), the extent of correlation among most pairs of variables raises little concern for multicollinearity in our regression analysis.

#### **IV. The Gender Effect in M&As**

In this section we report our main findings on the role of gender in acquisition attempts. We also implement various robustness checks on our main results.

##### ***Main Results***

Table 3 Panel A presents our regression results where the dependent variable is bid premium and our key variables of interest are the gender variables of bidder and target CEOs and

directors. In our baseline regression (column (1)), we include only the standard board, bid, and firm characteristics to establish a benchmark. We find that bids using all-equity payment, and bids for relatively large targets are negatively associated with the bid premium, while bidders with high Tobin's Q make higher bids.

Our main findings are presented in column (3) of Panel A where the year fixed effects are included in the regression. We find that the presence of a female bidder CEO is significantly and negatively associated with the bid premium. Recall that the sample average of bid premium is 32.8 percent, and the negative coefficient in front of the female bidder CEO dummy suggests that the bid premium paid over the pre-announcement target share price when the CEO of the bidding company is a woman is, *ceteris paribus*, more than 70 percent ( $= 0.237/0.328$  where the numerator is the coefficient on the female bidder CEO dummy and the denominator is the sample average of bid premiums) smaller than when the bidding company CEO is a man. This dampening effect of a female bidder CEO is statistically significant at the 1 percent level.

We also find that gender diversity in the target board, as measured by the fraction of female directors on the board, is significantly and negatively associated with the bid premium. In economic terms, each ten-percent representation of women on the target company's board of directors reduces the bid premium by almost 15 percent ( $= (0.1 \times 0.459)/0.328$  where the second term in the numerator is the coefficient on the target proportion of female directors and the denominator is the sample average of bid premiums). This effect is again statistically significant at the 1 percent level. To put the economic significance in context, these results mean that the combined effect of a female bidder CEO and of twenty-percent female representation on the target board, would be a virtual offset of the sample average bid premium of 32.8 percent ( $-0.237 - (0.2 \times 0.459) = -0.329$  where the first term is the regression coefficient on the female bidder CEO dummy, and the term in parentheses is the effect of twenty-percent female target directors on bid premiums). It is worth noting that the inclusion of CEO and director gender variables do not change the effects of other control variables on the bid premium.



The direction of effect in the association between women and M&As could run in either direction. For example, it could be that women as bidder CEOs *result* in a lower bid premium. However, it could also be that when facing the universe of possible M&As, women *select* those for which the bid premiums necessary to complete them are on average relatively small. Whichever way round is the direction of effect, this would still appear to be a matter of gender.

Our finding on the role of female target directors in the bid premium begs the question of whether female directors play any differential roles if they are independent or inside directors. Panel B presents our bid premium regression results when we classify female directors into independent and inside female directors. First, we still find the presence of a female bidder CEO is significantly and negatively associated with the bid premium, and that the economic significance of this effect is very similar to that in Panel A. Further, we show that the economically meaningful impact of female target board directorships occurs only if the female directors are independent appointees. Inside female directorship has no effect on the bid premium. All other control variables have similar effects on the bid premium as those in Panel A.

Table 4 presents the regression results when the dependent variable is target CAR3. In Panel A we focus on the role of CEO and director gender ignoring directors' affiliation as independent or not. In our baseline regression (column (1)), we include only the standard board, bid, and firm characteristics to establish a benchmark. We find that bids with all-equity payment, bids for relatively large targets, and bidders with high book leverage are negatively associated with the target CAR3.

Our main findings on CAR3s are presented in column (3) of Panel A. Consistent with the effect of bidder CEO gender on the bid premium, target CAR3s approach zero if the bidder CEO is a female. Recall that the sample average of target CAR3s is 18.2 percent, which is exactly offset by the coefficient on the female bidder CEO dummy. Again, this effect is significant at the 1 percent level. Further, each ten-percent representation of women on the target board reduces

the target CAR3 by close to three percentage points. This effect is significant at the 5 percent level.

Different from Table 3, we add a fourth column to present a model specification including the bid premium as a new control variable. This new specification allows us to examine the role of CEO and director gender both directly, and indirectly via the bid premium. We find that once we control for the bid premium, the direct CEO and director gender effects on target CAR3s disappear. On the other hand, the coefficient on bid premium is significant and positive, suggesting that the effect of CEO and director gender on target CAR3s mainly take effect indirectly via the bid premium channel.

We note that the coefficient of the bid premium on the target CAR3 is less than unity. This reflects the fact that the bid premium that is eventually paid in an acquisition frequently includes revisions of the original terms: an offer is made either to the company or to its shareholders—a tender in the latter case—and this is subsequently increased as the bidder assesses the prospects for acceptance. In such a situation the immediate price reaction (target CAR3) may be smaller than the eventual bid premium that is paid. Of course, the target price reaction might build in anticipation of subsequent “sweetening” of an offer which sometimes does not materialize, in which case the coefficient would exceed unity: the CAR3 goes up more than the bid premium actually paid. That is, the coefficient on the bid premium represents the average of actual sweeteners net of anticipated sweeteners. We are finding that sweetening of original offers is not fully anticipated.

Panel B of Table 4 presents the regression results when we separately measure independent and inside female directors. Again, we show that the economically meaningful impact of female target board directorships occurs only if the female directors are independent appointees. Inside female directorship has no effect on the target CAR3. Finally, once we

control for the bid premium in our model specification (column (4)), there is no direct effect of a female bidder CEO or independent female target directors on the target CAR3.

Table 5 presents the regression results when the dependent variable is bidder CAR3. In Panel A, we focus on the role of CEO and director gender ignoring directors' affiliation as independent or not. In our baseline regression (column (1)), we include only the standard board, bid, and firm characteristics to establish a benchmark. We find that bidders with more independent boards and high Tobin's Q are negatively associated with the bidder CAR3, while bidders whose CEOs are also Chairman of the Board and bids with all-cash payment are positively associated with the bidder CAR3.

Our main findings are presented in column (3) of Panel A. Female representation on the target board is significantly and negatively associated with the bidder CAR3. In terms of the economic significance, each ten-percent representation of women on the target board reduces the bidder CAR3 by about one percentage point. Recall that the sample average of bidder CAR3 is -2.9 percent.

Similar to Table 4 Panel A, we add a fourth column to present a model specification including the bid premium as a new control variable. We find that after controlling for the bid premium, the target proportion of female directors is still significantly and negatively associated with the bidder CAR3. Each ten-percent representation of women on the target board reduces the bidder CAR3 by slightly over one percentage point. Further, the coefficient on bid premium is significant and negative, suggesting that the effect of target director gender on the bidder CAR3 take effect both directly and via the channel of bid premium.

Panel B of Table 5 presents the regression results when we separately measure independent and inside female directors. Again, we show that the economically meaningful impact of female target board directorships occurs only if the female directors are independent appointees. Inside female directorship has no effect on the bidder CAR3. Further, using the refined measures of director gender, we show that the presence of independent female directors

on the bidder board is strongly and positively associated with the bidder CAR3. Independent women directors appear to serve their companies well, creating value when they are engaged in acquisitions or merging with another company. Finally, after controlling for the bid premium in our model specification (column (4)), there is still a direct effect of independent female directors in the target on the bidder CAR3.

Having established the role of gender in the pricing of mergers and acquisitions and the consequent returns of bidding and target firms, we turn next to the question of whether gender makes a difference in the procedure used in the M&A process. In this vein, our final variable of interest is the bidder's decision on the use of a tender offer as the method of acquisition. Table 6 presents the probit regression results. In Panel A, we focus on the role of CEO and director gender ignoring directors' affiliation as independent or not. In our baseline regression (column (1)), we include only the standard board, bid, and firm characteristics to establish a benchmark. We find that targets with more independent boards, bids with all-equity payment, bids for relatively large targets, and large bidders are negatively associated with the likelihood of using a tender offer. Bids with all-cash payment are positively associated with the likelihood of using a tender offer. In columns (2) and (3), we include both CEO and overall director gender variables in the baseline specification and find that none of the gender variables are significantly associated with the likelihood of making a tender offer.

Panel B of Table 6 presents the probit regression results when we separately measure independent and inside female directors. Strikingly, there is strong and positive association between the target CEO being a female and the likelihood of a tender offer being made to this target. Changing the target CEO from a male to a female increases the likelihood of receiving a tender offer by 21 percent. Moreover, we find that the larger is the proportion of inside female directors on the bidder board the greater is the likelihood that a tender offer rather than an alternative means of acquisition will be made for the target. Each ten-percent representation of

women on the bidder board increases the likelihood of a tender offer by almost seven percent. Recall that the sample frequency of tender offers is about 15 percent.

Since tender offers generally involve higher prices being paid for target companies, the inclination for women to induce and initiate tender offers makes their overall impact of a lower bid premium particularly compelling.

### Additional Investigation

To check whether our main findings are robust, we also employ a larger sample of over 1,100 acquisition attempts for the period 1997-2006 that, while providing gender information on the bidder CEOs and directors, does not provide information on target CEOs or directors.

Table 7 Panel A presents sample descriptive statistics. For this larger sample of 1,164 deals, we find that on average, the bidder pays a premium of 41.3 percent above the market price of the target, measured four weeks before the bid. The average target CAR3 is 22.4 percent, while the average CAR3 for the bidder is -2.0 percent. About 19 percent of our M&A deals take the form of a tender offer. While not reported here, we have determined that with this large sample, the average premium paid in 218 tender offers is 54.1 percent, while it is 38.4 percent in 946 merger bids (This compares to the average premium paid in 60 tender offers of 50.6 percent, and 29.7 percent in 343 merger bids in our main sample).

The sample fraction of female bidder CEOs is 0.9 percent. On average, about 10 percent of bidder directors are women (excluding the female CEO if this is the case). The average fraction of independent female directors in the bidder is 8.8 percent, and the average fraction of inside female directors (excluding the female CEO if this is the case) in the bidder is less than one percent. The average bidder board size is 11.3. On average, 68 percent of the bidder boards are occupied by independent directors. In 76 percent of the bidders, the CEO is also the Chairman of the Board. Close to 30 percent of the deals use only cash as the method of payment, and 37 percent of the deals are pure stock swaps. About a third of the deals are diversifying

deals. The mean ratio of the transaction value to bidder market capitalization (relative size) is 32 percent. On average, the bidder Tobin's Q is 2.3. The average book leverage ratio is 35 percent. The average ratio of operating cash flow to total assets is 36 percent. The average of bidder total assets is \$34 billions, measured in 2006 dollars.

In summary, compared to our main sample, this larger sample of takeovers has similar gender characteristics of bidder CEOs and directors and involves smaller deals and smaller bidders.

Table 7 Panel B presents the correlation matrix which is similar to that in Table 2 for our main sample. The extent of correlation among most pairs of variables raises little concern for multicollinearity in our regression analysis.

