

**Board Gender Diversity at Target Firms and Acquisition Decisions of
Gender Diverse Bidders**

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Abstract

We investigate the extent to which acquirers value gender diversity in potential targets and find that acquirers that have diverse boards prefer to acquire gender-diverse targets. Specific director traits such as educational and professional qualifications, networking skills, functional experience and industrial expertise influence the extent to which gender diversity at target firms is valued. Gender diverse bidders demonstrate improved acquisition efficiency when acquiring gender-diverse targets as opposed to male-only targets, resulting in higher announcement period abnormal returns. Gender-diverse firms that acquire gender-diverse targets demonstrate improved post-acquisition performance compared with those that acquire male-only targets. Our main findings remain robust to issues of endogeneity, concerns relating to omitted variable bias and reverse causality.

Keywords: Gender Diversity; Acquisitions Likelihood; Gender-diverse targets; Female Directors' Attributes

JEL Classification: G14, G34, G40, J24

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I. Introduction

Academic literature has extensively examined the influence of board gender diversity on corporate financial decisions. Researchers argue that female directors are better monitors than their male counterparts, they strengthen competitive advantages of the firm through their experience, skills and the broader perspective adopted in decision making, and, therefore, their presence improves the effectiveness of corporate boards (see, Galbreath, 2011; Nielsen and Huse, 2010; Adams and Ferreira, 2009; Huse and Solberg, 2006; Coffey and Wang, 1998). Recent studies extend this line of investigation to corporate acquisition decisions and find that the presence of female executives and directors leads to better acquisition outcomes (see, Huang and Kisgen, 2013; Dowling and Aribi, 2013; Levi et al., 2010; Levi et al., 2014). The inclusion of female directors on corporate boards is generally justified on the basis that they contribute to the company's success through their resource provisioning role (Hillman and Dalziel, 2003; and Hillman et al., 2007), contribution to boardroom discussions through skills, experience and the adoption of broader perspectives (Anderson et al., 2011), improving board functions by being more diligent monitors and transparent individuals (Adams & Ferreira, 2009; Adams and Funk, 2012; Gul et al., 2013; Post, and Byron, 2015) and by avoiding rash decision making through the adoption of a more conservative approach (Estes and Hosseini, 1988; Beckmann and Menkhoff, 2008; Lonkani, 2019). In this paper we seek to investigate whether board gender diversity is a desirable attribute for potential acquisition of targets.

Specifically, we ask the question of whether the gender diversity of a potential target board plays a role in the decision to acquire a firm. Female directors have been found to possess a diverse set of values, be effective and diligent monitors and to actively participate in corporate governance (Adams and Ferreira, 2009; Adams and Funk, 2012). The economic consequences of their contribution results in optimal compensation structures for the firm (Bugeja et al. 2012), higher informativeness of stock prices (Gul et al. 2011a), enhanced earnings quality (Gul et al. 2011b), increased sales revenue, and greater relative profits (Herring, 2009). These papers all suggest that gender diverse boards enhance firm value, which may be appealing to potential bidders, especially if the acquirer also has gender diversity on the board.

Using a sample of 1,926 acquisitions of publicly listed targets by publicly listed US bidders, we examine whether target firm board gender diversity matters. First, we examine the likelihood of a gender-diverse bidder acquiring a gender-diverse target. We find a one percentage increase in the fraction of female directors in acquirer board increases the likelihood of acquiring a gender-diverse target by an economical meaningful amount 0.36%. This finding remains robust to the use of firm fixed effect models, Fama-McBeth models, propensity score matching analysis and instrumental variable two-stage least square models.

Second, based on the argument that women who reach the upper echelon of the corporate hierarchy possess unique functional experience, expertise and qualifications, we examine whether gender-diverse acquirers place a value on these traits when they acquire a gender-diverse target. We find that gender-diverse acquirers are more likely to purchase a gender-diverse target when the female directors of the target have strong networks, more qualifications, specialized expertise or experience in the field. These results shed light into the attributes that potential bidders find valuable during an acquisition.

Third, we test whether aspects of the acquisition transactions are impacted when gender-diverse firms acquire gender-diverse targets. We find that gender-diversity at both bidder and target levels is associated with a longer due diligence as well as lower premiums paid. Finally, we test whether the efficiency displayed by gender-diverse boards when acquiring gender-diverse targets is rewarded by the capital market and find that acquirers' gender diversity has a significant positive association with the announcement period abnormal return only when they acquire gender-diverse targets; such a relationship is absent when they acquire male-only targets. We also find that the gender diversity at both ends of the deal leads to improved post-acquisition performance.

Our contribution is twofold. First, we contribute to the behavioural finance literature by examining the gender diversity of two companies on a corporate financial decision of one company. Prior research on gender diversity has been confined to the examination of the influence of gender diversity on the firm's own boardroom dynamics, financial decisions and other socially-connected decisions. These include the examination of the influence of female directors of a firm on its board's monitoring ability and decision making (Adams and Ferreira, 2009; Huse and Solberg, 2006; Nielsen and Huse, 2010), investment and financing decisions (Huang and Kisgen, 2013), acquisition decisions (Levi et al., 2014; Lucas et al., 2021), financial performance (Post and Byron, 2015; Pletzer et al., 2015; Ferreira, 2015; Eckbo et al.,

2022), and social and environmental performance (Ben-Amar et al., 2017; Cuadrado-Ballesteros et al., 2017; Rao & Tilt, 2016; Li et al., 2016) among others. Unlike other financial decisions, the acquisition decision allows researchers to investigate the contribution of gender diversity of another company (the target firm in this case) on a corporate finance decision of the decision-making company (the bidding firm in this case). Second, we contribute to the mergers and acquisitions literature by exploring whether the diversity of the target firm impacts acquisition decisions. Prior studies have investigated the influence of several characteristics of targets firms on the acquisition decisions of bidders. These include the organisational form of the target (Chang, 1998; Draper and Paudyal, 2006; Faccio et al., 2005; Faccio et al., 2006; Shams et al., 2013), the target's degree of information asymmetry (Cheng et al., 2016; Officer et al., 2009; Chemmanur et al., 2009; Martin and Shalev, 2017; Borochin et al., 2019), the target's financial constraints (Erel et al., 2015; Bugeja, 2015); the target firm's accounting quality (McNichols and Stubben, 2015), the target firm's earnings management practice (Farooqi et al., 2020), and insider trading at the target level (Suk and Wang, 2021, among others). There is a marked absence of studies investigating how the gender diversity at the target firm influences the acquisition decision of the bidding firm. We fill this vacuum by examining the influence of the target's gender diversity on the acquisition decision of gender-diverse bidders and associated value consequences of such an acquisition.

The remainder of the paper proceeds as follows. In Section II, we provide a literature review and propose the research questions to be investigated in the study. Section III discusses the sample selection procedure and the data used, while Section IV outlines the methodology. The findings are discussed in Section V. Section VI presents the robustness tests while section VII concludes.

II. Literature review and research questions

The academic literature identifies several reasons why having female directors on corporate boards improves the effectiveness of the firm's decision making. One argument is that female directors are more effective monitors than their male counterparts and the presence of female directors on corporate boards therefore mitigates the agency conflict between shareholders and managers. In support of this argument, Adams and Ferreira (2009) find that while female directors are less likely to experience board attendance problems than male directors, the attendance behaviour of male directors improves when boards have more female directors. They also find that the sensitivity of CEO turnover to performance decline is more pronounced for firms with a high fraction of female directors. These findings provide strong evidence that

the gender diversity of the board has a significant positive influence on the effectiveness of the board.

Another argument is that females are less overconfident than their male counterparts and given that the overconfidence leads to poor financial decisions (Barber and Odean, 2001; Doukas and Petmezas, 2007), the addition of female directors to corporate boards curtails these poor decisions. Several studies find that empire building is more prominent among men than among women (Deaux and Farris, 1977; Meehan and Overton, 1986; Beyer, 1990), likewise overconfidence in financial markets results in more frequent stock trading and lacklustre portfolio performance (Lewellen et al., 1977; Barber and Odean, 2001). Croson and Gneezy (2009) conclude that women are less overconfident than men and overconfidence is a main reason why men have different perceptions of the probability distribution underlying a particular risk. Applying this perceived difference in confidence to decision making scenarios at the corporate level, researchers find that female managers are more conservative when making financial decisions (Estes and Hosseini, 1988; Beckmann and Menkhoff, 2008; Lonkani, 2019). These findings suggest that the inclusion of female directors on corporate boards may prevent rash decision making that destroy value.

Based on the resource-based view (Barney, 1991; Hillman and Dalziel, 2003), female directors bring different values to corporate boards that are useful in achieving competitive advantages in the market. Huse and Solberg (2006) find that female directors are intrinsically motivated, act with wisdom and diligence, ask more questions and create a good atmosphere in the boardroom. Nielsen and Huse (2010) find that different values increase female directors' involvement in strategic decisions undertaken by the firm. Adams and Funk (2012) find that female directors care more about benevolence, universalism and stimulation, and care less about power, security, conformity and tradition implying that female directors bring in a unique set of values to the boardroom.

The above evidence suggests that companies with gender diverse boards are better monitored firms than those with homogenous boards. Therefore, a firm with female directors on its board should be an attractive target for an acquirer, if the bidder's acquisition decision is motivated by the creation of wealth for their shareholders. Based on the gender diversity literature, a bidder with a gender diverse board should have a greater value-creation focus than a bidder with a male-only board. Therefore, it is reasonable to argue that gender diverse bidders prefer to acquire gender diverse targets. This proposition can be further justified by

organisational demography, which explains the social and cultural trends that influence an organization. According to Becker's (1971) theory of employer discrimination, gender segregation causes some employers to have a strong distaste for female employees, while others may be indifferent or even prefer female employees. Carrington and Troske (1995) find that, while female-owned firms are significantly more likely to employ predominantly female workforces, male business owners typically employ far fewer women. One consequence of the aversion to employ females by male-dominated firms can be the creation of the glass ceiling at corporate hierarchy preventing women from rising to positions of power or responsibility and advancing to senior management positions (Li and Leung, 2001). Similarly, firms without gender diverse boards may not value the potential target firm's gender diversity. Indeed, the empirical evidence supports this view. The proportional representation of women in the upper echelons of organisational hierarchy enhances the likelihood of more women been recruited and promoted to similar positions (Cohen et al., 1998). As uncovered by Ely (1994), the implication of these findings is that females at the higher level of corporate hierarchy (such as directors of boards) prefer to have more women in similar positions to reduce both male-to-female evaluation bias and the tendency for men to prefer hiring more men to fill the managerial positions of the firm. A similar phenomenon may occur at the board level. Therefore, one can conjecture that a gender-diverse firm would give the priority to a gender-diverse target over a male-only target when they look for a company to acquire. Such a merger would make the post-acquisition cultural integration less problematic as both sides of the deal have similar cultures.