Given the data availability in our larger sample, we run the following cross-sectional regressions to explore the role of gender in M&As:

$$\begin{aligned}
 \text{Bid Characteristic}_i &= \alpha_0 + \beta_1 \text{Bidder CEO is Female}_i \\
 &+ \beta_2 \text{Bidder Proportion of Female Directors}_i + \beta_3 \text{Bidder Board Size}_i \\
 &+ \beta_4 \text{Bidder Proportion of Independent Directors}_i + \beta_5 \text{Bidder CEO is COB}_i \\
 &+ \text{Other Controls} + e_i,
 \end{aligned} \tag{3}$$

where "Bid Characteristic" could be the bid premium, target CAR3, bidder CAR3, or the use of a tender offer. We also run regressions that extend equation (3) by classifying female directors into independent and inside female directors on the bidder board.

Table 8 presents our main results. Due to space constraints, we present results regarding only the gender variables. Panel A presents our main findings when the dependent variable is bid premium. As in our smaller sample, Panel A column (2) shows that the presence of a female bidder CEO is significantly and negatively associated with the bid premium. Recall that the sample average of bid premium is 41.3 percent. Therefore, the negative coefficient in front of the female bidder CEO dummy suggests that the bid premium paid when the bidder CEO is a woman is, *ceteris paribus*, more than 40 percent ( $= 0.163/0.413$  where the numerator is the

coefficient on the female bidder CEO dummy and the denominator is the sample average of bid premiums) smaller than when the bidding company CEO is a male. This dampening effect of a female bidder CEO is statistically significant at the 5 percent level. Columns (3)-(4) show that classifying the fraction of female directors in the bidder firm into independent versus inside female directors does not change our results on the role of a female bidder CEO on the bid premium.

Panel B presents our main findings when the dependent variable is target CAR3. Consistent with our findings in Panel A, column (2) of Panel B shows that the presence of a female bidder CEO is significantly and negatively associated with the target CAR3. The target CAR3 drops by 14 percentage points if the bidder CEO is a female and this effect is significant at the 1 percent level. Recall that the sample average of target CAR3s is 22.4 percent. Different from results using our main sample, column (3) shows that after controlling for the bid premium, there remains a statistically significant direct effect of a female bidder CEO on the target CAR3. Columns (4)-(6) show that using more refined gender measures of bidder directors leaves our main results unchanged.

Table 8 Panel C presents our main findings when the dependent variable is bidder CAR3. Column (2) shows that gender diversity in the bidder board is significantly and positively associated with the bidder CAR3. In terms of the economic significance, each ten-percent representation of women on the bidder board increases the bidder CAR3 by about half a percentage point. Recall that the sample average of bidder CAR3s is -2.0 percent. Compared to our main sample, the effect of independent female directors on bidder CARs is statistically stronger (columns (4)-(5)). Our result suggests in this sample that lacks information on target boards, the important effect of female directors primarily comes from independent female directors on the bidder board. It is worth noting that after controlling for the bid premium, there is still a direct effect of female bidder directors on the bidder CAR3 (columns (3) and (6)).

Panel D presents the probit regression results when the dependent variable is a tender offer dummy. We find that the larger is the proportion of inside female directors on the bidder board the greater is the likelihood that a tender offer rather than an alternative means of acquisition will be made for the target. Each ten-percent representation of female insiders on the bidder board increases the likelihood of a tender offer by almost five percent. Recall that the sample frequency of tender offers is about 19 percent.

In summary, using a larger sample of M&A deals generates very similar results to our main sample on the effects of female bidder CEOs on the bid premium and on the target CAR3s. We also see the same effect of inside female bidder directors on the use of a tender offer. The similarity of results in the two samples for the gender effects suggests that the very significant findings reported in this paper are not an artifact of the data being investigated.

Finally, for a further robustness check using our main sample we also re-estimate the cumulative abnormal announcement period returns using a seven-day window around the announcement date (CAR7). Table 9 presents the main results. Panel A column (2) shows that the presence of a female bidder CEO reduces the target CAR7 by 18 percentage points, and this effect is significant at the 1 percent level. Further, each ten-percent representation of women on the target board reduces the target CAR7 by about two percentage points. This effect is significant at the 10 percent level. Recall that the sample average of target CAR7s is 19.2 percent. Column (5) shows that the target director gender effect mainly comes from the independent female target directors.

Panel B column (5) shows that the fraction of independent female directors on the target board is significantly and negatively associated with the bidder CAR7. In terms of the economic significance, each ten-percent representation of independent female directors on the target board reduces the bidder CAR7 by about one percentage point. Recall that the sample average of bidder CAR7 is -3.1 percent. In summary, the effect of gender on CAR7s is similar to that using CAR3s.



## **V. Conclusions**

Consistent with the findings of the significant role gender plays in other contexts, such as financial performance reflected in returns on equity, sales, and investment, we have found a further influence in the economically important arena of mergers and acquisitions. While there are many significant influences of gender documented in this paper, the main conclusions concern the dampening role of a female bidder CEO and independent female target directors on the bid premium paid, and on the associated lower target cumulative abnormal announcement period returns.

As mentioned, our main purpose is to report this gender effect, not to test any hypotheses that might help explain it. Nevertheless, we can at the least point out that it does not appear to reflect stronger bargaining ability of women which would be supported by the negative bid premium and associated negative CAR3s related to the bidder CEO gender, but not by the dampening effect of independent female membership of the target board. What we might also cautiously say is that among possible explanations of what we report, better price discovery ability of women is consistent with the findings. This would require that the pre-announcement price of the target company is closer to the true value of the company under its new ownership than the price actually paid. Based on the gender impacts reported here, a female bidder CEO and two independent female members of the target board would, for example, be enough to keep the price paid close to the pre-announcement price. If this were a reasonable reflection of the company value under its new ownership, we could argue that women are better able to assess value.

As mentioned in the introduction, the results we find for the negative impacts of a female bidder CEO and target proportion of independent female directors on the bid premium and target CARs are also consistent with an agency argument. If male CEOs and directors have more to gain from completing a merger or acquisition, and if the main hurdle is persuading enough target

company shareholders to approve, males will, *ceteris paribus*, offer a higher price for the target shares. That is, women will pay less for the same company, both as bidder CEOs and members of target company boards.

Finally, another possibility we might cautiously mention, one with a distinct behavioral finance flavor, is overconfidence that has been found to exist among men (for example, see studies by Melvin Prince (1993), and Mary Lundeberg, Paul Fox, and Judith Puncochar (1994)). This would lead men, whether on bidder or target boards, as CEOs or as board members, to pay more than women for the same target. This and other possibilities cannot be disentangled in the current paper. We do believe, however, that we have provided evidence that strongly supports further research in this area.

## References

- Adams, Renée B., and Daniel Ferreira. 2007. "Gender Diversity in the Boardroom." European Corporate Governance Institute Working Paper No. 57/2004.  
[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=594506](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=594506).
- Bange, Mary M., and Michael A. Mazzeo. 2004. "Board Composition, Board Effectiveness, and the Observed Form of Takeover Bids." *Review of Financial Studies* 17(4): 1185-1215.
- Bertrand, Marianne, and Kevin F. Hallock. 2001. "The Gender Gap in Top Corporate Jobs." *Industrial and Labor Relations Review* 53(1): 3-21.
- Betton, Sandra, B. Espen Eckbo, and Karin S. Thorburn. Forthcoming. "Merger Negotiation and the Toehold Puzzle." *Journal of Financial Economics*.
- Byrd, John W., and Kent A. Hickman. 1992. "Do Outside Directors Monitor Managers?" *Journal of Financial Economics* 32(2): 195-221.
- Carter, David A., Betty J. Simkins, and W. Gary Simpson. 2003. "Corporate Governance, Board Diversity, and Firm Value." *The Financial Review* 38 (1): 33-53.
- Catalyst. 2007. "The Bottom Line: Corporate Performance and Women Representation on Boards." <http://www.catalyst.org/knowledge/bottomline2.shtml>.
- Chen, Xia, Jarrad Harford, and Kai Li. 2007. "Monitoring: Which Institutions Matter?" *Journal of Financial Economics* 86(2): 279-305.
- Cotter, James F., Anil Shivdasani, and Marc Zenner. 1997. "Do Independent Directors Enhance Target Shareholder Wealth during Tender Offers?" *Journal of Financial Economics* 43(2): 195-218.
- Erhardt, Niclas L., James D. Werbel, and Charles B. Shrader. 2003. "Board of Director Diversity and Firm Financial Performance." *Corporate Governance* 11(2): 102-111.
- Fama, Eugene, and Kenneth French. 1997. "Industry Costs of Equity." *Journal of Financial Economics* 43(2): 153-193.
- Farrell, Kathleen A., and Phillip L. Hersch. 2005. "Additions to Corporate Boards: The Effect of Gender." *Journal of Corporate Finance* 11(1-2): 85-106.
- Gertner, Robert, and Steven N. Kaplan. 1996. "The Value-Maximizing Board." <http://faculty.chicagogsb.edu/steven.kaplan/research/gerkap.pdf>.
- Hermalin, Benjamin E., and Michael S. Weisbach. 1998. "Endogenously Chosen Boards of Directors and Their Monitoring of the CEO." *American Economic Review* 88(1): 96-118.

- Jensen, Michael C., and Richard S. Ruback. 1983. "The Market for Corporate Control: The Scientific Evidence." *Journal of Financial Economics* 11(1-4): 5-50.
- Lee, Peggy M., and Erika Hayes James. 2007. "She'-E-Os: Gender Effects and Investor Reactions to the Announcements of Top Executive Appointments." *Strategic Management Journal* 28(3): 227-241.
- Lundeberg, Mary A., Paul W. Fox, and Judith Puncochar. 1994. "Highly Confident But Wrong: Gender Differences and Similarities in Confidence Judgments." *Journal of Educational Psychology* 86(1): 114-121.
- Mohan, Nancy J., and Carl R. Chen. 2004. "Are IPOs Priced Differently Based Upon Gender?" *Journal of Behavioral Finance* 5(1): 57-65.
- Peng, Winnie Qian, and K.C. John Wei. 2007. "Women Executives and Corporate Investment: Evidence from the S&P 1500."  
[http://www.fma.org/Orlando/Papers/Women\\_Executives\\_Investment\\_2007FMA.pdf](http://www.fma.org/Orlando/Papers/Women_Executives_Investment_2007FMA.pdf).
- Prince, Melvin. 1993. "Women, Men, and Money Styles." *Journal of Economic Psychology* 14(1): 175-182.
- Schwert, G. William. 2000. "Hostility in Takeovers: In the Eyes of the Beholder?" *Journal of Finance* 55(6): 2599-2640.
- Shivdasani, Anil. 1993. "Board Composition, Ownership Structure, and Hostile Takeovers." *Journal of Accounting and Economics* 16(1-3): 167-198.
- Welbourne, Theresa M., Cynthia S. Cychota, and Claudia J. Ferrante. 2007. "Wall Street Reaction to Women in IPOs: An Examination of Gender Diversity in Top Management Teams." *Group & Organization Management* 32(5): 524-547.
- Wolfers, Justin. 2006. "Diagnosing Discrimination: Stock Returns and CEO Gender." *Journal of the European Economic Association* 4(2-3): 531-541.
- Zelechowski, Deborah Dahlen, and Diana Bilimoria. 2004. "Characteristics of Women and Men Corporate Inside Directors in the US." *Corporate Governance* 12(3): 337-342.

**Table 1**  
**Summary Statistics on Merger and Acquisition Bids, Bidders, and Targets, 1997-2006**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. *CAR3* is the cumulative abnormal announcement period return over (-1, +1). *CAR7* is the cumulative abnormal announcement period return over (-3, +3). Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days (-200, -60) prior to the acquisition announcement date. *Tender Offer* is set to one if the bidder uses a tender offer, and zero otherwise. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement.

| Variable                                   | N   | Mean   | StdDev  | 5 <sup>th</sup><br>Percentile | Median | 95 <sup>th</sup><br>Percentile |
|--|-----|--------|---------|-------------------------------|--------|--------------------------------|
| Bid Premium                                | 403 | 0.328  | 0.265   | -0.020                        | 0.292  | 0.786                          |
| Target CAR3                                | 403 | 0.182  | 0.194   | -0.045                        | 0.151  | 0.520                          |
| Target CAR7                                | 403 | 0.192  | 0.197   | -0.058                        | 0.167  | 0.544                          |
| Bidder CAR3                                | 403 | -0.029 | 0.070   | -0.144                        | -0.028 | 0.071                          |
| Bidder CAR7                                | 403 | -0.031 | 0.079   | -0.166                        | -0.025 | 0.095                          |
| Tender Offer                               | 403 | 0.149  | 0.356   | 0.000                         | 0.000  | 1.000                          |
| Bidder CEO is Female                       | 403 | 0.010  | 0.099   | 0.000                         | 0.000  | 0.000                          |
| Target CEO is Female                       | 403 | 0.015  | 0.121   | 0.000                         | 0.000  | 0.000                          |
| Bidder Proportion of Female Directors      | 403 | 0.111  | 0.079   | 0.000                         | 0.100  | 0.250                          |
| Bidder Prop. of Independent Female Dir.    | 403 | 0.101  | 0.078   | 0.000                         | 0.100  | 0.250                          |
| Bidder Prop. of Inside Female Dir.         | 403 | 0.010  | 0.028   | 0.000                         | 0.000  | 0.083                          |
| Target Proportion of Female Directors      | 403 | 0.085  | 0.082   | 0.000                         | 0.091  | 0.222                          |
| Target Prop. of Independent Female Dir.    | 403 | 0.078  | 0.081   | 0.000                         | 0.083  | 0.222                          |
| Target Prop. of Inside Female Dir.         | 403 | 0.007  | 0.028   | 0.000                         | 0.000  | 0.083                          |
| Bidder Board Size                          | 403 | 11.481 | 3.730   | 7.000                         | 11.000 | 18.000                         |
| Target Board Size                          | 403 | 9.697  | 3.102   | 5.000                         | 9.000  | 15.000                         |
| Bidder Proportion of Independent Directors | 403 | 0.690  | 0.173   | 0.333                         | 0.727  | 0.909                          |
| Target Proportion of Independent Directors | 403 | 0.675  | 0.172   | 0.364                         | 0.700  | 0.900                          |
| Bidder CEO is COB                          | 403 | 0.801  | 0.412   | 0.000                         | 1.000  | 1.000                          |
| Target CEO is COB                          | 403 | 0.705  | 0.483   | 0.000                         | 1.000  | 1.000                          |
| All Cash                                   | 403 | 0.169  | 0.375   | 0.000                         | 0.000  | 1.000                          |
| All Stock                                  | 403 | 0.360  | 0.481   | 0.000                         | 0.000  | 1.000                          |
| Diversifying                               | 403 | 0.325  | 0.469   | 0.000                         | 0.000  | 1.000                          |
| Relative Size                              | 403 | 0.600  | 0.724   | 0.018                         | 0.366  | 1.848                          |
| Bidder Tobin's Q                           | 403 | 2.171  | 2.230   | 1.015                         | 1.505  | 5.346                          |
| Bidder Book Leverage                       | 403 | 0.399  | 0.195   | 0.071                         | 0.424  | 0.708                          |
| Bidder Operating Cash Flow                 | 403 | 0.308  | 0.691   | -0.776                        | 0.451  | 0.957                          |
| Bidder Total Assets (\$Billion)            | 403 | 48.133 | 130.017 | 0.718                         | 10.870 | 221.653                        |

**Table 2**  
**The Correlation Matrix**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. *CAR3* is the cumulative abnormal announcement period return over (-1, +1). *CAR7* is the cumulative abnormal announcement period return over (-3, +3). Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days (-200, -60) prior to the acquisition announcement date. *Tender Offer* is set to one if the bidder uses a tender offer, and zero otherwise. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. The corresponding p-value is reported in the brackets below each correlation coefficient.

|   | 1      | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     | 21     | 22     | 23     | 24     | 25     | 26     | 27    | 28    |  |  |
|---|--------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--|--|
| 1 Bid Premium                                 | 1.000  |         |         |         |         |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 2 Target CAR3                                 | 0.651  | 1.000   |         |         |         |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 3 Target CAR7                                 | 0.679  | 0.955   | 1.000   |         |         |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 4 Bidder CAR3                                 | -0.124 | 0.021   | 0.015   | 1.000   |         |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 5 Bidder CAR7                                 | -0.035 | 0.041   | 0.093   | 0.843   | 1.000   |         |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 6 Tender Offer                                | 0.281  | 0.280   | 0.260   | 0.049   | 0.082   | 1.000   |         |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 7 Bidder CEO is Female                        | -0.085 | -0.088  | -0.080  | -0.021  | -0.004  | 0.028   | 1.000   |         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 8 Target CEO is Female                        | -0.022 | -0.033  | -0.016  | 0.016   | 0.016   | 0.064   | 0.194   | 1.000   |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 9 Bidder Proportion of Female Directors       | -0.087 | -0.069  | -0.011  | 0.074   | 0.036   | -0.024  | -0.007  | -0.051  | 1.000  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 10 Bidder Prop. of Independent Female Dir.    | -0.083 | [0.857] | [0.825] | [0.139] | [0.470] | [0.632] | [0.882] | [0.312] |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 11 Bidder Prop. of Inside Female Dir.         | 0.065  | 0.055   | 0.056   | -0.015  | -0.010  | 0.111   | -0.035  | -0.043  | 0.191  | -0.165 | 1.000  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 12 Target Proportion of Female Directors      | -0.174 | -0.156  | -0.156  | -0.107  | -0.092  | -0.134  | 0.016   | 0.131   | 0.164  | 0.144  | 0.059  | 1.000  |        |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 13 Target Prop. of Independent Female Dir.    | -0.166 | -0.143  | -0.152  | -0.135  | -0.121  | -0.146  | 0.026   | 0.144   | 0.167  | 0.146  | 0.061  | 0.939  | 1.000  |        |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 14 Target Prop. of Inside Female Dir.         | -0.029 | -0.043  | -0.017  | 0.075   | 0.079   | 0.031   | -0.026  | -0.032  | -0.003 | -0.002 | -0.004 | 0.209  | -0.140 | 1.000  |        |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 15 Bidder Board Size                          | -0.057 | -0.082  | -0.077  | 0.056   | 0.052   | -0.045  | -0.047  | -0.027  | 0.166  | 0.121  | 0.126  | 0.215  | 0.203  | 0.040  | 1.000  |        |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 16 Target Board Size                          | -0.127 | -0.128  | -0.125  | -0.005  | -0.006  | -0.103  | -0.071  | -0.034  | 0.022  | 0.016  | 0.018  | 0.267  | 0.249  | 0.060  | 0.416  | 1.000  |        |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 17 Bidder Proportion of Independent Directors | -0.115 | -0.073  | -0.063  | -0.059  | -0.001  | -0.070  | -0.053  | -0.006  | 0.253  | 0.360  | -0.295 | 0.013  | 0.019  | -0.015 | -0.011 | 0.034  | 1.000  |        |        |        |        |        |        |        |        |        |       |       |  |  |
| 18 Target Proportion of Independent Directors | -0.027 | 0.007   | -0.012  | 0.014   | -0.007  | -0.112  | -0.032  | 0.008   | 0.107  | 0.119  | -0.031 | 0.233  | 0.329  | -0.266 | 0.035  | 0.128  | 0.082  | 1.000  |        |        |        |        |        |        |        |        |       |       |  |  |
| 19 Bidder CEO is COB                          | -0.003 | 0.006   | 0.026   | 0.117   | 0.088   | -0.035  | 0.048   | -0.090  | 0.142  | 0.158  | -0.043 | 0.012  | -0.007 | 0.056  | -0.001 | 0.044  | 0.158  | 0.039  | 1.000  |        |        |        |        |        |        |        |       |       |  |  |
| 20 Target CEO is COB                          | -0.010 | -0.031  | -0.036  | -0.070  | -0.030  | -0.019  | -0.043  | 0.033   | 0.031  | 0.037  | -0.017 | 0.204  | 0.184  | 0.066  | 0.140  | 0.088  | -0.044 | 0.114  | 0.005  | 1.000  |        |        |        |        |        |        |       |       |  |  |
| 21 All Cash                                   | 0.101  | 0.138   | 0.138   | 0.112   | 0.075   | 0.258   | -0.045  | -0.001  | 0.103  | 0.078  | 0.070  | -0.232 | -0.209 | -0.075 | -0.096 | -0.238 | 0.036  | -0.025 | -0.056 | -0.109 | 1.000  |        |        |        |        |        |       |       |  |  |
| 22 All Stock                                  | -0.157 | -0.165  | -0.173  | -0.045  | -0.078  | -0.285  | -0.075  | -0.050  | -0.121 | -0.118 | -0.009 | 0.003  | 0.008  | -0.015 | 0.147  | 0.095  | -0.085 | -0.034 | -0.053 | 0.127  | -0.338 | 1.000  |        |        |        |        |       |       |  |  |
| 23 Diversifying                               | 0.034  | 0.039   | 0.011   | 0.049   | 0.058   | 0.082   | -0.016  | 0.046   | -0.021 | 0.005  | -0.075 | -0.049 | -0.100 | 0.145  | -0.040 | -0.105 | 0.016  | -0.043 | 0.000  | -0.004 | 0.069  | -0.057 | 1.000  |        |        |        |       |       |  |  |
| 24 Relative Size                              | -0.125 | -0.169  | -0.190  | -0.071  | -0.082  | -0.127  | -0.035  | 0.006   | -0.065 | -0.062 | -0.010 | 0.249  | 0.256  | -0.013 | -0.123 | 0.168  | -0.089 | 0.135  | -0.057 | 0.109  | -0.222 | -0.020 | -0.032 | 1.000  |        |        |       |       |  |  |
| 25 Bidder Tobin's Q                           | 0.118  | 0.128   | 0.083   | -0.107  | -0.151  | 0.003   | -0.025  | -0.037  | -0.070 | -0.078 | 0.023  | -0.059 | -0.051 | -0.023 | -0.166 | -0.144 | -0.103 | -0.089 | -0.074 | -0.009 | 0.046  | 0.151  | 0.073  | -0.149 | 1.000  |        |       |       |  |  |
| 26 Bidder Book Leverage                       | -0.033 | -0.041  | -0.028  | 0.052   | 0.034   | 0.088   | 0.109   | 0.045   | 0.080  | 0.118  | -0.105 | 0.002  | -0.011 | 0.035  | -0.278 | -0.214 | 0.039  | -0.044 | 0.030  | -0.024 | 0.083  | -0.251 | 0.080  | 0.221  | -0.011 | 1.000  |       |       |  |  |
| 27 Bidder Operating Cash Flow                 | 0.032  | -0.029  | -0.023  | 0.010   | 0.014   | -0.030  | 0.007   | -0.006  | -0.108 | -0.149 | 0.112  | 0.039  | 0.049  | -0.027 | 0.200  | 0.205  | -0.103 | 0.026  | -0.022 | -0.020 | -0.069 | 0.147  | -0.207 | -0.100 | -0.041 | -0.481 | 1.000 |       |  |  |
| 28 Log(Bidder Total Assets)                   | -0.059 | -0.072  | -0.088  | 0.019   | 0.036   | -0.054  | -0.027  | -0.040  | 0.241  | 0.195  | 0.130  | 0.187  | 0.172  | 0.050  | 0.613  | 0.418  | 0.119  | -0.014 | 0.079  | 0.142  | 0.084  | 0.042  | -0.027 | -0.240 | -0.150 | -0.392 | 0.334 | 1.000 |  |  |