Considering their monitoring capabilities, lack of over-confidence, resourcefulness and the propensity to promote females to higher positions, one would expect a bidder with a gender-diversified board to favour the acquisition of a target with a gender diversified board as opposed to a target with a male-only board. Therefore, we propose to test the following main research question (RQ):

RQ1: Are companies with gender-diverse boards thereby more attractive targets for bidders with gender-diverse boards?

If we find evidence that gender-diverse bidders prefer to acquire targets with gender diverse boards, it raises the question of whether gender-diverse bidders prefer those targets simply because they have female directors or because those female directors possess specific qualifications, expertise and experience. Addressing of this question is important because of

the possibility that tokenism could play a major role in the appointment of females to boards. Under regulatory pressure, companies may appoint female directors to their boards as mere figureheads which is often regarded as tokenism. As per the Catalyst report, the majority of MSCI ACWI companies (71.8%) located in jurisdictions with established compulsory quotas had at least 30% women directors in 2019, but in jurisdictions with no compulsory gender quota requirements, only 20.3% of boards reached the 30% women director threshold.¹ This implies that companies increase female representation in their boards only under regulatory pressure and those females may work as figureheads rather than being actively engaged in monitoring managers. Such forced changes in board characteristics may have no effect on firm value when they are mere window-dressing exercises (Helland and Sykuta, 2004). Indeed, studies find that most corporate decisions remain unaffected after an increase in female board representation in order to fulfil the quota requirement (Matsa and Miller, 2013) and a regulation-backed forced increase in female directors results in a significant decrease in firm value (Ahern and Dittmar, 2012). If the corporate boards are aware of these outcomes, it is unlikely that a gender-diverse bidder would merge with a target having figurehead female board members for the purpose of creating value for their shareholders.

This leads to the question of whether gender-diverse acquirers prefer to purchase gender-diverse targets because female directors of those targets possess important characteristics such as qualifications, expertise and experiences. Previous studies show that female directors bring unique perspectives and work styles (Daily and Dalton, 2003), possess different functional expertise (Kim and Starks, 2016), bring different professional experiences based on non-traditional backgrounds (Hillman et al., 2002; Singh et al., 2008), and hold more advanced degrees (Hillman et al., 2002) than their male counterparts. Gender diverse acquirers may be looking for gender-diverse targets in which female directors possess these experiences and skills. We therefore propose to test the following research question:

RQ2: Do the gender-diverse bidders value the qualifications, experiences and expertise possessed by female directors when acquiring gender-diverse targets?

Managerial overconfidence has been blamed for the value losses experienced by acquiring shareholders (Malmendier and Tate, 2005). According to the hubris hypothesis of takeovers, hubris-infected overconfident managers of bidding firms value the target higher than the market valuation, causing them to pay a higher premium to the target (Roll, 1986). This

¹ Source: <https://www.catalyst.org/research/women-on-corporate-boards/>

problem can be less severe for companies with gender diverse boards since female directors with relatively lower overconfidence are more precise in their estimates regarding the value implications of acquisitions (Levi et al., 2014). Unlike male managers who fall prey to the ‘deal frenzy’ approach in acquisitions, female directors evaluate acquisitions with less emotionally attached mindsets while following a more objective approach in making acquisition decisions (Lucas et al., 2021). Consequently, gender diversity in corporate boards leads to significant reduction in premiums paid to targets in acquisitions (Levi et al., 2014; Lucas et al., 2021).

The existing studies show that, compared with their homogenous counterparts, gender-diverse groups have broader perspectives for problem solving (Dutton & Duncan, 1987; Watson et al., 1993). Female directors may bring improved brainstorming, creativity, consideration of diverse perspectives, and questioning of the status quo in board decision making. While this can lead to increased information search by diversified boards (Hillman et al. 2007), it may also lead to clashes within the board (Pelled et al., 1999). As a result, gender-diverse boards may take a longer time to arrive at a decision. Erhardt et al. (2003) and Milliken and Martins (1996) find that gender-diverse boards are associated with longer decision-making periods. Therefore, we can argue that the boards with female directors engage in in-depth negotiations and exercise a greater scrutiny in due diligence processes when confronted with the decision to acquire.

One important question is whether the efficiency displayed by gender diverse acquirers (in terms of lower premiums paid and longer time taken to execute a deal) is more pronounced when they acquire a gender-diverse target as opposed to a male-only target. If, under the influence of female directors, both sides of the deal with gender-diverse boards make more precise estimates of the value of the target, then one could expect the lower premium paid in acquisitions to be more pronounced when gender diverse acquirers purchase gender-diverse targets. However, if the female directors of gender-diverse targets attempt to get the maximum price for their shareholders, then this phenomenon should be less severe for targets with female directors. Similarly, if both gender-diverse bidders and targets engage in extensive due diligence, then due diligence would be longer when both the bidder and the target have females sitting on their boards. On the other hand, since female directors are better communicators than their male counterparts (Adams and Kirchmaier, 2015; Gul et al., 2011), negotiations between two gender diverse boards in an acquisition deal might therefore proceed more smoothly, reducing the time spent on merger negotiations.

Based on the above discussion, we propose to test the following research question:

RQ3: Is the acquisition efficiency displayed by gender-diverse bidders more pronounced when the target is also gender-diverse?

We also investigate whether the relationship between gender-diversity in the acquirer board and the market reaction to acquisition announcement is conditional on whether the target is gender-diverse or not. If both the bidder and target boards are gender diverse, one would expect the market response to the acquisition announcement to be positive. We therefore test the following research question:

RQ4: Is the market response to acquisition announcement positive when a gender-diverse bidder acquires a gender-diverse target?

Commented [AG1]: In the remainder of the text, we say that the market response is more pronounced for this group. Please consider rewording this hypothesis, if needed.

III. Sample and data

Using the SDC Platinum M&A database, we collect a sample of domestic acquisitions undertaken by US firms (i.e., public targets by public bidders) during the 20-year period 2001-2020. We start with a sample of public acquirers and targets because we need detailed board demographics for both the acquirer and the target. We matched this acquisition sample to BoardEx database to collect the data relating to the number of female directors in both acquirer and target boards together with information relating to several characteristics of the target's female directors (such as their executive and non-executive nature, independent and non-independent nature, qualifications, experiences and expertise) and acquirers' governance variables. We then match our acquisition sample to COMPUSTAT database to collect firm level financial variables. This three-way matching process provided us with a final sample of 1,926 acquisitions.

Table 1 presents the year-by-year and industry-by-industry distributions of the sample. In Panel A, the number of annual observations gradually increases from 2001 to 2005 and reaches a peak in 2006 and 2007, prior to the financial crisis. The acquisition market remains active until 2017 but annual observations drop to pre-financial crisis levels thereafter. Similarly, total annual deal value shows a substantial increase prior to the financial crisis. A significant increase in deal value can also be observed during the period 2014-2019 implying that large deals have been undertaken by bidders during this period. In Panel B we see the highest number of acquisitions in the Electronic Equipment industry (39.82%) followed by the Medical Equipment (29.49%) and Non-metal and Industrial Metal Mining (13.40%) industries.

Table 2 reports mean and median values segmented into male-only targets and gender-diverse targets.² We test for significant differences in the univariates between the two groups. In Panel A, the mean (median) percentage of female directors is significantly higher for acquirers of gender-diverse targets compared with acquirers of male-only targets implying that greater gender diversity in acquirers' boards leads to the acquisition of gender diverse targets. On average, 21% of the directors of gender diverse targets are females while 69% of the target firms has at least one female director.

Panel B of Table 2 present information relating to a number of roles and characteristics of female directors in gender-diverse target firms. Generally, the female directors in target boards are more likely to be non-executive and independent directors than executive and non-independent directors. On average, a female director of a gender-diverse target has seven networks and six years of service. The majority also have finance experience and legal expertise while 30%-45% are IVY educated and have accounting and managerial experience.

In Panel C, the bidders pay a significantly lower premium when they purchase a gender-diverse targets as opposed to a male-only target. Acquirers appear to take a longer time to complete the deal when they acquire a gender diverse target. However, the average abnormal returns earned by bidders during the announcement period remains insignificant between the two groups of acquirers.³

In Panel D of this table, the boards of acquirers of gender-diverse targets are significantly larger than those of the acquirers of male-only targets. However, no significant differences exist between these two groups with respect to the fraction of independent directors and CEO duality. As per the statistics in Panel E, the acquirers of gender-diverse targets are larger, have higher leverage and lower Tobin's Q compared to the bidders of male-only targets. However, there are no significant differences between these two groups with respect to cash holdings, return on assets and sales growth.

Panel F reveals that these two groups show significant differences with respect to several bid characteristics, such as cash as the method of payment, placing multiple bids, offering hostile bids and serial bidders. Panel G shows that the majority (minority) of the acquirers of gender-diverse targets (acquirers of male-only targets) comes from the states that

² Some variables in this table represent 'acquirer' characteristics while others represent 'target' characteristics. For acquirer characteristics, two groups are used to differentiate between 'acquirers of male-only targets' and 'acquirers of gender-diverse targets.'

³ Footnote 6 explains how we calculated the announcement period abnormal return.

have adopted the equal rights amendment (ERA). The former group appears to be located in states that have a higher fraction of female labour force.⁴

Appendix A provides the definitions of all these variables.

IV. Methodology

To test our first research question (that companies with gender-diverse boards attractive targets for bidders with gender-diverse boards), we need to ascertain the probability of a gender-diverse firm acquiring a gender-diverse target. For this purpose, we estimate the following logistic model:

$$PR(TAR_FEM_{i,t}) = \alpha_0 + \beta_1(ACQ_FEM_{i,t-1}) + \beta_{2-4}GOVERNANCE_CONTROLS + \beta_{5-10}FINANCIAL_CONTROLS_{i,t-1} + \sum \beta_i Year_{i,t} + \sum \beta_i Industry_{i,t} + \varepsilon_{i,t} \quad (1)$$

where, the dependent variable $PR(TAR_FEM_{i,t})$ is an indicator variable which takes the value of one if a target has a gender-diverse board and zero otherwise. Our main explanatory variable is the $ACQ_FEM_{i,t-1}$, the fraction of female directors in the acquirer board. We include three governance variables (board size, fraction of independent directors and CEO duality dummy) and six financial characteristics (natural logarithm of market capitalisation, leverage, cash holdings, return on assets, sales growth and Tobin's Q) of acquirers as control variables. They are included because prior studies have found those variables to have a significant influence on the acquisition decision of a firm.⁵

In examining research question 2 (that gender-diverse bidders value qualifications, experiences and expertise possessed by female directors when acquiring gender-diverse targets), we test the probability of a gender-diverse firm acquiring a gender-diverse target with a particular qualification/expertise/experience. We analyse several characteristics relating to the target's female directors' qualifications (networks, tenure, IVY education, CFA qualification, CPA qualification and qualification index) and expertise and experience (finance expertise, industry expertise, M&A experience, legal expertise, accounting experience and managerial experience). We modify equation (1) by replacing the dependent variable with a dichotomous variable that takes the value of one if at least one female director of the target has a particular qualification/experience/expertise or zero otherwise. For example, when testing

⁴ We use the adoption of equal rights amendment by states and the percentage of female workforce in each state as instrumental variables when addressing endogeneity issues in Section 5.2.