### **Table 3**

#### **Explaining Bid Premium**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. All model specifications employ robust standard errors. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively. In Panel A we use the total fraction of female directors to measure gender diversity of the board. In Panel B we break down the fraction of female directors into fractions of independent female directors and inside female directors.

**Panel A: Determinants of Bid Premium: Total Fraction of Female Directors**

| Dependent Variable                         | Bid Premium |           |           |
|--|-------------|-----------|-----------|
|  | (1)         | (2)       | (3)       |
| Bidder CEO is Female                       |             | -0.285*** | -0.237*** |
|  |             | [0.000]   | [0.001]   |
| Target CEO is Female                       |             | 0.013     | 0.062     |
|  |             | [0.890]   | [0.458]   |
| Bidder Proportion of Female Directors      |             | -0.179    | -0.095    |
|  |             | [0.282]   | [0.567]   |
| Target Proportion of Female Directors      |             | -0.458*** | -0.459*** |
|  |             | [0.008]   | [0.005]   |
| Bidder Board Size                          | 0.002       | 0.003     | -0.004    |
|  | [0.667]     | [0.448]   | [0.301]   |
| Target Board Size                          | -0.006      | -0.006    | -0.009*   |
|  | [0.197]     | [0.178]   | [0.050]   |
| Bidder Proportion of Independent Directors | -0.172*     | -0.168*   | -0.081    |
|  | [0.052]     | [0.065]   | [0.343]   |
| Target Proportion of Independent Directors | -0.003      | 0.044     | 0.121     |
|  | [0.970]     | [0.592]   | [0.140]   |
| Bidder CEO is COB                          | 0.012       | 0.017     | -0.004    |
|  | [0.675]     | [0.552]   | [0.892]   |
| Target CEO is COB                          | 0.021       | 0.027     | 0.014     |
|  | [0.483]     | [0.367]   | [0.638]   |
| All Cash                                   | 0.004       | -0.020    | -0.002    |
|  | [0.916]     | [0.654]   | [0.955]   |
| All Stock                                  | -0.112***   | -0.125*** | -0.126*** |
|  | [0.000]     | [0.000]   | [0.000]   |
| Diversifying                               | 0.012       | 0.007     | 0.005     |
|  | [0.689]     | [0.812]   | [0.852]   |
| Relative Size                              | -0.040**    | -0.031    | -0.041**  |
|  | [0.045]     | [0.115]   | [0.031]   |
| Bidder Tobin's Q                           | 0.012**     | 0.013**   | 0.009     |
|  | [0.043]     | [0.023]   | [0.136]   |
| Bidder Book Leverage                       | -0.100      | -0.057    | -0.054    |
|  | [0.252]     | [0.519]   | [0.541]   |
| Bidder Operating Cash Flow                 | 0.020       | 0.020     | 0.022     |
|  | [0.329]     | [0.349]   | [0.271]   |
| Log(Bidder Total Assets)                   | -0.013      | -0.006    | 0.002     |
|  | [0.274]     | [0.598]   | [0.856]   |
| Constant                                   | 0.655***    | 0.582***  | 0.623***  |
|  | [0.000]     | [0.000]   | [0.000]   |
| Year Fixed Effects                         | No          | No        | Yes       |
| Number of Observations                     | 403         | 403       | 403       |
| Adjusted R-squared                         | 0.056       | 0.078     | 0.157     |

**Panel B: Determinants of Bid Premium: Fractions of Independent and Inside Female Directors**

| Dependent Variable                         | Bid Premium |           |           |
|--|-------------|-----------|-----------|
|  | (1)         | (2)       | (3)       |
| Bidder CEO is Female                       |             | -0.279*** | -0.229*** |
|  |             | [0.000]   | [0.002]   |
| Target CEO is Female                       |             | 0.015     | 0.067     |
|  |             | [0.873]   | [0.431]   |
| Bidder Prop. of Independent Female Dir.    |             | -0.221    | -0.147    |
|  |             | [0.197]   | [0.393]   |
| Bidder Prop. of Inside Female Dir.         |             | 0.234     | 0.421     |
|  |             | [0.622]   | [0.334]   |
| Target Prop. of Independent Female Dir.    |             | -0.465*** | -0.482*** |
|  |             | [0.008]   | [0.004]   |
| Target Prop. of Inside Female Dir.         |             | -0.449    | -0.328    |
|  |             | [0.300]   | [0.440]   |
| Bidder Board Size                          | 0.002       | 0.003     | -0.004    |
|  | [0.667]     | [0.465]   | [0.271]   |
| Target Board Size                          | -0.006      | -0.006    | -0.009*   |
|  | [0.197]     | [0.185]   | [0.050]   |
| Bidder Proportion of Independent Directors | -0.172*     | -0.142    | -0.047    |
|  | [0.052]     | [0.131]   | [0.603]   |
| Target Proportion of Independent Directors | -0.003      | 0.048     | 0.135     |
|  | [0.970]     | [0.585]   | [0.123]   |
| Bidder CEO is COB                          | 0.012       | 0.018     | -0.004    |
|  | [0.675]     | [0.542]   | [0.887]   |
| Target CEO is COB                          | 0.021       | 0.029     | 0.015     |
|  | [0.483]     | [0.343]   | [0.612]   |
| All Cash                                   | 0.004       | -0.022    | -0.005    |
|  | [0.916]     | [0.624]   | [0.906]   |
| All Stock                                  | -0.112***   | -0.124*** | -0.125*** |
|  | [0.000]     | [0.000]   | [0.000]   |
| Diversifying                               | 0.012       | 0.008     | 0.005     |
|  | [0.689]     | [0.782]   | [0.844]   |
| Relative Size                              | -0.040**    | -0.032    | -0.042**  |
|  | [0.045]     | [0.115]   | [0.034]   |
| Bidder Tobin's Q                           | 0.012**     | 0.013**   | 0.009     |
|  | [0.043]     | [0.024]   | [0.133]   |
| Bidder Book Leverage                       | -0.100      | -0.052    | -0.049    |
|  | [0.252]     | [0.556]   | [0.577]   |
| Bidder Operating Cash Flow                 | 0.020       | 0.019     | 0.021     |
|  | [0.329]     | [0.372]   | [0.296]   |
| Log(Bidder Total Assets)                   | -0.013      | -0.007    | 0.002     |
|  | [0.274]     | [0.564]   | [0.877]   |
| Constant                                   | 0.655***    | 0.564***  | 0.595***  |
|  | [0.000]     | [0.000]   | [0.000]   |
| Year Fixed Effects                         | No          | No        | Yes       |
| Number of Observations                     | 403         | 403       | 403       |
| Adjusted R-squared                         | 0.056       | 0.075     | 0.155     |

**Table 4**  
**Explaining Target Cumulative Abnormal Announcement Period Return**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *CAR3* is the cumulative abnormal announcement period return over  $(-1, +1)$ . Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days  $(-200, -60)$  prior to the acquisition announcement date. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. All model specifications employ robust standard errors. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively. In Panel A we use the total fraction of female directors to measure gender diversity of the board. In Panel B we break down the fraction of female directors into fractions of independent female directors and inside female directors.

**Panel A: Determinants of Target CAR3: Total Fraction of Female Directors**

| Dependent Variable                         | Target CAR3          |                      |                      |                     |
|--|----------------------|----------------------|----------------------|---------------------|
|  | (1)                  | (2)                  | (3)                  | (4)                 |
| Bidder CEO is Female                       |                      | -0.196***<br>[0.002] | -0.182***<br>[0.006] | -0.074<br>[0.188]   |
| Target CEO is Female                       |                      | -0.009<br>[0.900]    | 0.012<br>[0.872]     | -0.017<br>[0.847]   |
| Bidder Proportion of Female Directors      |                      | 0.047<br>[0.736]     | 0.107<br>[0.469]     | 0.150<br>[0.207]    |
| Target Proportion of Female Directors      |                      | -0.246*<br>[0.053]   | -0.257**<br>[0.038]  | -0.049<br>[0.617]   |
| Bidder Board Size                          | -0.001<br>[0.858]    | 0.000<br>[0.951]     | -0.003<br>[0.370]    | -0.001<br>[0.737]   |
| Target Board Size                          | -0.002<br>[0.505]    | -0.002<br>[0.538]    | -0.002<br>[0.558]    | 0.002<br>[0.466]    |
| Bidder Proportion of Independent Directors | -0.097<br>[0.133]    | -0.108<br>[0.104]    | -0.091<br>[0.159]    | -0.054<br>[0.255]   |
| Target Proportion of Independent Directors | 0.040<br>[0.505]     | 0.058<br>[0.336]     | 0.075<br>[0.230]     | 0.020<br>[0.661]    |
| Bidder CEO is COB                          | 0.010<br>[0.642]     | 0.010<br>[0.630]     | 0.002<br>[0.923]     | 0.004<br>[0.824]    |
| Target CEO is COB                          | 0.009<br>[0.694]     | 0.012<br>[0.589]     | 0.012<br>[0.577]     | 0.006<br>[0.721]    |
| All Cash                                   | 0.020<br>[0.503]     | 0.004<br>[0.911]     | 0.011<br>[0.713]     | 0.012<br>[0.601]    |
| All Stock                                  | -0.078***<br>[0.000] | -0.084***<br>[0.000] | -0.082***<br>[0.000] | -0.024<br>[0.130]   |
| Diversifying                               | 0.005<br>[0.830]     | 0.004<br>[0.867]     | 0.005<br>[0.829]     | 0.002<br>[0.888]    |
| Relative Size                              | -0.042***<br>[0.001] | -0.038***<br>[0.004] | -0.044***<br>[0.002] | -0.026**<br>[0.011] |
| Bidder Tobin's Q                           | 0.009**<br>[0.017]   | 0.009**<br>[0.013]   | 0.006<br>[0.105]     | 0.002<br>[0.716]    |
| Bidder Book Leverage                       | -0.114**<br>[0.033]  | -0.094*<br>[0.092]   | -0.091<br>[0.112]    | -0.066<br>[0.150]   |
| Bidder Operating Cash Flow                 | -0.009<br>[0.584]    | -0.006<br>[0.703]    | -0.007<br>[0.657]    | -0.017<br>[0.121]   |
| Log(Bidder Total Assets)                   | -0.011<br>[0.237]    | -0.009<br>[0.354]    | -0.009<br>[0.369]    | -0.010<br>[0.179]   |
| Bid Premium                                |                      |                      |                      | 0.453***<br>[0.000] |
| Constant                                   | 0.412***<br>[0.000]  | 0.393***<br>[0.000]  | 0.426***<br>[0.000]  | 0.144**<br>[0.049]  |
| Year Fixed Effects                         | No                   | No                   | Yes                  | Yes                 |
| Number of Observations                     | 403                  | 403                  | 403                  | 403                 |
| Adjusted R-squared                         | 0.069                | 0.079                | 0.105                | 0.428               |