⁵ For evidence, see Mueller (1972), Jensen (1986; 1993), Shivdasani (1993), Martin (1996), Jung et al. (1996), Denis et al. (1997), Ang and Kohers (2001), Faccio and Masulis (2005), Martynova and Renneboog (2008), Harford et al. (2009), Levi, Li and Zhang (2010; 2014), Uysal (2011), Karampatsas et al. (2014), among others.

CFA qualification, our dependent variable takes the value of one if at least one female director in the target firm possess the CFA qualification and zero otherwise. We then estimate this modified model separately for each characteristic.

Our third research question (that the acquisition efficiency displayed by gender-diverse bidders is more pronounced when the target is also gender-diverse) needs to be investigated separately for gender-diverse targets and male-only targets. We therefore estimate the following regression for the above two types of targets separately:

$$EFFICIENCY_{i,t} = \alpha_0 + \beta_1(ACQ_FEM_{i,t-1}) + \beta_{2-4}GOVERNANCE_CONTROLS + \beta_{5-10}FINANCIAL_CONTROLS_{i,t-1} + \beta_{11-17}DEAL_CHARACTERISTIC_CONTROLS_{i,t-1} + \sum \beta_i Year_{i,t} + \sum \beta_i Industry_{i,t} + \varepsilon_{i,t} \quad (2)$$

where the dependent variable $EFFICIENCY_{i,t}$ is represented, in separate models, by the bid premium paid ($PREMIUM$) and the natural logarithm of the number of days taken to complete the deal ($LOGDAYS$).

Testing our fourth research question (that the market response to acquisition announcements is more pronounced when a gender-diverse bidder acquires a gender-diverse target) also requires the separation of the sample into two groups as gender-diverse targets and male-only targets. Therefore, we estimate the following regression equation for these two groups separately:

$$CAR_{i,t} = \alpha_0 + \beta_1(ACQ_FEM_{i,t-1}) + \beta_{2-4}GOVERNANCE_CONTROLS + \beta_{5-10}FINANCIAL_CONTROLS_{i,t-1} + \beta_{11-17}DEAL_CHARACTERISTIC_CONTROLS_{i,t-1} + \sum \beta_i Year_{i,t} + \sum \beta_i Industry_{i,t} + \varepsilon_{i,t} \quad (3)$$

where, $CAR_{i,t}$ is the cumulative abnormal return earned by an acquirer during the three-day announcement period. Following the conventional event study methodology (Brown & Warner, 1985), we first calculate daily abnormal returns and cumulate them over a three-day event window to derive announcement-period cumulative abnormal returns.⁶ Following prior studies, we control for a number of governance, financial and deal characteristics in equations

⁶ For this purpose, we estimate the market model using the equally-weighted index as the market portfolio. We use an estimation window of 210 days, ending on day 46, where day 0 is the announcement day (the day that the SDC Platinum database identifies as the announcement day). The α and β parameters generated by the market model, together with the return on the market portfolio, are used to generate daily abnormal returns for a three-day event window from day -1 to day +1, and these daily abnormal returns are cumulated to generate the cumulative abnormal return for the announcement period.

(2) and (3).⁷ While our governance and financial controls remain similar to those in Equation (1), the deal characteristics used in Equations (2) and (3) include a cash only dummy, stock only dummy, related dummy, multiple bid dummy, hostile bid dummy and a serial bid dummy.

We use robust standard errors to address the issue of heteroscedasticity in all our regression models. The correlation matrix for the variables included in the above equations is presented in Table 3.⁸ The fraction of female directors on the target board has a significant positive correlation with the fraction of the acquirer's female directors, implying that gender-diverse bidders prefer to acquire gender-diverse targets. It is also positively correlated with the number of days taken to complete the deal, but has a significant negative correlation with the announcement period abnormal return earned by acquirers. The acquirer's board size, firm size and leverage show positive correlations with the fraction of target's female directors, while Tobin's Q has a negative correlation. It is interesting to observe if these relationships hold when the multiple regressions are estimated. Many of our control variables have significant correlations with each other. Nevertheless, their magnitudes are not sufficiently large to cause multicollinearity issues in our regression models.⁹

V. Findings

5.1 Preference for gender-diverse boards to acquire gender-diverse targets

In this section we estimate Equation (1) to determine whether target board diversity matters in the decision to acquire the target. The findings are reported in Table 4. Column 1 of this table reports the output of Equation (1) when the logit model is estimated, while column 2 reports the output when the panel regression logit model with firm fixed effects is estimated. Focusing on the control variables, larger firms tend to show a greater probability of acquiring gender-diverse targets while bidders with a higher fraction of independent directors and those with higher market valuations seem less likely to acquire gender-diverse targets.

⁷ See Yermack (1996); Weisbach (1988); Dlugosz et al. (2006); Moeller et al. (2004); Maloney et al. (1993); Harford (1999); Lang et al. (1991); Fuller et al. (2002); Travlos (1987); Morck et al. (1990); Asquith et al. (1983), Levi et al. (2014) and Lucas et al. (2021).

⁸ To conserve space, the table does not report the variables that represent female directors' qualifications (experience expertise, etc.) in the target firm.

⁹ The highest correlation coefficient of 0.4474 is between board size and market capitalisation. As per Gujarati and Porter (2009), multicollinearity problems occur when the correlation coefficients between variables exceed 0.80, implying that our models do not suffer from this issue. We also conducted a variance inflation factor (VIF) test for the control variables and found that the largest VIF score is 1.72 for the bid premium which is considerably below the threshold of ten beyond which multicollinearity concerns arise (Kennedy, 1992).

In both models, the coefficient of the *ACQ_FEM* variable is positive (0.0968 and 0.1203 respectively) and significant at the 1% level suggesting that a higher fraction of female directors on acquirer board leads to a higher probability of acquiring a gender-diverse target. Using the coefficient in model (1) as the basis, the marginal effect analysis reveals that one percentage increase in *ACQ_FEM* results in 0.36% increase in the probability of a firm acquiring a gender-diverse target.

In addition to estimating Equation (1) in logistic form, we also estimate a Fama-McBeth (1973) regression. This estimation is conducted in a two-step process. In the first step, we estimate twenty firm-year cross-sectional regressions. In the second step, we run time-series averages of the coefficients of the cross-sectional regressions, where the standard errors are adjusted for cross-sectional dependence. This type of estimation is generally an acceptable solution when there is a large number of cross-sectional units and a relatively small time series for each cross-sectional unit. The estimation therefore allows for controlling of the potential cross-sectional correlation of the regression residuals. In our case, one may suspect cross-sectional and time-series dependencies in the data set. Accordingly, we adjust the standard errors for inconsistencies by applying the Newey-West consistent standard errors. The output of this exercise, presented in Column 3, provides qualitatively similar evidence. Even though the magnitude of the *ACQ_FEM* coefficient is small, it remains positive and significant at the 1% level.¹⁰ Collectively, these findings provide strong evidence that gender-diverse boards are likely to acquire targets with female directors on their boards. By doing so, they may be accumulating the benefits of acquiring a better managed firm which has the potential to create synergies and facilitate a smooth cultural integration, post-acquisition.¹¹

Depending on the nature of their appointment, female directors can be either executive or non-executive directors. Additionally, depending on the ties they have with the firm and management, they can be either non-independent or independent directors. Both non-executive and independent directors are better monitors than their executive and non-independent counterparts. We therefore examine whether the above classifications play a role in the likelihood of a gender-diverse board acquiring a gender-diverse target. For this purpose, we modify the dependent variable of Equation (1) by assigning the value of one if the majority of female directors of the target belongs to one of the above categories and zero otherwise. For

¹⁰ Generally, the coefficient estimates generated using the Fama-McBeth approach tend to be more conservative.

¹¹ We find similar results when using a dummy variable representing the presence of female directors in the acquiring board instead of *ACQ_FEM* in Equation (1).

example, when we test the influence of executive female directors, we assign the value of one if the majority of female directors in the target firm are executive directors and zero otherwise. A similar approach is followed when creating variables for the other three categories. We then estimate four different models to test the influence of each category of the target's female directors. The findings of this analysis are presented in Table 5. In summary, we find that, across all four models estimated, the coefficients of the *ACQ_FEM* variable remain consistently positive and significant, implying that what is important for a gender-diverse acquirer is having female directors in the target firm rather than the actual positions held by those females on the firm's board. Even though not consistent across all four models, a number of acquirer characteristics such as fraction of independent directors, leverage, cash holdings and Tobin's Q seem to influence these decisions.

5.2 Addressing endogeneity

In this section, we address possible endogeneity concerns that might affect our analyses. First, our analyses may be influenced by the omitted variable bias. While we have included a range of control variables in Equation (1) to capture the influence of firm-specific variables on the decision to acquire gender-diverse targets. It is possible that we may have omitted some variables that might mechanically affect this decision. For example, as per organisational demography, if the acquirer's CEO is female, she may prefer to acquire a gender-diverse target. Second, targets with female directors may have a preference to negotiate with gender-diverse firms rather than those with male-only boards imparting a reverse causality into the acquisition decision. To address these two concerns, we employ a propensity score matching procedure (PSM) (to address omitted variable bias) and the two-stage least squares (2SLS) instrumental variable (IV) approach (to address reverse causality).

The PSM procedure involves a two-stage process. In the first stage, following prior studies (Rosenbaum and Rubin, 1983; Shipman et al., 2017), we estimate the probability that a firm acquires a gender-diverse target. For this purpose, we split the sample firms into two groups, as acquirers of gender-diverse targets and acquirers of male-only targets; the first category is the treatment group, and the second category is the control group. We then assign a value of one for acquirers of gender-diverse targets and a value of zero for acquirers of male-only targets and estimate a logistic model (first-stage model) using this categorical variable as the dependent variable and the governance and financial characteristics included in Equation (1) as control variables. Using the coefficients generated by this first-stage model, we compute

a propensity score for each firm-year observation and use those scores to select the optimal match, based on the nearest neighbour technique, in an attempt to control for the differences in characteristics between firms in the treatment group and those in the control group. The calliper distance of 0.01 is utilised when doing this match, that is, the control and treatment firms' propensity scores are allowed to differ by up to 0.01. This matching procedure generated 693 firms for each of the two groups. In the second stage, we estimate Equation (1) using these propensity score-matched samples.

The findings are reported in Table 6. The differences in means of the variables used in the first-stage model between treatment group and control group are reported in Panel A of this table. It appears that our matching procedure has successfully achieved the balance in the covariates between the two groups. The only variable that differs significantly between the treatment group and the control group is the fraction of acquirer's female directors. All other deterministic variables remain insignificantly different revealing a strong similarity between the two groups with respect to their governance and financial characteristics. The output of the first-stage model (Panel B, Column 1) shows that variables such as the fraction of independent directors, firm size, leverage and cash holdings have significant influences on the probability of a sample firm being identified as an acquirer of a gender-diverse target. More importantly, the second-stage regression output (Panel B, Column 2) shows a positive and significant coefficient for the *ACQ_FEM* variable confirming that our main findings remain robust to the use of these propensity-score-matched samples.

We next employ a two-stage least squares instrumental variable (IV) approach to addresses possible reverse causality in the main model (Wooldridge, 2010). We use two instruments: (i) the annual percentage of female labour force in each state and (ii) an indicator variable capturing the years after which the equal rights amendment (ERA) was enacted by a particular state. While both these instruments can have an impact on the appointment of female directors to corporate boards, it is unlikely that they have an impact on a firm's decision to acquire either a gender-diverse target or a male-only target. In our first-stage model, we regress the *ACQ_FEM* variable on two instrumental variables as well as firm-specific governance and the financial variables included in Equation (1). We then use the coefficients generated by the first-stage model to calculate the predicted fraction of female directors in acquirer board (*PRED_ACQ_FEM*). In our second-stage model, we re-estimate Equation (1) using this predicted fraction of female directors based on the first-stage estimation as our variable of interest.

The findings are reported in Table 7. The first-stage regression output reveals that the fraction of female directors on acquirers' boards is positively and significantly related to the two instrumental variables. The annual percentage of female labour force in each state and the ERA indicator enter into regression model with positive coefficients (2.7918 and 97.0334 respectively) which are significant at conventional levels. This finding is consistent with our prediction that the acquirer's firm-level board gender diversity is positively affected by the two instruments. The output of the second-stage model shows a positive and significant coefficient for the *PRED_ACQ_FEM* variable (0.0867) confirming our previous findings. The Wald Chi-squared test statistic of endogeneity (246.61), which is significant at the 1% level, rejects the null hypothesis of no endogeneity implying that regular probit regression would be inferior to the probit model with instrumental variable. More importantly, the positive influence that the gender diversity at the acquirer level has on the likelihood of acquiring a gender-diverse target remains unchanged after addressing the possible reverse causality issue.

5.3 Qualifications, experience and expertise of targets' female directors

Our second research question is designed to test whether gender-diverse acquirers value qualifications, expertise and experiences possessed by female directors of target firms when they make the decision to acquire a gender-diverse target. Equation (2) is designed to examine this issue. In this respect, we analyse the importance of a number of qualifications (networks, tenure, IVY education, CFA qualification and CPA qualification), and expertise and experiences (finance expertise, industry expertise, M&A experience, legal expertise, accounting experience and managerial expertise). The analysis of personal traits and credentials of female directors of target firms is important in the context of the findings that female directors possess specific core values compared with their male counterparts (Adams and Funk, 2012) and directors' qualifications, skills, expertise, experience etc. play significant roles in the governance and decision-making spheres of the firm (Fedaseyeu et al., 2018; Bugeja et al., 2012; Adams and Kirchmaier, 2015; Gul et al., 2011; Masulis and Mobbs, 2014; Cai and Sevilir, 2012). Do the gender-diverse acquirers believe that these credentials of female directors make the target firms in which they work to be well-managed firms with better prospects? We address this issue in this section.

Table 8 reports the findings. Panel A of this table reports the findings when the qualifications of target female directors are analysed. We find that the *ACQ_FEM* variable generates positive and significant coefficients in four of the six models estimated. The

likelihood of a gender-diverse acquirer purchasing a gender-diverse target is more pronounced when female directors of the target firm have networking skills together with IVY education and CFA qualification. In the last column of this panel, we find similar results when a qualification index is used to represent all the qualifications. In Panel B of the table, when expertise and experiences are analysed, we find that the *ACQ_FEM* variable generates positive and significant coefficients when the dependent variable of respective models captures finance expertise, legal expertise, accounting experience and managerial expertise. It appears that these expertise and experiences possessed by female directors of target firms are valued by gender-diverse acquirers in their acquisition decisions. Therefore, these findings indicate that the credentials of female directors in target firms are also important characteristics evaluated by gender-diverse bidders in their decisions to acquire gender-diverse targets.

5.4 Acquisition efficiency and market response

While our third research question examines the degree to which the acquisition efficiency displayed by gender-diverse acquirers comes from the acquisition of gender-diverse targets as opposed to male-only targets, our fourth research question tests if the positive market response to acquisition announcements is more pronounced when gender-diverse firms acquire gender-diverse targets. Equations (3) and (4) respectively test these research questions.

The relevant regression estimates are reported in Table 9. In this table, we split the sample into two groups as (i) acquisitions of gender-diverse targets and (ii) acquisition of male-only targets and estimate the relevant regression separately for these two groups. Levi et al. (2014) find the percentage of female directors in an acquirer board to be negatively and significantly associated with the bid premium paid in acquisitions. But, when we separate the sample into two groups and estimate Equation (3), in columns (1) and (2) of Table 9, we find that the *ACQ_FEM* coefficient is insignificant for the 'gender-diverse targets' group while it is positive and significant for the 'male-only targets' group. As per the Chi-square statistic, the two coefficients differ significantly from one another. It appears that, in an acquisition deal, negotiations between two gender-diverse boards mitigate the escalation of deal values, probably because both sides derive more precise estimates about the value of the target. But this does not seem to be the case when gender-diverse acquirers negotiate with male-only targets, when these acquirers appear to pay higher premiums to purchase those targets. In columns (3) and (4), when we analyse the number of days taken to complete the deal, we find a positive and significant coefficient for the *ACQ_FEM* variable for the 'gender-diverse

targets' group while finding an insignificant coefficient for the 'male-only targets' group. The Chi-square statistic reveals that the *ACQ_FEM* coefficient differs by a significant margin between the two groups. This implies that a longer deal completion time is taken when gender-diverse bidders acquire gender-diverse targets, probably because both parties engage in extensive information search and due diligence exercises. This does not necessarily seem to happen when the target has a male-only board.

Columns (5) and (6) of Table 9 report the estimates of Equation (4) when the dependent variable is the announcement period abnormal return. We find that the *ACQ_FEM* variable generates a positive and significant coefficient only for the 'gender-diverse targets' group while the same coefficient remains insignificant for the 'male-only targets' group. As per the Chi-square statistic, the coefficients between two groups are significantly different. This implies the market participants' belief that the acquisitions conducted by gender-diverse bidders create value only when they purchase gender-diverse targets but not when they acquire male-only targets. This market reaction can be justified on the basis that gender-diverse bidders display a greater efficiency as reflected by the non-payment of excessive premiums and careful execution of deals by taking a longer time to perform the necessary due diligence when they acquire a target with female directors on its board. Even though not consistent across all the models estimated, we find some governance, financial and bid characteristics to have a significant influence on the premium paid, time taken to complete the deal and the market reaction to acquisitions.

An issue related to the efficiency displayed in acquisitions and the market's assessment of the value created in acquisitions is whether these aspects translate into improved post-acquisition performances for acquirers. To examine this proposition, we next examine the degree to which the gender-diverse acquirers show better post-acquisition performance when they acquire gender-diverse targets as opposed to male-only targets. To this end, we use the return on assets reported and the buy-and-hold return earned by acquirers in the year following the acquisition year as representatives of their post-acquisition performance and estimate Equation (4) using these performance measures as the dependent variable. The results are reported in Table 10.¹² Our results are consistent with the findings of acquisition efficiency and market response analyses. We find that the *ACQ_FEM* coefficient is positive and significant only for the 'gender-diverse targets' group in both panels while the same coefficient remains

¹² We use only governance and financial controls in these models.

insignificant for the ‘male-only targets’ group. As per the Chi-square statistics, the difference in the *ACQ_FEM* coefficients between the two groups are significant in both panels. These findings reveal that achieving significant performance improvements is possible for gender-diverse bidders only when they acquire gender-diverse targets.

VI. Additional tests

6.1 Acquirers’ governance quality

Better governed firms are expected to make better financial decisions. Consequently, when confronted with the decision to acquire, a firm with a better governance quality may opt to purchase a gender-diverse target as opposed to a non-diverse target in order to reap the benefits discussed in Section 2. For this reason, the relationship between bidders’ gender-diversity and the likelihood of acquiring a gender-diverse target can be expected to be more pronounced for acquirers with better governance quality. We investigate this possibility by using four variables to reflect the governance quality of acquirers – (i) analyst coverage, (ii) Eindex, (iii) institutional ownership and (iv) organisational capital. Using the annual median of each of these variables as the cut-off, we split the sample into two groups as better governed firms and poorly governed firms (high analyst coverage versus low analyst coverage; low Eindex versus high Eindex; high institutional ownership versus low institutional ownership; and high organisational capital versus low organisational capital) and estimate Equation (1) separately for the two groups.

The findings are reported in Table 11. We find that, while the *ACQ_FEM* coefficient is positive and significant for both groups in each panel, the magnitude of this coefficient is larger for acquirers with better governance quality (high analyst coverage, low Eindex, high institutional ownership and high organisational capital) compared with those with poor governance quality (low analyst coverage, high Eindex, low institutional ownership and low organisational capital). Additionally, the Chi-square statistics in Panels B, C and D show significant differences in *ACQ_FEM* coefficients between the two groups. These findings therefore indicate that the likelihood of a gender-diverse bidder acquiring a gender diverse target is more pronounced for acquirers with better governance quality.

6.2 Tokenism

The symbolic appointment of female directors as token figureheads to meet regulatory requirements or due to stakeholder pressure is often seen as a futile exercise which does not necessarily bring material benefits to board level decision-making process (Nielsen and Huse,

2010; Lenney, 1977; Torchia et al., 2010). Research shows that when women hold at least three board seats, this critical mass works effectively in improving the governance of the firm and the quality of decisions taken by the board (Erkut et al., 2008; Konrad et al., 2008; Torchia et al. 2010). We investigate this issue by analysing the following two samples separately: (i) targets with less than three female directors and male-only targets, and (ii) targets with three or more female directors and male-only targets. We then estimate Equation (1) for these two groups separately and present results in Table 12. In both panels of this table, the *ACQ_FEM* variable enters into all three models estimated with positive coefficients of which five out of six are statistically significant. This finding rejects the possibility that tokenism at the target level plays a role in a gender-diverse acquirer's decision to bid for a gender-diverse target.