**Panel B: Determinants of Target CAR3: Fractions of Independent and Inside Female Directors**

| Dependent Variable                         | Target CAR3 |           |           |           |
|--|-------------|-----------|-----------|-----------|
|  | (1)         | (2)       | (3)       | (4)       |
| Bidder CEO is Female                       |             | -0.194*** | -0.179*** | -0.075    |
|  |             | [0.002]   | [0.007]   | [0.187]   |
| Target CEO is Female                       |             | -0.009    | 0.012     | -0.018    |
|  |             | [0.897]   | [0.867]   | [0.832]   |
| Bidder Prop. of Independent Female Dir.    |             | 0.025     | 0.082     | 0.149     |
|  |             | [0.858]   | [0.579]   | [0.213]   |
| Bidder Prop. of Inside Female Dir.         |             | 0.249     | 0.345     | 0.154     |
|  |             | [0.508]   | [0.353]   | [0.607]   |
| Target Prop. of Independent Female Dir.    |             | -0.240*   | -0.256**  | -0.038    |
|  |             | [0.057]   | [0.039]   | [0.704]   |
| Target Prop. of Inside Female Dir.         |             | -0.320    | -0.290    | -0.142    |
|  |             | [0.354]   | [0.368]   | [0.527]   |
| Bidder Board Size                          | -0.001      | 0.000     | -0.003    | -0.001    |
|  | [0.858]     | [0.930]   | [0.351]   | [0.733]   |
| Target Board Size                          | -0.002      | -0.002    | -0.002    | 0.002     |
|  | [0.505]     | [0.555]   | [0.571]   | [0.446]   |
| Bidder Proportion of Independent Directors | -0.097      | -0.095    | -0.075    | -0.054    |
|  | [0.133]     | [0.168]   | [0.267]   | [0.298]   |
| Target Proportion of Independent Directors | 0.040       | 0.055     | 0.075     | 0.014     |
|  | [0.505]     | [0.392]   | [0.257]   | [0.774]   |
| Bidder CEO is COB                          | 0.010       | 0.010     | 0.002     | 0.004     |
|  | [0.642]     | [0.613]   | [0.913]   | [0.809]   |
| Target CEO is COB                          | 0.009       | 0.013     | 0.013     | 0.006     |
|  | [0.694]     | [0.559]   | [0.551]   | [0.705]   |
| All Cash                                   | 0.020       | 0.002     | 0.010     | 0.012     |
|  | [0.503]     | [0.942]   | [0.751]   | [0.611]   |
| All Stock                                  | -0.078***   | -0.084*** | -0.081*** | -0.025    |
|  | [0.000]     | [0.000]   | [0.000]   | [0.130]   |
| Diversifying                               | 0.005       | 0.005     | 0.006     | 0.003     |
|  | [0.830]     | [0.815]   | [0.786]   | [0.841]   |
| Relative Size                              | -0.042***   | -0.039*** | -0.045*** | -0.026*** |
|  | [0.001]     | [0.004]   | [0.001]   | [0.010]   |
| Bidder Tobin's Q                           | 0.009**     | 0.009**   | 0.006     | 0.002     |
|  | [0.017]     | [0.015]   | [0.110]   | [0.729]   |
| Bidder Book Leverage                       | -0.114**    | -0.091    | -0.088    | -0.066    |
|  | [0.033]     | [0.102]   | [0.123]   | [0.155]   |
| Bidder Operating Cash Flow                 | -0.009      | -0.006    | -0.007    | -0.017    |
|  | [0.584]     | [0.687]   | [0.638]   | [0.123]   |
| Log(Bidder Total Assets)                   | -0.011      | -0.009    | -0.009    | -0.010    |
|  | [0.237]     | [0.330]   | [0.349]   | [0.172]   |
| Bid Premium                                |             |           |           | 0.453***  |
|  |             |           |           | [0.000]   |
| Constant                                   | 0.412***    | 0.388***  | 0.418***  | 0.148**   |
|  | [0.000]     | [0.000]   | [0.000]   | [0.047]   |
| Year Fixed Effects                         | No          | No        | Yes       | Yes       |
| Number of Observations                     | 403         | 403       | 403       | 403       |
| Adjusted R-squared                         | 0.069       | 0.075     | 0.101     | 0.425     |

**Table 5**  
**Explaining Bidder Cumulative Abnormal Announcement Period Return**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *CAR3* is the cumulative abnormal announcement period return over (-1, +1). Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days (-200, -60) prior to the acquisition announcement date. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. All model specifications employ robust standard errors. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively. In Panel A we use the total fraction of female directors to measure gender diversity of the board. In Panel B we break down the fraction of female directors into fractions of independent female directors and inside female directors.

**Panel A: Determinants of Bidder CAR3: Total Fraction of Female Directors**

| Dependent Variable                         | Bidder CAR3         |                     |                    |                     |
|--|---------------------|---------------------|--------------------|---------------------|
|  | (1)                 | (2)                 | (3)                | (4)                 |
| Bidder CEO is Female                       |                     | -0.032<br>[0.499]   | -0.033<br>[0.525]  | -0.044<br>[0.403]   |
| Target CEO is Female                       |                     | 0.028<br>[0.290]    | 0.030<br>[0.295]   | 0.033<br>[0.210]    |
| Bidder Proportion of Female Directors      |                     | 0.072<br>[0.143]    | 0.066<br>[0.197]   | 0.061<br>[0.222]    |
| Target Proportion of Female Directors      |                     | -0.098*<br>[0.052]  | -0.094*<br>[0.058] | -0.115**<br>[0.025] |
| Bidder Board Size                          | 0.001<br>[0.207]    | 0.001<br>[0.182]    | 0.001<br>[0.338]   | 0.001<br>[0.413]    |
| Target Board Size                          | 0.000<br>[0.766]    | 0.001<br>[0.590]    | 0.000<br>[0.732]   | 0.000<br>[0.969]    |
| Bidder Proportion of Independent Directors | -0.041*<br>[0.055]  | -0.048**<br>[0.027] | -0.041*<br>[0.063] | -0.045**<br>[0.046] |
| Target Proportion of Independent Directors | 0.012<br>[0.548]    | 0.016<br>[0.442]    | 0.020<br>[0.376]   | 0.025<br>[0.271]    |
| Bidder CEO is COB                          | 0.022**<br>[0.017]  | 0.021**<br>[0.022]  | 0.021**<br>[0.021] | 0.021**<br>[0.021]  |
| Target CEO is COB                          | -0.010<br>[0.238]   | -0.008<br>[0.327]   | -0.012<br>[0.180]  | -0.011<br>[0.194]   |
| All Cash                                   | 0.022**<br>[0.021]  | 0.017*<br>[0.075]   | 0.017*<br>[0.090]  | 0.017*<br>[0.094]   |
| All Stock                                  | 0.004<br>[0.657]    | 0.003<br>[0.733]    | 0.003<br>[0.735]   | -0.003<br>[0.752]   |
| Diversifying                               | 0.008<br>[0.280]    | 0.008<br>[0.286]    | 0.007<br>[0.329]   | 0.008<br>[0.311]    |
| Relative Size                              | -0.007<br>[0.233]   | -0.006<br>[0.396]   | -0.003<br>[0.583]  | -0.005<br>[0.411]   |
| Bidder Tobin's Q                           | -0.004**<br>[0.016] | -0.004**<br>[0.025] | -0.003*<br>[0.098] | -0.002<br>[0.129]   |
| Bidder Book Leverage                       | 0.032<br>[0.148]    | 0.034<br>[0.141]    | 0.031<br>[0.181]   | 0.028<br>[0.214]    |
| Bidder Operating Cash Flow                 | 0.004<br>[0.454]    | 0.005<br>[0.353]    | 0.005<br>[0.407]   | 0.006<br>[0.330]    |
| Log(Bidder Total Assets)                   | -0.002<br>[0.621]   | -0.002<br>[0.635]   | 0.000<br>[0.985]   | 0.000<br>[0.962]    |
| Bid Premium                                |                     |                     |                    | -0.045**<br>[0.012] |
| Constant                                   | -0.034<br>[0.362]   | -0.038<br>[0.353]   | -0.032<br>[0.453]  | -0.004<br>[0.925]   |
| Year Fixed Effects                         | No                  | No                  | Yes                | Yes                 |
| Number of Observations                     | 403                 | 403                 | 403                | 403                 |
| Adjusted R-squared                         | 0.033               | 0.040               | 0.045              | 0.068               |



**Panel B: Determinants of Bidder CAR3: Fractions of Independent and Inside Female Directors**

| Dependent Variable                         | Bidder CAR3         |                     |                     |                      |
|--|---------------------|---------------------|---------------------|----------------------|
|  | (1)                 | (2)                 | (3)                 | (4)                  |
| Bidder CEO is Female                       |                     | -0.031<br>[0.514]   | -0.032<br>[0.541]   | -0.042<br>[0.422]    |
| Target CEO is Female                       |                     | 0.032<br>[0.219]    | 0.034<br>[0.228]    | 0.037<br>[0.149]     |
| Bidder Prop. of Independent Female Dir.    |                     | 0.090*<br>[0.070]   | 0.084<br>[0.106]    | 0.077<br>[0.130]     |
| Bidder Prop. of Inside Female Dir.         |                     | -0.075<br>[0.616]   | -0.085<br>[0.556]   | -0.066<br>[0.645]    |
| Target Prop. of Independent Female Dir.    |                     | -0.127**<br>[0.012] | -0.121**<br>[0.017] | -0.143***<br>[0.006] |
| Target Prop. of Inside Female Dir.         |                     | 0.166<br>[0.131]    | 0.153<br>[0.177]    | 0.139<br>[0.236]     |
| Bidder Board Size                          | 0.001<br>[0.207]    | 0.002<br>[0.160]    | 0.001<br>[0.295]    | 0.001<br>[0.369]     |
| Target Board Size                          | 0.000<br>[0.766]    | 0.000<br>[0.719]    | 0.000<br>[0.873]    | 0.000<br>[0.875]     |
| Bidder Proportion of Independent Directors | -0.041*<br>[0.055]  | -0.057**<br>[0.016] | -0.051**<br>[0.032] | -0.053**<br>[0.027]  |
| Target Proportion of Independent Directors | 0.012<br>[0.548]    | 0.032<br>[0.140]    | 0.034<br>[0.132]    | 0.040*<br>[0.087]    |
| Bidder CEO is COB                          | 0.022**<br>[0.017]  | 0.020**<br>[0.027]  | 0.020**<br>[0.026]  | 0.020**<br>[0.025]   |
| Target CEO is COB                          | -0.010<br>[0.238]   | -0.010<br>[0.247]   | -0.013<br>[0.133]   | -0.012<br>[0.145]    |
| All Cash                                   | 0.022**<br>[0.021]  | 0.018*<br>[0.052]   | 0.019*<br>[0.064]   | 0.018*<br>[0.070]    |
| All Stock                                  | 0.004<br>[0.657]    | 0.003<br>[0.702]    | 0.003<br>[0.712]    | -0.002<br>[0.784]    |
| Diversifying                               | 0.008<br>[0.280]    | 0.005<br>[0.518]    | 0.004<br>[0.564]    | 0.005<br>[0.537]     |
| Relative Size                              | -0.007<br>[0.233]   | -0.004<br>[0.515]   | -0.002<br>[0.733]   | -0.004<br>[0.536]    |
| Bidder Tobin's Q                           | -0.004**<br>[0.016] | -0.003**<br>[0.037] | -0.002<br>[0.126]   | -0.002<br>[0.167]    |
| Bidder Book Leverage                       | 0.032<br>[0.148]    | 0.031<br>[0.166]    | 0.028<br>[0.215]    | 0.026<br>[0.250]     |
| Bidder Operating Cash Flow                 | 0.004<br>[0.454]    | 0.005<br>[0.338]    | 0.005<br>[0.389]    | 0.006<br>[0.318]     |
| Log(Bidder Total Assets)                   | -0.002<br>[0.621]   | -0.001<br>[0.743]   | 0.001<br>[0.877]    | 0.001<br>[0.858]     |
| Bid Premium                                |                     |                     |                     | -0.045**<br>[0.013]  |
| Constant                                   | -0.034<br>[0.362]   | -0.043<br>[0.276]   | -0.039<br>[0.359]   | -0.012<br>[0.776]    |
| Year Fixed Effects                         | No                  | No                  | Yes                 | Yes                  |
| Number of Observations                     | 403                 | 403                 | 403                 | 403                  |
| Adjusted R-squared                         | 0.033               | 0.050               | 0.055               | 0.076                |

**Table 6**  
**Determinants of a Tender Offer**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Tender Offer* is set to one if the bidder uses a tender offer, and zero otherwise. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. We estimate probit models and present the marginal effect of each explanatory variable on the likelihood of using a tender offer. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively. In Panel A we use the total fraction of female directors to measure gender diversity of the board. In Panel B we break down the fraction of female directors the female board fraction into fractions of independent female directors and inside female directors.

**Panel A: Determinants of the Use of a Tender Offer: Total Fraction of Female Directors**

| Dependent Variable                         | Tender Offer Dummy   |                      |                      |
|--|----------------------|----------------------|----------------------|
|  | (1)                  | (2)                  | (3)                  |
| Bidder CEO is Female                       |                      | -0.042<br>[0.514]    | -0.014<br>[0.745]    |
| Target CEO is Female                       |                      | 0.131<br>[0.250]     | 0.189<br>[0.104]     |
| Bidder Proportion of Female Directors      |                      | -0.103<br>[0.536]    | 0.027<br>[0.827]     |
| Target Proportion of Female Directors      |                      | -0.219<br>[0.255]    | -0.130<br>[0.322]    |
| Bidder Board Size                          | 0.003<br>[0.581]     | 0.004<br>[0.438]     | -0.001<br>[0.725]    |
| Target Board Size                          | 0.002<br>[0.694]     | 0.003<br>[0.596]     | 0.003<br>[0.377]     |
| Bidder Proportion of Independent Directors | -0.123<br>[0.121]    | -0.114<br>[0.159]    | -0.074<br>[0.181]    |
| Target Proportion of Independent Directors | -0.153**<br>[0.049]  | -0.140*<br>[0.077]   | -0.064<br>[0.236]    |
| Bidder CEO is COB                          | -0.009<br>[0.769]    | -0.004<br>[0.898]    | -0.020<br>[0.389]    |
| Target CEO is COB                          | 0.030<br>[0.296]     | 0.033<br>[0.266]     | 0.026<br>[0.228]     |
| All Cash                                   | 0.084**<br>[0.044]   | 0.078*<br>[0.067]    | 0.102***<br>[0.006]  |
| All Stock                                  | -0.182***<br>[0.000] | -0.182***<br>[0.000] | -0.147***<br>[0.000] |
| Diversifying                               | 0.033<br>[0.272]     | 0.028<br>[0.360]     | 0.039*<br>[0.079]    |
| Relative Size                              | -0.064**<br>[0.019]  | -0.057**<br>[0.030]  | -0.052***<br>[0.006] |
| Bidder Tobin's Q                           | -0.001<br>[0.896]    | 0.000<br>[0.993]     | -0.006<br>[0.380]    |
| Bidder Book Leverage                       | 0.069<br>[0.374]     | 0.072<br>[0.360]     | 0.044<br>[0.467]     |
| Bidder Operating Cash Flow                 | 0.020<br>[0.238]     | 0.018<br>[0.271]     | 0.017<br>[0.166]     |
| Log(Bidder Total Assets)                   | -0.019*<br>[0.091]   | -0.017<br>[0.136]    | -0.017*<br>[0.057]   |
| Year Fixed Effects                         | No                   | No                   | Yes                  |
| Number of Observations                     | 403                  | 403                  | 403                  |
| Pseudo R-squared                           | 0.206                | 0.213                | 0.335                |

**Panel B: Determinants of the Use of a Tender Offer: Fractions of Independent and Inside Female Directors**

| Dependent Variable                         | Tender Offer Dummy   |                      |                      |
|--|----------------------|----------------------|----------------------|
|  | (1)                  | (2)                  | (3)                  |
| Bidder CEO is Female                       |                      | -0.035<br>[0.596]    | -0.008<br>[0.865]    |
| Target CEO is Female                       |                      | 0.154<br>[0.194]     | 0.212*<br>[0.087]    |
| Bidder Prop. of Independent Female Dir.    |                      | -0.198<br>[0.242]    | -0.056<br>[0.651]    |
| Bidder Prop. of Inside Female Dir.         |                      | 0.792*<br>[0.071]    | 0.659**<br>[0.041]   |
| Target Prop. of Independent Female Dir.    |                      | -0.252<br>[0.210]    | -0.149<br>[0.292]    |
| Target Prop. of Inside Female Dir.         |                      | -0.059<br>[0.893]    | 0.033<br>[0.903]     |
| Bidder Board Size                          | 0.003<br>[0.581]     | 0.003<br>[0.570]     | -0.002<br>[0.585]    |
| Target Board Size                          | 0.002<br>[0.694]     | 0.003<br>[0.528]     | 0.004<br>[0.344]     |
| Bidder Proportion of Independent Directors | -0.123<br>[0.121]    | -0.057<br>[0.487]    | -0.033<br>[0.556]    |
| Target Proportion of Independent Directors | -0.153**<br>[0.049]  | -0.119<br>[0.147]    | -0.046<br>[0.426]    |
| Bidder CEO is COB                          | -0.009<br>[0.769]    | -0.002<br>[0.956]    | -0.019<br>[0.417]    |
| Target CEO is COB                          | 0.030<br>[0.296]     | 0.038<br>[0.200]     | 0.030<br>[0.161]     |
| All Cash                                   | 0.084**<br>[0.044]   | 0.069*<br>[0.097]    | 0.091**<br>[0.013]   |
| All Stock                                  | -0.182***<br>[0.000] | -0.176***<br>[0.000] | -0.143***<br>[0.000] |
| Diversifying                               | 0.033<br>[0.272]     | 0.028<br>[0.373]     | 0.037*<br>[0.099]    |
| Relative Size                              | -0.064**<br>[0.019]  | -0.064**<br>[0.026]  | -0.057***<br>[0.008] |
| Bidder Tobin's Q                           | -0.001<br>[0.896]    | -0.001<br>[0.901]    | -0.006<br>[0.374]    |
| Bidder Book Leverage                       | 0.069<br>[0.374]     | 0.084<br>[0.286]     | 0.053<br>[0.378]     |
| Bidder Operating Cash Flow                 | 0.020<br>[0.238]     | 0.015<br>[0.352]     | 0.015<br>[0.233]     |
| Log(Bidder Total Assets)                   | -0.019*<br>[0.091]   | -0.017<br>[0.125]    | -0.016*<br>[0.065]   |
| Year Fixed Effects                         | No                   | No                   | Yes                  |
| Number of Observations                     | 403                  | 403                  | 403                  |
| Pseudo R-squared                           | 0.206                | 0.225                | 0.347                |

**Table 7**  
**Characteristics of Merger and Acquisition Bids, Bidders, and Targets, 1997-2006**

The sample consists of 1,164 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. *CAR3* is the cumulative abnormal announcement period return over (-1, +1). Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days (-200, -60) prior to the acquisition announcement date. *Tender Offer* is set to one if the bidder uses a tender offer, and zero otherwise. *Bidder CEO is Female* is set to one if the bidder CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement.