6.3 Change in board characteristics

In Section 2, based on organisational demography, we argued that gender-diverse bidders may prefer to acquire gender-diverse targets due to the desire of female leaders in the former category (female directors of acquirer firms in this case) to give an opportunity to female executives in the target firms to reach the c-suite in the merged entity. If this happens when a gender-diverse firm acquires a gender-diverse target, the female representation together with the monitoring roles played by females in the acquirer's board can be expected to show an increase in the year of acquisition. To test this conjecture, we analyse changes in board characteristics from year t-1 to year t0, where year t0 is the acquisition year, for the following two groups of acquirers: (i) gender-diverse bidders acquiring gender-diverse targets and (ii) gender-diverse bidders acquiring male-only targets. The findings are reported in Table 13. In Panel A, we find a significant increase in the board size of acquirers of gender-diverse targets from pre-acquisition year to acquisition year, while in Panel B this increase is marginally significant for the acquirers of male-only targets. In both panels, we observe a significant increase in both the number of female directors and the fraction of female directors implying that both groups of acquirers tend to increase their board size by appointing new female directors to respective boards. However, with these new female appointments, female directors of the former group of companies (gender-diverse bidders acquiring gender-diverse targets) seem to be given more monitoring roles compared with those in the latter group (gender-diverse bidders acquiring male-only targets). For example, in the former group (Panel A), the number of corporate governance committee chairs held by female directors increase from zero to 0.0143 and there is a significant increase in the number of audit committee chairs held by female directors. By contrast, a significant decrease in the monitoring roles played by female

directors can be observed for the latter group. In Panel B, the number of corporate governance committee chairs held by female directors decreases from 0.0789 to zero with a drop in the number of audit committee chairs held by female directors. The change in the number of compensation committee chairs held by female directors remains insignificantly different for both groups. While we cannot clearly determine that the acquirers of gender-diverse targets appoint female directors of the target firm into their own boards, the increased monitoring roles assigned to female directors in the acquisition year together with the increase in female representation in their boards provide support for the view that the acquisition of a gender-diverse target can be an avenue for a gender-diverse bidder to bring more females onto their boards.

VII. Conclusion

The literature on gender diversity argues that the inclusion of female directors on corporate boards brings benefits associated with improved monitoring and better decision making. Several studies have investigated the influence of female directors in regard to the functioning of boards and the firm's outcome financial performance, its investment and financing decisions, and social and environmental performance. Following the argument that female directors are less likely to be overconfident than their male counterparts, the acquisition literature shows that companies with gender-diverse boards are less acquisitive and pay a lower premium for the targets that they acquire. Nevertheless, the manner in which the gender diversity of another firm affects the financial decisions of the decision-making firm remains unexplored in the literature. Acquisitions provide the opportunity to investigate such a proposition. In this study, we have examined how the gender diversity at the target firm affects the acquisition decisions of the gender diverse bidder.

Using a sample of 1,926 US acquisitions, we have investigated whether gender-diverse targets are preferred more than male-only targets by gender-diverse bidders. We have followed with an examination of whether the qualifications, experience and expertise possessed by female directors of target firms play a role in the decision of gender-diverse bidders to acquire gender-diverse targets. Thereafter, we have analysed the degree to which gender-diverse bidders have demonstrated an improved efficiency when they have acquired gender-diverse targets and whether these efficiencies are rewarded by the capital market. We find that gender-diversity at the acquirer board leads to a greater probability of acquiring a gender-diverse target, an effect which is both statistically and economically significant. Furthermore, gender-diverse bidders are more likely to acquire a gender-diverse target when female directors of the target

possess specific traits such as networks, IVY education, CFA qualification, finance expertise, legal expertise, accounting experience and managerial experience. We have determined that neither tokenism nor the nature of appointment (executive versus non-executive nature and independent versus non-independent nature) of the female directors of the target play a role in the decision to acquire a gender-diverse target by a gender-diverse bidder. We reveal that gender-diverse bidders show improved efficiency as displayed by a longer time taken to complete an acquisition together with lower acquisition premiums, particularly when they acquire gender-diverse targets as opposed to male only targets. These efficiencies appear to be rewarded by the capital market by according positive abnormal returns during the announcement period of acquisitions. Gender-diverse bidders show improved post-acquisition performance when they acquire gender-diverse targets rather than male only targets.

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Table 1: Sample distribution

Panel A: Year-by-year distribution				Panel B: Industry-by-industry distribution		
Year	Obs.	Percent	Total deal value (\$,000)	Industry category	Obs.	Percent
2001	33	1.72	7,271.85	Business Services	6	0.31
2002	12	0.62	25,709.91	Banking	94	4.88
2003	21	1.09	21,524.46	Trading	6	0.31
2004	57	2.96	98,546.22	Electronic Equipment	767	39.82
2005	83	4.31	240,792.00	Pharmaceutical Products	135	7.01
2006	155	8.05	321,728.00	Petroleum and Natural Gas	39	2.02
2007	158	8.20	499,747.40	Computers	53	2.75
2008	118	6.13	210,823.90	Non-Metallic and Industrial Metal Mining	258	13.40
2009	121	6.28	239,733.00	Medical Equipment	568	29.49
2010	115	5.97	269,105.10			
2011	86	4.47	194,793.80			
2012	107	5.56	200,072.10			
2013	92	4.78	121,726.70			
2014	129	6.70	342,467.70			
2015	154	8.00	685,741.10			
2016	131	6.80	781,836.10			
2017	103	5.35	604,757.70			
2018	98	5.09	738,658.00			
2019	78	4.05	640,607.30			
2020	75	3.89	110,848.80			
Total	1,926	100	6,361,025.41	Total	1,926	100

This table presents sample distribution across years (Panel A) and industries (Panel B) of bidders over the period: 2001-2020. The industry classification is as per Standard Industrial Classification (SIC).

Table 2: Descriptive statistics

	Male only targets		Gender diverse targets		Mean test of difference (t-stat and sig.)	Median test of difference (χ^2 -stat and sig.)
	Mean	Median	Mean	Median		
Panel A: Percentage of female directors						
Percent of acquirer female directors	8.2035	8.3333	18.6759	16.6667	-18.57 (0.00)	317.01 (0.00)
Gender diverse bidder dummy	0.5703	1.0000	0.8342	1.0000	-13.13 (0.00)	100.41 (0.00)
Percentage of target female directors	-	-	0.2120	0.1667	-	-
Gender diverse target dummy	-	-	0.6940	1.0000	-	-
Panel B: Roles and Characteristics of target female directors						
Percentage of executive female directors	-	-	0.0331	0.0000	-	-
Percentage of non-executive female directors	-	-	0.1523	0.1333	-	-
Percentage of independent female directors	-	-	0.1406	0.1250	-	-
Percentage of non-independent female directors	-	-	0.0448	0.0000	-	-
Networks	-	-	7.4294	7.6329	-	-
Tenure	-	-	5.7555	4.6000	-	-
IVY education	-	-	0.4413	0.0000	-	-
CFA qualification	-	-	0.0120	0.0000	-	-
CPA qualification	-	-	0.1785	0.0000	-	-
Finance expertise	-	-	0.8788	1.0000	-	-
Industry expertise	-	-	0.0919	0.0000	-	-
M&A experience	-	-	0.1280	0.0000	-	-
Legal expertise	-	-	0.8788	1.0000	-	-
Accounting experience	-	-	0.3358	0.0000	-	-
Managerial expertise	-	-	0.4480	0.0000	-	-
Panel C: Bid premium, days taken and abnormal return						
Bid premium (%)	5.3001	0.5029	2.9036	0.0297	3.49 (0.00)	27.28 (0.00)
Days taken to complete the deal	124.0730	107.0000	136.7707	106.5000	-1.57 (0.11)	0.24 (0.62)
Log days	4.3182	4.6728	4.4872	4.7749	2.55 (0.11)	11.10 (0.00)
Announcement period abnormal return (%)	-0.0091	-0.0050	-0.0087	-0.0049	-0.13 (0.89)	0.16 (0.69)

Table 2: Descriptive statistics (Contd.)

	Male only targets		Gender diverse targets		Mean test of difference (t-stat and sig.)	Median test of difference (χ^2 -stat and sig.)
	Mean	Median	Mean	Median		
Panel D: Board characteristics						
Board size	9.9761	10.0000	11.1495	11.0000	7.52 (0.00)	59.02 (0.00)
% of independent directors	70.2913	75.0000	70.4398	75.0000	-0.19 (0.85)	3.83 (0.05)
CEO duality	0.4855	0.0000	0.4583	0.0000	1.20 (0.23)	1.07 (0.30)
Panel E: Financial Characteristics						
Market capitalization (\$,000)	12540.7000	469.8119	22889.9500	616.5541	2.98 (0.00)	5.11 (0.02)
Leverage	0.2426	0.1960	0.2648	0.2428	-2.26 (0.02)	9.54 (0.00)
Cash holdings	0.1889	0.1107	0.1878	0.0905	0.11 (0.91)	1.56 (0.21)
Return on assets	0.2587	0.0226	-0.0095	0.0231	0.92 (0.36)	0.01 (0.93)
Sales growth	0.2304	0.0623	0.2266	0.0329	0.14 (0.88)	2.93 (0.09)
Tobin's Q	1.4855	1.0768	1.3811	1.0045	2.88 (0.00)	18.89 (0.00)
Panel F: Deal characteristics						
Cash only dummy	0.3360	0.0000	0.2568	0.0000	3.80 (0.00)	9.05 (0.00)
Stock only dummy	0.1904	0.0000	0.1928	0.0000	-0.13 (0.89)	0.01 (0.92)
Related dummy	0.5653	1.0000	0.5493	1.0000	0.70 (0.48)	0.37 (0.54)
Multiple bid dummy	0.3430	0.0000	0.3976	0.0000	-2.48 (0.01)	4.30 (0.04)
Hostile bid dummy	0.1705	0.0000	0.2958	0.0000	-6.59 (0.00)	22.62 (0.00)
Serial bidder dummy	0.1585	0.0000	0.2221	0.0000	-3.57 (0.00)	5.82 (0.01)
Panel G: Other variables						
Equal rights amendment	0.4948	0.4638	0.5740	0.5689	5.08 (0.00)	75.06 (0.00)
Percentage of female labour force in state	0.2932	0.2921	0.2990	0.2985	-6.14 (0.00)	135.26 (0.00)

This table presents mean and median values of the variables used in the study for two groups - (i) acquirers of male-only targets and (ii) acquirers of gender-diverse targets – and the statistics of the test of differences. *P*-values are reported in parentheses. All variables are defined in Appendix A.

Table 3: Correlation matrix

	VIF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Gender diverse target dummy	(1)	1.0000											
Bid premium	(2)	1.72	-0.0288	1.0000									
Cumulative abnormal return	(3)	1.67	-0.1198***	0.0070	1.0000								
Log days	(4)	1.66	0.0794***	-0.0161	-0.0208	1.0000							
Percent of acquirer female directors	(5)	1.35	0.4260***	0.0388*	-0.1228***	0.1599***	1.0000						
Board size	(6)	1.31	0.1618***	-0.0111	-0.0608***	0.0717***	0.1417***	1.0000					
% of independent directors	(7)	1.28	-0.0001	0.0053	-0.0203	0.1058***	0.1658***	0.1069***	1.0000				
CEO duality	(8)	1.25	-0.0288	-0.0019	-0.0065	0.0293	0.0169	0.0278	0.1708***	1.0000			
Market capitalization	(9)	1.19	0.1695***	0.0420*	-0.1674***	0.0773***	0.2316***	0.4474***	0.2238***	0.1400***	1.0000		
Leverage	(10)	1.17	0.0479**	0.0688***	-0.0469**	0.0091	0.0603***	0.0078	-0.0139	0.0302	0.1127***	1.0000	
Cash holdings	(11)	1.16	0.0046	-0.0268	0.0433*	-0.1160***	0.0015	-0.2374***	-0.0796***	-0.1236***	-0.1798***	-0.2932***	1.0000
Return on assets	(12)	1.15	-0.0160	0.0033	0.0046	0.0075	-0.0179	-0.0115	-0.0246	0.0266	0.0252	-0.0223	0.0477**
Sales growth	(13)	1.14	-0.0132	-0.0321	-0.0143	-0.0188	-0.0353*	-0.0718***	-0.0655***	0.0042	-0.0987***	0.0170	0.0267
Tobin's Q	(14)	1.14	-0.0583***	0.0381*	0.0297	-0.0215	-0.0030	-0.0354	0.0637***	0.0786***	0.2697***	-0.0031	0.0756***
Cash only dummy	(15)	1.09	-0.0893***	0.0615***	0.0506**	-0.0744***	-0.0296	-0.1490***	0.0503**	0.0328	-0.0405*	-0.0383*	0.1112***
Stock only dummy	(16)	1.07	0.0013	-0.0643***	0.0126	0.1123***	-0.0336*	0.0263	-0.0488**	-0.0557**	-0.1221***	-0.0568***	-0.0928***
Relative size	(17)	1.06	-0.0144	-0.0265	-0.0396*	0.1039***	-0.0340*	0.0494**	0.0211	-0.0154	-0.0130	-0.0087	-0.1240***
Unrelated dummy	(18)	1.05	0.1101***	-0.0130	0.0071	-0.0988***	0.0003	-0.0263	-0.0901***	-0.0377*	-0.0545**	-0.0058	0.1452***
Hostile bid dummy	(19)	1.02	0.1417***	0.0579***	-0.0305	-0.0447**	0.1126***	0.0835***	0.0231	0.0321	0.1848***	0.0641***	0.0229
Serial bidder dummy	(20)	1.02	0.0784***	0.0293	-0.0411**	-0.0836***	0.0299	0.0498**	-0.0941***	-0.0061	0.0716***	0.0415*	0.1216***

Table 3: Correlation matrix (Contd.)

		(12)	(13)	(14)	(15)	(16)	(17)	(18)	(20)	(21)
Return on assets	(12)	1.0000								
Sales growth	(13)	-0.0161	1.0000							
Tobin's Q	(14)	-0.0049	-0.0412**	1.0000						
Cash only dummy	(15)	-0.0140	0.0065	0.0791***	1.0000					
Stock only dummy	(16)	0.0382*	0.0178	-0.0743***	-0.3360***	1.0000				
Relative size	(17)	0.0217	-0.0355*	-0.0122	-0.1185***	0.1535***	1.0000			
Unrelated dummy	(18)	-0.0241	0.0088	-0.1043***	0.0895***	-0.1741***	-0.0363*	1.0000		
Hostile bid dummy	(19)	0.0348	-0.0350*	-0.0059	-0.1740***	-0.1633***	-0.0293	0.1277***	1.0000	
Serial bidder dummy	(20)	-0.0211	0.0255	-0.0569***	0.0004	-0.1310***	-0.1063***	0.2210***	0.1481***	1.0000

This table presents the correlation matrix for the variables used in the regression models. The asterisk *, ** or *** denotes statistical significance at the 10%, 5% or 1%, respectively. All variables are defined in Appendix A.

Table 4: Likelihood of a gender-diverse bidder acquiring a gender-diverse target

	Model (1)	Model (2)	Model (3)
	Logit	Panel Logit	Fama-McBeth
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0968*** (0.00)	0.1203*** (0.00)	0.0149*** (0.01)
Board size	0.0751*** (0.00)	0.0895*** (0.00)	0.0055 (0.43)
% of independent directors	-0.0216*** (0.00)	-0.0271*** (0.00)	-0.0028 (0.16)
CEO duality	0.1067 (0.36)	0.1278 (0.39)	0.0379 (0.26)
Natural logarithm of market capitalization	0.0654* (0.05)	0.1033** (0.02)	0.0297 (0.10)
Leverage	-0.1115 (0.69)	-0.2597 (0.46)	0.0879 (0.23)
Cash holdings	0.1525 (0.62)	0.1936 (0.62)	0.0532 (0.31)
Return on assets	-0.0180 (0.69)	-0.0183 (0.68)	0.0129 (0.82)
Sales growth	0.0334 (0.71)	0.0571 (0.61)	-0.0672 (0.28)
Tobin's Q	-0.1714** (0.02)	-0.1502 (0.10)	-0.0328 (0.11)
Constant	16.4493 (0.98)	20.2865 (0.99)	0.1898 (0.10)
Year Fixed Effects	Yes	Yes	No
Industry Fixed Effects	Yes	No	Yes
Pseudo/Adjusted R-square	0.2492		0.2598
LR/Wald Chi-square	15.15**	156.60***	692.87***
N	1926	1926	1926

This table presents the regression results of Equation (1) which tests the likelihood of a gender-diverse board acquiring a gender-diverse target. Columns 1-3 present results for three types of models: Model (1) - logit model; Model (2) - panel regression random effects logit model with firm random effects; Model (3) - two-stage Fama-MacBeth (1973) model. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 5: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: The role of female directors' position

	Model (1)	Model (2)	Model (3)	Model (4)
	Executive director	Non-executive director	Independent director	Non-independent director
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0022*** (0.00)	0.0063*** (0.00)	0.0053*** (0.00)	0.0031*** (0.00)
Board size	-0.0004 (0.45)	0.0012 (0.18)	0.0003 (0.75)	0.0005 (0.42)
% of independent directors	-0.0004*** (0.00)	-0.0002 (0.22)	0.0004* (0.06)	-0.0009*** (0.00)
CEO duality	0.0025 (0.43)	0.0041 (0.43)	-0.0008 (0.87)	0.0076** (0.05)
Natural logarithm of market capitalization	-0.0004 (0.62)	-0.0017 (0.22)	0.0001 (0.97)	-0.0023** (0.03)
Leverage	0.0004 (0.96)	0.0253** (0.04)	0.0260** (0.03)	-0.0000 (1.00)
Cash holdings	0.0188** (0.02)	-0.0216* (0.10)	-0.0228* (0.08)	0.0198** (0.04)
Return on assets	-0.0000 (0.98)	-0.0001 (0.84)	-0.0000 (0.96)	-0.0001 (0.83)
Sales growth	0.0023 (0.34)	-0.0024 (0.52)	-0.0002 (0.95)	0.0001 (0.98)
Tobin's Q	0.0027 (0.18)	-0.0000 (0.99)	0.0004 (0.90)	0.0023 (0.34)
Constant	0.0487** (0.01)	-0.0111 (0.71)	-0.0521* (0.08)	0.1195** (0.01)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-square	0.2081	0.4803	0.4273	0.2767
N	1,442	1,442	1,442	1,442

This table presents the regression results of Equation (1) which tests the likelihood of a gender-diverse board acquiring a gender-diverse target conditional on the position held by target female directors. In Model (1), the dependent variable takes the value of one if the majority of target female directors is executive directors and zero otherwise. In Model (2), the dependent variable takes the value of one if the majority of target female directors is non-executive directors and zero otherwise. In Model (3), the dependent variable takes the value of one if the majority of target female directors is independent directors and zero otherwise. In Model (4), the dependent variable takes the value of one if the majority of target female directors is non-independent directors and zero otherwise. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 6: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Propensity score matching analysis

Panel A: Differences in means between treated and control groups				
	High female director (treated) group	Low female director (control) group	Difference test	
	Mean	Mean	<i>t</i> -statistic	<i>P</i> -value
Fraction of acquirer female directors	0.6219	0.3103	12.23	(0.00)
Board size	10.40	10.41	-0.07	(0.94)
% of independent directors	69.6930	69.1170	0.94	(0.35)
CEO duality	0.4559	0.4618	-0.22	(0.83)
Natural logarithm of market capitalization	7.4339	7.4664	-0.32	(0.75)
Leverage	0.2504	0.2465	0.33	(0.74)
Cash holdings	0.1851	0.1889	-0.33	(0.74)
Return on assets	-0.0173	-0.0257	0.53	(0.60)
Sales growth	0.2338	0.2430	-0.27	(0.79)
Tobin's Q	1.4009	1.4213	-0.49	(0.62)
Panel B: Propensity score matching regression results				
	First stage	Second Stage		
	DV= D_Pct_FemaleDirector	DV=DFDIR_TAR		
Dummy fraction of acquirer female directors (<i>ACQ_FEM</i>)		0.3055***		
		(12.88)		
Board size	0.0229 (0.17)	0.0163*** (3.97)		
% of independent directors	0.0171*** (0.00)	-0.0020** (-2.57)		
CEO duality	0.0575 (0.55)	0.0208 (0.82)		
Natural logarithm of market capitalization	0.2167*** (0.00)	0.0200** (2.55)		
Leverage	0.5842** (0.02)	0.0658 (1.14)		
Cash holdings	0.6609*** (0.01)	0.0872 (1.30)		
Return on assets	-0.0159 (0.63)	0.0326 (0.72)		
Sales growth	-0.0345 (0.68)	-0.0003 (-0.01)		
Tobin's Q	-0.0374 (0.59)	-0.0393** (-2.36)		
Constant	-2.5916*** (0.00)	0.6148*** (6.18)		
Year Fixed Effects	Yes	Yes		
Industry Fixed Effects	Yes	Yes		
Pseudo R ² / Adj R ²	0.0946	0.2423		
N	1,926	1,386		