**Panel A: Summary Statistics on Merger and Acquisition Bids, Bidders, and Targets**

| Variable                                   | N    | Mean   | StdDev | 5 <sup>th</sup><br>Percentile | Median | 95 <sup>th</sup><br>Percentile |
|--|------|--------|--------|-------------------------------|--------|--------------------------------|
| Bid Premium                                | 1164 | 0.413  | 0.488  | -0.02                         | 0.343  | 1.074                          |
| Target CAR3                                | 1164 | 0.224  | 0.246  | -0.050                        | 0.181  | 0.664                          |
| Bidder CAR3                                | 1164 | -0.020 | 0.064  | -0.129                        | -0.009 | 0.070                          |
| Tender Offer                               | 1164 | 0.187  | 0.390  | 0.000                         | 0.000  | 1.000                          |
| Bidder CEO is Female                       | 1164 | 0.009  | 0.097  | 0.000                         | 0.000  | 0.000                          |
| Bidder Proportion of Female Directors      | 1164 | 0.097  | 0.082  | 0.000                         | 0.091  | 0.250                          |
| Bidder Prop. of Independent Female Dir.    | 1164 | 0.088  | 0.080  | 0.000                         | 0.091  | 0.231                          |
| Bidder Prop. of Inside Female Dir.         | 1164 | 0.009  | 0.028  | 0.000                         | 0.000  | 0.083                          |
| Bidder Board Size                          | 1164 | 11.302 | 3.931  | 6.000                         | 11.000 | 19.000                         |
| Bidder Proportion of Independent Directors | 1164 | 0.675  | 0.169  | 0.333                         | 0.700  | 0.900                          |
| Bidder CEO is COB                          | 1164 | 0.756  | 0.455  | 0.000                         | 1.000  | 1.000                          |
| All Cash                                   | 1164 | 0.275  | 0.447  | 0.000                         | 0.000  | 1.000                          |
| All Stock                                  | 1164 | 0.367  | 0.482  | 0.000                         | 0.000  | 1.000                          |
| Diversifying                               | 1164 | 0.345  | 0.475  | 0.000                         | 0.000  | 1.000                          |
| Relative Size                              | 1164 | 0.323  | 0.562  | 0.003                         | 0.112  | 1.296                          |
| Bidder Tobin's Q                           | 1164 | 2.346  | 2.481  | 1.021                         | 1.555  | 6.149                          |
| Bidder Book Leverage                       | 1164 | 0.348  | 0.194  | 0.044                         | 0.361  | 0.660                          |
| Bidder Operating Cash Flow                 | 1164 | 0.360  | 0.659  | -0.743                        | 0.475  | 0.960                          |
| Bidder Total Assets (\$Billion)            | 1164 | 33.901 | 94.663 | 0.480                         | 7.403  | 127.674                        |

## Panel B: The Correlation Matrix

|   | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13      | 14      | 15      | 16      | 17      | 18      | 19    |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 1 Bid Premium                                 | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 2 Target CAR3                                 | 0.501   | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.000] |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 3 Bidder CAR3                                 | 0.026   | 0.092   | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.372] | [0.002] |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 4 Tender Offer                                | 0.126   | 0.224   | 0.066   | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.000] | [0.000] | [0.024] |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 5 Bidder CEO is Female                        | -0.034  | -0.055  | -0.029  | -0.001  | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.252] | [0.059] | [0.327] | [0.963] |         |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 6 Bidder Proportion of Female Directors       | -0.042  | 0.021   | 0.099   | 0.041   | -0.013  | 1.000   |         |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.152] | [0.480] | [0.001] | [0.164] | [0.664] |         |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 7 Bidder Prop. of Independent Female Dir.     | -0.034  | 0.029   | 0.088   | 0.031   | -0.002  | 0.941   | 1.000   |         |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.247] | [0.325] | [0.003] | [0.296] | [0.941] | [0.000] |         |         |         |         |         |         |         |         |         |         |         |         |       |
| 8 Bidder Prop. of Inside Female Dir.          | -0.027  | -0.022  | 0.039   | 0.033   | -0.031  | 0.254   | -0.089  | 1.000   |         |         |         |         |         |         |         |         |         |         |       |
|   | [0.365] | [0.463] | [0.188] | [0.268] | [0.287] | [0.000] | [0.002] |         |         |         |         |         |         |         |         |         |         |         |       |
| 9 Bidder Board Size                           | -0.069  | -0.041  | 0.084   | -0.131  | -0.048  | 0.165   | 0.142   | 0.079   | 1.000   |         |         |         |         |         |         |         |         |         |       |
|   | [0.019] | [0.165] | [0.004] | [0.000] | [0.100] | [0.000] | [0.000] | [0.007] |         |         |         |         |         |         |         |         |         |         |       |
| 10 Bidder Proportion of Independent Directors | -0.027  | 0.014   | 0.032   | -0.041  | -0.030  | 0.276   | 0.372   | -0.249  | 0.116   | 1.000   |         |         |         |         |         |         |         |         |       |
|   | [0.357] | [0.628] | [0.278] | [0.164] | [0.313] | [0.000] | [0.000] | [0.000] | [0.000] |         |         |         |         |         |         |         |         |         |       |
| 11 Bidder CEO is COB                          | -0.030  | 0.005   | 0.033   | -0.023  | 0.013   | 0.057   | 0.058   | 0.003   | 0.032   | 0.121   | 1.000   |         |         |         |         |         |         |         |       |
|   | [0.301] | [0.855] | [0.266] | [0.427] | [0.649] | [0.052] | [0.049] | [0.912] | [0.273] | [0.000] |         |         |         |         |         |         |         |         |       |
| 12 All Cash                                   | 0.149   | 0.233   | 0.163   | 0.356   | -0.001  | 0.139   | 0.139   | 0.012   | -0.098  | 0.069   | -0.076  | 1.000   |         |         |         |         |         |         |       |
|   | [0.000] | [0.000] | [0.000] | [0.000] | [0.987] | [0.000] | [0.000] | [0.688] | [0.001] | [0.019] | [0.010] |         |         |         |         |         |         |         |       |
| 13 All Stock                                  | -0.084  | -0.152  | -0.092  | -0.315  | -0.019  | -0.165  | -0.166  | -0.011  | 0.186   | -0.059  | 0.016   | -0.469  | 1.000   |         |         |         |         |         |       |
|   | [0.004] | [0.000] | [0.002] | [0.000] | [0.516] | [0.000] | [0.000] | [0.716] | [0.000] | [0.043] | [0.576] | [0.000] |         |         |         |         |         |         |       |
| 14 Diversifying                               | 0.029   | 0.054   | 0.039   | 0.097   | 0.004   | 0.011   | 0.034   | -0.064  | -0.066  | -0.008  | 0.023   | 0.088   | -0.060  | 1.000   |         |         |         |         |       |
|   | [0.316] | [0.064] | [0.181] | [0.001] | [0.893] | [0.705] | [0.247] | [0.029] | [0.024] | [0.774] | [0.429] | [0.003] | [0.039] |         |         |         |         |         |       |
| 15 Relative Size                              | -0.104  | -0.180  | -0.194  | -0.107  | -0.008  | -0.051  | -0.052  | -0.001  | -0.124  | -0.054  | 0.003   | -0.229  | -0.019  | -0.070  | 1.000   |         |         |         |       |
|   | [0.000] | [0.000] | [0.000] | [0.000] | [0.782] | [0.085] | [0.078] | [0.981] | [0.000] | [0.065] | [0.915] | [0.000] | [0.510] | [0.018] |         |         |         |         |       |
| 16 Bidder Tobin's Q                           | 0.080   | 0.056   | -0.058  | 0.047   | -0.017  | -0.029  | -0.018  | -0.034  | -0.158  | -0.059  | 0.005   | 0.034   | 0.130   | 0.064   | -0.111  | 1.000   |         |         |       |
|   | [0.007] | [0.058] | [0.049] | [0.111] | [0.568] | [0.317] | [0.532] | [0.249] | [0.000] | [0.046] | [0.865] | [0.248] | [0.000] | [0.028] | [0.000] |         |         |         |       |
| 17 Bidder Book Leverage                       | 0.005   | -0.040  | -0.014  | 0.124   | 0.067   | 0.156   | 0.176   | -0.045  | -0.295  | 0.052   | 0.054   | 0.049   | -0.201  | 0.112   | 0.208   | 0.065   | 1.000   |         |       |
|   | [0.865] | [0.175] | [0.638] | [0.000] | [0.022] | [0.000] | [0.000] | [0.129] | [0.000] | [0.079] | [0.065] | [0.098] | [0.000] | [0.000] | [0.000] | [0.026] |         |         |       |
| 18 Bidder Operating Cash Flow                 | -0.065  | -0.044  | 0.056   | -0.155  | -0.043  | -0.089  | -0.108  | 0.047   | 0.263   | -0.038  | -0.021  | -0.070  | 0.132   | -0.171  | -0.103  | -0.088  | -0.500  | 1.000   |       |
|   | [0.028] | [0.136] | [0.059] | [0.000] | [0.142] | [0.002] | [0.000] | [0.108] | [0.000] | [0.197] | [0.473] | [0.017] | [0.000] | [0.000] | [0.000] | [0.003] | [0.000] |         |       |
| 19 Log(Bidder Total Assets)                   | -0.096  | -0.033  | 0.092   | -0.132  | -0.025  | 0.311   | 0.288   | 0.091   | 0.624   | 0.196   | 0.080   | 0.007   | 0.054   | -0.058  | -0.169  | -0.158  | -0.260  | 0.336   | 1.000 |
|   | [0.001] | [0.256] | [0.002] | [0.000] | [0.396] | [0.000] | [0.000] | [0.002] | [0.000] | [0.000] | [0.007] | [0.804] | [0.065] | [0.049] | [0.000] | [0.000] | [0.000] | [0.000] |       |

**Table 8**  
**Determinants of Pricing and Form of Merger and Acquisition Bids**

Our sample consists of 1,164 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *Bid Premium* is the ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one. *CAR3* is the cumulative abnormal announcement period return over (-1, +1). Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days (-200, -60) prior to the acquisition announcement date. *Tender Offer* is set to one if the bidder uses a tender offer, and zero otherwise. *Bidder CEO is Female* is set to one if the bidder CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. We run OLS regressions in Panels A, B, and C. All model specifications employ robust standard errors. In Panel D, we estimate probit models and present the marginal effect of each explanatory variable on the likelihood of using a tender offer. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

**Panel A: Determinants of Bid Premium**

| Dependent Variable                      | Bid Premium         |                     |                     |                     |
|---|---------------------|---------------------|---------------------|---------------------|
|   | (1)                 | (2)                 | (3)                 | (4)                 |
| Bidder CEO is Female                    | -0.185**<br>[0.016] | -0.163**<br>[0.037] | -0.188**<br>[0.014] | -0.165**<br>[0.035] |
| Bidder Proportion of Female Directors   | -0.237<br>[0.230]   | -0.158<br>[0.405]   |                     |                     |
| Bidder Prop. of Independent Female Dir. |                     |                     | -0.203<br>[0.333]   | -0.138<br>[0.490]   |
| Bidder Prop. of Inside Female Dir.      |                     |                     | -0.484<br>[0.236]   | -0.312<br>[0.457]   |
| Control Variables                       | Yes                 | Yes                 | Yes                 | Yes                 |
| Year Fixed Effects                      | No                  | Yes                 | No                  | Yes                 |
| Observations                            | 1164                | 1164                | 1164                | 1164                |
| Adjusted R-squared                      | 0.037               | 0.055               | 0.036               | 0.054               |