This table presents the results of propensity score matching analysis. Panel A reports the differences in means between treated and control groups for the variables used in the first-stage model. Panel B reports the regression outputs for the first-stage model and the second-stage model. P values for robust two-tailed *t*-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 7: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Two-stage least square regressions

	Stage 1	Stage 2
Predicted fraction of acquirer female directors (<i>PRED_ACQ_FEM</i>)		0.0867*** (0.00)
Annual percentage of female labour force in each state	2.7918** (0.01)	
Equal Rights Amendment (dummy for each state and year)	97.0334*** (0.00)	
Board size	0.1910* (0.05)	0.0373*** (0.00)
% of independent directors	0.1016*** (0.00)	-0.0160*** (0.00)
CEO duality	-0.1271*** (0.00)	0.0457 (0.53)
Natural logarithm of market capitalization	1.1359*** (0.00)	0.0069 (0.78)
Leverage	1.0106 (0.47)	-0.1089 (0.52)
Cash holdings	3.9558*** (0.00)	-0.0157 (0.94)
Return on assets	-0.0555 (0.22)	-0.0082 (0.70)
Sales growth	-0.2019 (0.68)	0.0202 (0.72)
Tobin's Q	-0.4183 (0.29)	-0.0802* (0.08)
Constant	-31.5371*** (0.00)	5.5444 (0.97)
R-squared	0.1677	
N	1,926	1,926
Wald chi-squared test of exogeneity	9.75***	246.61***
Exogeneity test Wald p-value		0.00

This table presents the results of two-stage least square regressions. In the first-stage regression, the categorical variable representing high-gender-diverse acquirers is regressed on two instruments - (i) annual percentage of female labour force in each state and (ii) an indicator variable capturing the years after which the equal rights amendment (ERA) was enacted by a particular state – and the governance and financial characteristics included in Equation (1). In the second-stage regression, the dummy variable capturing gender-diverse targets is regressed on the predicted fraction of acquirer's female directors and other governance and financial controls. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 8: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Target female directors' qualifications, expertise and experiences

Panel A: Education and qualifications	Networks	Tenure	IVY	CFA	CPA	Qualification index
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0134*** (0.00)	0.0129 (0.16)	0.0093*** (0.00)	0.0005* (0.05)	0.0011 (0.20)	0.0331*** (0.00)
Board size	-0.0151 (0.17)	-0.0165 (0.68)	0.0008 (0.91)	0.0008 (0.45)	-0.0000 (0.99)	-0.0057 (0.71)
% of independent directors	-0.0005 (0.81)	-0.0003 (0.96)	-0.0001 (0.91)	-0.0001 (0.58)	0.0009 (0.18)	-0.0027 (0.36)
CEO duality	0.1609** (0.02)	0.1482 (0.55)	0.0501 (0.22)	0.0030 (0.64)	0.0014 (0.95)	0.1839* (0.05)
Natural logarithm of market capitalization	0.1002*** (0.00)	-0.0385 (0.58)	0.0244** (0.04)	-0.0037** (0.04)	-0.0044 (0.48)	-0.0144 (0.59)
Leverage	0.3948** (0.01)	-1.4648** (0.01)	0.2378** (0.01)	0.0078 (0.60)	-0.0359 (0.49)	0.1162 (0.60)
Cash holdings	0.4467*** (0.01)	-0.9772 (0.11)	0.2791*** (0.01)	-0.0006 (0.97)	-0.1145** (0.03)	-0.2163 (0.35)
Return on assets	0.0012 (0.80)	-0.0030 (0.87)	-0.0019 (0.52)	-0.0001 (0.88)	-0.0006 (0.73)	-0.0032 (0.65)
Sales growth	-0.0769 (0.16)	0.1326 (0.51)	-0.0345 (0.30)	0.0095* (0.07)	0.0070 (0.70)	0.0042 (0.96)
Tobin's Q	-0.0708 (0.11)	-0.4706*** (0.00)	-0.0595** (0.03)	0.0089** (0.03)	0.0496*** (0.00)	-0.2087*** (0.00)
Constant	6.1819*** (0.00)	7.9567*** (0.00)	-0.0144 (0.92)	0.0314 (0.18)	0.1442* (0.08)	1.6151*** (0.00)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.0949	0.0338	0.0607	0.0168	0.0305	0.0742
N	1,908	1,921	1,921	1,921	1,921	1,921

Table 8: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Target female directors' qualifications, expertise and experiences (Contd.)

Panel B: Experience and expertise	Finance expertise	Industry expertise	M&A experience	Legal expertise	Accounting experience	Managerial expertise
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0064*** (0.00)	0.0006 (0.43)	-0.0007 (0.51)	0.0070*** (0.00)	0.0063*** (0.00)	0.0189*** (0.00)
Board size	0.0314*** (0.00)	-0.0072** (0.03)	0.0048 (0.31)	0.0016 (0.76)	-0.0015 (0.78)	-0.0111 (0.20)
% of independent directors	0.0003 (0.84)	0.0004 (0.53)	0.0009 (0.34)	-0.0009 (0.41)	-0.0009 (0.39)	-0.0015 (0.38)
CEO duality	0.0563 (0.29)	-0.0283 (0.18)	0.0196 (0.50)	0.0880*** (0.01)	0.0140 (0.68)	0.0684 (0.20)
Natural logarithm of market capitalization	-0.0187 (0.21)	0.0157*** (0.01)	0.0018 (0.82)	0.0089 (0.35)	-0.0163* (0.09)	-0.0145 (0.34)
Leverage	-0.1261 (0.31)	0.0388 (0.43)	-0.0362 (0.60)	0.0955 (0.22)	-0.0326 (0.67)	0.0245 (0.84)
Cash holdings	-0.2993** (0.02)	0.0425 (0.41)	-0.0017 (0.98)	-0.0659 (0.42)	-0.1098 (0.18)	-0.0248 (0.85)
Return on assets	0.0015 (0.70)	-0.0001 (0.95)	-0.0011 (0.60)	0.0021 (0.40)	-0.0011 (0.66)	-0.0036 (0.37)
Sales growth	-0.0311 (0.47)	-0.0087 (0.61)	-0.0108 (0.65)	0.0109 (0.69)	-0.0153 (0.57)	-0.0150 (0.73)
Tobin's Q	-0.0670* (0.05)	-0.0049 (0.72)	0.0024 (0.90)	-0.0137 (0.53)	-0.0678*** (0.00)	-0.1155*** (0.00)
Constant	0.9704*** (0.00)	-0.0587 (0.45)	-0.0311 (0.78)	0.1441 (0.24)	0.5982*** (0.00)	1.0002*** (0.00)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.0922	0.0231	0.0209	0.0501	0.0307	0.0788
N	1921	1921	1921	1921	1921	1921

This table presents the regression results of Equation (2) which tests the likelihood of a gender-diverse board acquiring a gender-diverse target having female directors with specific abilities, qualifications, expertise and experience. We analyse a number of abilities and qualifications (networks, tenure, IVY education, CFA qualification, CPA qualification and qualification index), and expertise and experiences (finance expertise, industry expertise, M&A experience, legal expertise, accounting experience and managerial expertise). P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 9: Acquisition of gender-diverse versus male only targets by gender-diverse acquirers: Acquisition efficiency and market response

Variable	Panel A: Bid premium		Panel B: Number of days taken to complete the deal		Panel C: Cumulative Annual return	
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
	Gender diverse targets	Male only targets	Gender diverse targets	Male only targets	Gender diverse targets	Male only targets
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	-0.0886 (0.24)	0.5157** (0.02)	0.0210*** (0.00)	-0.0006 (0.92)	0.0008*** (0.00)	-0.0001 (0.76)
Board size	-0.2793 (0.46)	-0.5497 (0.33)	-0.0178 (0.26)	0.0283* (0.07)	0.0002 (0.74)	-0.0006 (0.40)
% of independent directors	-0.1331* (0.05)	-0.1902 (0.11)	0.0090*** (0.00)	0.0065* (0.05)	-0.0000 (0.98)	0.0000 (0.94)
CEO duality	3.5084 (0.14)	2.9804 (0.37)	0.1462 (0.14)	-0.0417 (0.65)	-0.0008 (0.85)	-0.0025 (0.57)
Natural logarithm of market capitalization	1.4273* (0.05)	0.2563 (0.79)	0.0238 (0.43)	0.0219 (0.41)	0.0003 (0.80)	0.0012 (0.36)
Leverage	-5.0825 (0.38)	4.3530 (0.57)	0.2507 (0.30)	0.1055 (0.62)	0.0098 (0.38)	0.0258** (0.01)
Cash holdings	-1.0891 (0.86)	-1.5883 (0.85)	0.0023 (0.99)	-0.6965*** (0.00)	-0.0017 (0.88)	-0.0175 (0.12)
Return on assets	-1.0545 (0.83)	0.0215 (0.90)	-0.1884 (0.35)	0.0045 (0.37)	-0.0025 (0.79)	0.0001 (0.57)
Sales growth	2.8011 (0.31)	-0.8819 (0.69)	0.0102 (0.93)	-0.0013 (0.98)	0.0077 (0.14)	-0.0052* (0.08)
Tobin's Q	-1.4277 (0.35)	0.1206 (0.96)	-0.0131 (0.83)	-0.0699 (0.27)	0.0033 (0.25)	0.0009 (0.77)
All cash dummy	0.5098 (0.86)	2.9282 (0.42)	-0.2392* (0.05)	-0.0171 (0.86)	0.0059 (0.28)	0.0101** (0.04)
All stock dummy	5.7009* (0.08)	0.4726 (0.91)	0.1818 (0.16)	0.3649*** (0.00)	-0.0094 (0.12)	-0.0013 (0.83)
Related dummy	1.4695 (0.53)	-2.8535 (0.37)	0.1763* (0.07)	0.2217** (0.01)	-0.0038 (0.39)	0.0044 (0.30)
Multiple bid dummy	-1.1086 (0.72)	8.1024** (0.05)	-0.1857 (0.14)	-0.1324 (0.25)	-0.0079 (0.18)	0.0042 (0.44)
Hostile bid dummy	-1.7426 (0.53)	-1.6405 (0.70)	-0.0985 (0.40)	-0.1509 (0.21)	0.0084 (0.11)	0.0079 (0.17)
Serial bid dummy	7.0055* (0.06)	-7.7938 (0.15)	0.1115 (0.47)	-0.2342 (0.12)	0.0027 (0.70)	0.0036 (0.62)
Constant	-0.3364 (0.97)	13.3984 (0.56)	3.2108*** (0.00)	3.0048*** (0.00)	-0.0332** (0.04)	-0.0815*** (0.01)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
R-square	0.0446	0.0349	0.1542	0.1539	0.0878	0.0725
N	923	1,002	820	1,003	872	1,003
Diff. in coef. and χ^2	1.42 (0.23)		12.36*** (0.00)		7.36*** (0.00)	