**Panel B: Determinants of Target Cumulative Abnormal Announcement Period Return**

| Dependent Variable                      | Target CAR3          |                      |                     |                      |                      |                     |
|---|----------------------|----------------------|---------------------|----------------------|----------------------|---------------------|
|   | (1)                  | (2)                  | (3)                 | (4)                  | (5)                  | (6)                 |
| Bidder CEO is Female                    | -0.143***<br>[0.001] | -0.140***<br>[0.003] | -0.102**<br>[0.011] | -0.145***<br>[0.001] | -0.142***<br>[0.003] | -0.104**<br>[0.010] |
| Bidder Proportion of Female Directors   | -0.003<br>[0.978]    | 0.016<br>[0.875]     | 0.053<br>[0.533]    |                      |                      |                     |
| Bidder Prop. of Independent Female Dir. |                      |                      |                     | 0.023<br>[0.833]     | 0.035<br>[0.750]     | 0.067<br>[0.457]    |
| Bidder Prop. of Inside Female Dir.      |                      |                      |                     | -0.192<br>[0.460]    | -0.124<br>[0.639]    | -0.052<br>[0.810]   |
| Bid Premium                             |                      |                      | 0.232**<br>[0.031]  |                      |                      | 0.232**<br>[0.031]  |
| Control Variables                       | Yes                  | Yes                  | Yes                 | Yes                  | Yes                  | Yes                 |
| Year Fixed Effects                      | No                   | Yes                  | Yes                 | No                   | Yes                  | Yes                 |
| Observations                            | 1164                 | 1164                 | 1164                | 1164                 | 1164                 | 1164                |
| Adjusted R-squared                      | 0.079                | 0.093                | 0.292               | 0.079                | 0.092                | 0.292               |

**Panel C: Determinants of Bidder Cumulative Abnormal Announcement Period Return**

| Dependent Variable                      | Bidder CAR3       |                    |                    |                   |                   |                   |
|---|-------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
|   | (1)               | (2)                | (3)                | (4)               | (5)               | (6)               |
| Bidder CEO is Female                    | -0.020<br>[0.496] | -0.018<br>[0.538]  | -0.018<br>[0.540]  | -0.020<br>[0.502] | -0.018<br>[0.546] | -0.018<br>[0.548] |
| Bidder Proportion of Female Directors   | 0.047*<br>[0.058] | 0.052**<br>[0.039] | 0.052**<br>[0.038] |                   |                   |                   |
| Bidder Prop. of Independent Female Dir. |                   |                    |                    | 0.044<br>[0.103]  | 0.048*<br>[0.074] | 0.048*<br>[0.073] |
| Bidder Prop. of Inside Female Dir.      |                   |                    |                    | 0.073<br>[0.281]  | 0.079<br>[0.237]  | 0.080<br>[0.236]  |
| Bid Premium                             |                   |                    | 0.001<br>[0.847]   |                   |                   | 0.001<br>[0.844]  |
| Control Variables                       | Yes               | Yes                | Yes                | Yes               | Yes               | Yes               |
| Year Fixed Effects                      | No                | Yes                | Yes                | No                | Yes               | Yes               |
| Observations                            | 1164              | 1164               | 1164               | 1164              | 1164              | 1164              |
| Adjusted R-squared                      | 0.064             | 0.067              | 0.066              | 0.063             | 0.066             | 0.066             |

**Panel D: Determinants of the Use of a Tender Offer**

| Dependent Variable                      | Tender Offer Dummy |                   |                   |                   |
|---|--------------------|-------------------|-------------------|-------------------|
|   | (1)                | (2)               | (3)               | (4)               |
| Bidder CEO is Female                    | -0.042<br>[0.554]  | -0.043<br>[0.518] | -0.040<br>[0.581] | -0.040<br>[0.549] |
| Bidder Proportion of Female Directors   | 0.006<br>[0.959]   | 0.074<br>[0.512]  |                   |                   |
| Bidder Prop. of Independent Female Dir. |                    |                   | -0.055<br>[0.672] | 0.014<br>[0.905]  |
| Bidder Prop. of Inside Female Dir.      |                    |                   | 0.435<br>[0.170]  | 0.491*<br>[0.098] |
| Control Variables                       | Yes                | Yes               | Yes               | Yes               |
| Year Fixed Effects                      | No                 | Yes               | No                | Yes               |
| Observations                            | 1164               | 1164              | 1164              | 1164              |
| Pseudo R-squared                        | 0.222              | 0.292             | 0.224             | 0.294             |

**Table 9**  
**Explaining Target and Bidder Cumulative Abnormal Announcement Period Returns**

Our sample consists of 403 merger and acquisition attempts announced in the period 1997-2006. The data are retrieved from the SDC database and have available data from RiskMetrics/CRSP/Compustat. *CAR7* is the cumulative abnormal announcement period return over  $(-3, +3)$ . Daily abnormal stock returns are computed using the market model and the value-weighted CRSP index. The estimation window is days  $(-200, -60)$  prior to the acquisition announcement date. *Bidder (Target) CEO is Female* is set to one if the bidder (target) CEO is a female, and zero otherwise. *Proportion of Female Directors* is measured as the number of female directors (excluding the female CEO if this is the case) divided by the board size. *Proportion of Independent Female Directors* is measured as the number of independent female directors divided by the board size. *Proportion of Inside Female Directors* is measured as the number of inside female directors (excluding the female CEO if this is the case) divided by the board size. *Board Size* is the number of directors serving on the board. *Proportion of Independent Directors* is measured as the number of independent directors divided by the board size. *CEO is COB* is set to one if the CEO is also the Chairman of the Board (COB), and zero otherwise. *All Cash*, *All Stock*, and *Diversifying* are dummy variables that take the value of one if only cash is used to pay for the acquisition, or if only equity is used, or if the bidder and the target are in the same Fama-French industry (Fama and French (1997)), respectively, and zero otherwise. *Relative Size* is the transaction value divided by the market capitalization of the bidder at the fiscal year end prior to the acquisition announcement. *Tobin's Q* is the market value of total assets divided by the book value of total assets. *Book Leverage* is the book value of total debt divided by the book value of total assets. *Operating Cash Flow* is sales minus the cost of goods sold, sales and general administration expenses, and working capital change, divided by the book value of total assets. *Total Assets* is the book value of total assets. All dollar amounts are in 2006 millions of dollars, and all percentages are in real numbers. All firm characteristics are measured at the fiscal year end prior to the bid announcement. All model specifications employ robust standard errors. The corresponding p-value is reported in the brackets below each coefficient. Superscripts \*\*\*, \*\*, and \* correspond to statistical significance at the 1, 5, and 10 percent levels, respectively. Panels A and B tabulate regression results for target *CAR7* and bidder *CAR7*, respectively.

**Panel A: Determinants of Target Cumulative Abnormal Announcement Period Return**

| Dependent Variable                      | Target CAR7          |                      |                     |                      |                      |                     |
|---|----------------------|----------------------|---------------------|----------------------|----------------------|---------------------|
|   | (1)                  | (2)                  | (3)                 | (4)                  | (5)                  | (6)                 |
| Bidder CEO is Female                    | -0.200***<br>[0.000] | -0.183***<br>[0.000] | -0.069*<br>[0.052]  | -0.196***<br>[0.000] | -0.178***<br>[0.000] | -0.068*<br>[0.061]  |
| Target CEO is Female                    | 0.015<br>[0.784]     | 0.041<br>[0.475]     | 0.011<br>[0.879]    | 0.018<br>[0.745]     | 0.045<br>[0.435]     | 0.012<br>[0.867]    |
| Bidder Proportion of Female Directors   | 0.043<br>[0.752]     | 0.106<br>[0.465]     | 0.152<br>[0.172]    |                      |                      |                     |
| Bidder Prop. of Independent Female Dir. |                      |                      |                     | 0.017<br>[0.906]     | 0.077<br>[0.603]     | 0.148<br>[0.187]    |
| Bidder Prop. of Inside Female Dir.      |                      |                      |                     | 0.307<br>[0.426]     | 0.397<br>[0.294]     | 0.194<br>[0.528]    |
| Target Proportion of Female Directors   | -0.223*<br>[0.093]   | -0.230*<br>[0.076]   | -0.008<br>[0.936]   |                      |                      |                     |
| Target Prop. of Independent Female Dir. |                      |                      |                     | -0.235*<br>[0.067]   | -0.247*<br>[0.052]   | -0.014<br>[0.889]   |
| Target Prop. of Inside Female Dir.      |                      |                      |                     | -0.155<br>[0.675]    | -0.119<br>[0.733]    | 0.039<br>[0.869]    |
| Bid Premium                             |                      |                      | 0.483***<br>[0.000] |                      |                      | 0.483***<br>[0.000] |
| Control Variables                       | Yes                  | Yes                  | Yes                 | Yes                  | Yes                  | Yes                 |
| Year Fixed Effects                      | No                   | Yes                  | Yes                 | No                   | Yes                  | Yes                 |
| Observations                            | 403                  | 403                  | 403                 | 403                  | 403                  | 403                 |
| Adjusted R-squared                      | 0.079                | 0.111                | 0.466               | 0.076                | 0.109                | 0.464               |

**Panel B: Determinants of Bidder Cumulative Abnormal Announcement Period Return**

| Dependent Variable                      | Bidder CAR7       |                   |                   |                     |                    |                     |
|---|-------------------|-------------------|-------------------|---------------------|--------------------|---------------------|
|   | (1)               | (2)               | (3)               | (4)                 | (5)                | (6)                 |
| Bidder CEO is Female                    | -0.021<br>[0.525] | -0.020<br>[0.631] | -0.024<br>[0.563] | -0.018<br>[0.567]   | -0.017<br>[0.673]  | -0.022<br>[0.604]   |
| Target CEO is Female                    | 0.019<br>[0.391]  | 0.028<br>[0.232]  | 0.029<br>[0.203]  | 0.024<br>[0.286]    | 0.032<br>[0.156]   | 0.033<br>[0.131]    |
| Bidder Proportion of Female Directors   | 0.024<br>[0.652]  | 0.017<br>[0.757]  | 0.015<br>[0.782]  |                     |                    |                     |
| Bidder Prop. of Independent Female Dir. |                   |                   |                   | 0.031<br>[0.560]    | 0.024<br>[0.663]   | 0.022<br>[0.700]    |
| Bidder Prop. of Inside Female Dir.      |                   |                   |                   | -0.023<br>[0.886]   | -0.033<br>[0.832]  | -0.025<br>[0.871]   |
| Target Proportion of Female Directors   | -0.089<br>[0.132] | -0.088<br>[0.136] | -0.097<br>[0.111] |                     |                    |                     |
| Target Prop. of Independent Female Dir. |                   |                   |                   | -0.117**<br>[0.049] | -0.115*<br>[0.057] | -0.124**<br>[0.045] |
| Target Prop. of Inside Female Dir.      |                   |                   |                   | 0.159<br>[0.183]    | 0.145<br>[0.241]   | 0.139<br>[0.270]    |
| Bid Premium                             |                   |                   | -0.019<br>[0.334] |                     |                    | -0.019<br>[0.333]   |
| Control Variables                       | Yes               | Yes               | Yes               | Yes                 | Yes                | Yes                 |
| Year Fixed Effects                      | No                | Yes               | Yes               | No                  | Yes                | Yes                 |
| Observations                            | 403               | 403               | 403               | 403                 | 403                | 403                 |
| Adjusted R-squared                      | 0.018             | 0.026             | 0.027             | 0.021               | 0.029              | 0.030               |