This table presents the regression output for Equations (3) and (4). Models (1) and (2) use the bid premium as the dependent variable; Models (3) and (4) use the log value of the number of days taken to complete the deal as the dependent variable; Models (5) and (6) use the announcement period abnormal return as the dependent variable. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, **, and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 10: Acquisition of gender-diverse versus male only targets by gender-diverse acquirers: Post-acquisition performance

	Panel A: Return on assets		Panel B: Buy-and-hold return	
	Model (1)	Model (2)	Model (3)	Model (4)
	Gender diverse targets	Male only Targets	Gender diverse targets	Male only Targets
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0006*** (0.00)	-0.0002 (0.65)	0.0018*** (0.00)	0.0004 (0.44)
Board size	-0.0004 (0.71)	-0.0013 (0.29)	-0.0003 (0.62)	-0.0028** (0.03)
% of independent directors	-0.0001 (0.52)	0.0003 (0.28)	0.0001 (0.45)	0.0009*** (0.00)
CEO duality	0.0111* (0.08)	-0.0075 (0.32)	0.0069 (0.12)	-0.0182** (0.03)
Natural logarithm of market capitalization	0.0028 (0.13)	0.0084*** (0.00)	0.0042*** (0.00)	0.0198*** (0.00)
Leverage	0.0106 (0.49)	-0.0098 (0.57)	0.0073 (0.49)	-0.0603*** (0.00)
Cash holdings	-0.0056 (0.72)	-0.0083 (0.65)	0.0055 (0.60)	-0.1037*** (0.00)
Sales growth	-0.0339*** (0.00)	-0.0183*** (0.00)	-0.0244*** (0.00)	-0.0100** (0.03)
Constant	0.0393* (0.07)	0.0345 (0.50)	0.0018*** (0.00)	0.0004 (0.44)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
R-square	0.0745	0.0708	0.1279	0.2293
N	923	1003	923	1003
Diff. in coef. and χ^2 (Percent of acquirer female directors)	4.02** (0.04)		26.27*** (0.00)	

This table presents the regression output for Equations (4) using post-acquisition performance as the dependent variable. Models (1) and (2) use the return on assets as the dependent variable; Models (3) and (4) use the buy-and-hold return as the dependent variable. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 11: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Role of governance quality

Panel A: Number of analysts			
	Model (1)	Model (2)	
	High analyst coverage	Low analyst coverage	Difference in Coefficients and χ^2
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.1003***	0.0966***	0.08 (0.77)
	(0.00)	(0.00)	
Constant	Yes	Yes	
Controls	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
R-square	0.2369	0.2757	
Chi-square	160.34	38.17	
Prob chi2	0.0000	0.0001	
N	945	944	
Panel B: Entrenchment index			
	Model (1)	Model (2)	
	High Eindex	Low Eindex	Difference in Coefficients and χ^2
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0787***	0.1119***	4.17** (0.04)
	(0.00)	(0.00)	
Constant	Yes	Yes	
Controls	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
R-square	0.2029	0.2827	
Chi-square	345.95	182.10	
Prob chi2	0.0000	0.0000	
N	935	986	
Panel C: Institutional ownership			
	Model (1)	Model (2)	
	High institutional ownership	Low institutional ownership	Difference in Coefficients and χ^2
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.1124***	0.0802***	6.23** (0.01)
	(0.00)	(0.00)	
Constant	Yes	Yes	
Controls	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
R-square	0.2754	0.2187	
Chi-square	222.18	311.83	
Prob chi2	0.0000	0.0000	
N	963	961	

Panel D: Organizational capital			
	Model (1)	Model (2)	
	High organisational capital	Low organisational capital	Difference in Coefficients and χ^2
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.0440**	0.0131	1.31* (0.25)
	(0.04)	(0.22)	
Constant	Yes	Yes	
Controls	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
R-square	0.1304	0.0723	
Chi-square	45.06	23.98	
Prob chi2	0.0000	0.0205	
N	218	660	

This table presents the regression results of Equation (1) which tests the likelihood of a gender-diverse board acquiring a gender-diverse target. The sample is divided into two groups – high and low – under four aspects of governance quality: (i) institutional ownership, (ii) number of analysts, (iii) Eindex and (iv) organisational capital. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, ** and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.

Table 12: Likelihood of a gender-diverse bidder acquiring a gender-diverse target: Role of tokenism

Panel A: Gender-diverse targets with only one or two female directors, and male only targets			
	Model (1)	Model (2)	Model (3)
	Logit	Panel Logit	Fama-McBeth
Fraction of acquirer female directors (<i>ACQ_FEM</i>)	0.1355*** (0.00)	0.1635*** (0.00)	0.0187 (0.14)
Constant	-3.0297*** (0.00)	-3.6233*** (0.00)	-
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	No
Industry Fixed Effects	Yes	No	Yes
Pseudo/Adjusted R-square	0.1433	0.2004	0.2849
LR/Wald Chi-square	283.31***	86.96***	14.84***
N	1,217	1,217	1,238
Panel B: Gender-diverse targets with three or more female directors, and male only targets			
	Model (1)	Model (2)	Model (3)
	Logit	Panel Logit	Fama-McBeth
Percent of acquirer female directors	0.1142*** (0.00)	0.1527*** (0.00)	0.0159*** (0.00)
Constant	16.4330 (0.98)	23.6624 (1.00)	0.1872 (0.15)
Controls	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	No
Industry Fixed Effects	Yes	No	Yes
Pseudo/Adjusted R-square	0.3553	0.2137	0.2891
LR/Wald Chi-square	629.58***	76.89***	21.06**
N	1,283	1,283	1,284

This table presents the regression results of Equation (1) which tests the likelihood of a gender-diverse board acquiring a gender-diverse target. In estimating this equation, Panel A uses gender-diverse targets with only one or two female directors, and male only targets while Panel B uses gender-diverse targets with three or more female directors, and male only targets. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, **, and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix.

Table 13: Changes in board characteristics of gender-diverse acquirers

Variable	Panel A: Gender-diverse bidders acquiring gender-diverse targets			Panel B: Gender-diverse bidders acquiring male only targets		
	(1)	(2)	(3)	(1)	(2)	(3)
	Year _{t-1}	Year ₀	Difference t-stat. (p-value)	Year _{t-1}	Year ₀	Difference t-stat. (p-value)
Board size	9.9647	11.2671	-4.54*** (0.00)	9.0000	10.0327	-1.95* (0.06)
Number of female directors	2.0563	3.0179	-3.46*** (0.00)	0.8157	1.7476	-5.44*** (0.00)
Percentage of female directors	0.1954	0.3005	3.94*** (0.00)	0.0916	0.1867	-5.73*** (0.00)
Percentage of independent directors	0.7130	0.9631	-5.04*** (0.00)	0.8164	0.8956	1.40 (0.16)
Number of corporate governance committee chairs held by female directors	0.0000	0.0143	1.43 (0.15)	0.0789	0.0000	4.26*** (0.00)
Number of auditing committee chairs held by female directors	0.0352	0.0863	-1.95* (0.05)	0.3684	0.2710	1.22 (0.22)
Number of compensation committee chairs held by female directors	0.2464	0.2449	-1.04 (0.29)	0.2105	0.3084	-1.21 (0.22)

This table reports changes in board characteristics of gender diverse bidders from year -1 to year 0. Panel A reports changes for gender-diverse bidders acquiring gender-diverse targets. Panel B reports changes for gender-diverse bidders acquiring male only targets. P values for robust two-tailed t-statistics clustered by firm are presented in parentheses. The superscripts ***, **, and * correspond to statistical significance at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix.

Appendix A: Definitions of variables

Variable	Definition
Percentage of female directors:	
Percent of acquirer female directors	The percentage of acquirer female directors on the board divided by the size of the acquirer board.
Gender diverse bidder dummy	Indicator variable that takes the value of one if there is at least one acquirer female director on the acquirer board, and zero otherwise.
Percentage of target female directors	The percentage of target female directors on the board divided by the size of the target board.
Gender diverse target dummy	Indicator variable that takes the value of one if there is at least one target female director on the target board, and zero otherwise.
Roles and Characteristics of target female directors:	
Percentage of executive female directors	The percentage of target executive female directors on the board divided by the size of the board.
Percentage of non-executive female directors	The percentage of target non-executive female directors on the board divided by the size of the board.
Percentage of independent female directors	The percentage of target independent female directors on the board divided by the size of the board.
Percentage of non-independent female directors	The percentage of target non-independent female directors on the board divided by the size of the board.
Female director attributes:	
Networks	Total network size of acquirer female (male) directors on the board.
Tenure	Median time of presence of acquire female (male) directors on the board.
Number of degree qualifications	Median number of degree qualifications of acquirer female (male) directors on the board.
IVY education	Maximum number of acquirer female (male) directors on the board with IVY league education.
CPA qualification	Maximum number of acquirer female (male) directors on the board with CFA qualification.
CPA qualification	Maximum number of acquirer female (male) directors on the board with CFA qualification.
Finance expertise	Number of female directors who have been employed in the financial services industry, in a finance-related role (Accountant, Chief Financial Officer, Treasurer, or Vice President of Finance), or in a top-tier auditing firm (Pricewaterhouse, Deloitte, Ernst & Young, KPMG, Arthur Andersen, Coopers, Peat Marwick, Touche Ross), using data from BoardEx.
Industry experience	Number of acquirer female directors who have served as a manager or director in the same Fama-French 48 industry as the target.

M&A experience	Number of acquirer female directors who have served on an M&A committee of the board of any firms in the past.
Management expertise	Number of acquirer female directors who have served on CEO, CFO, CIO, CDO and Chief Executives roles of any firms in the past.
Legal expertise	Number of acquirer female directors who have served as accountant, Chief Financial Officer, Treasurer and vice president finance roles in the past.
Accounting experience	Number of acquirer female directors who have served as consultant, lawyer, attorney and Judge roles in the past.
Qualification index	The sum of the following indicator variables: (i) Networks, (ii) Tenure, (iii) Number of degree qualifications, (iv) IVY education, (v) CPA qualification and (vi) CPA qualification. Each variable is assigned a value of one if a director possesses that particular skill/experience and zero otherwise.
Acquirers' firm characteristics:	
Market capitalization	The natural logarithm of the bidder's market capitalization.
Leverage	Short-term debt plus current portion of long-term debt plus long-term debt divided by total assets.
Cash holdings	Total cash holdings divided by total assets.
Return on assets	Income before extraordinary divided by opening year book value of total assets
Tobin's Q	The market value of total assets divided by the book value of total assets. The market value of assets is calculated as the book value of total assets minus the book value of common equity plus the number of common shares outstanding times the stock price.
Acquirers' post-acquisition performance:	
Post-acquisition change in return on asset	The average change in ROA reported by the acquirer following the acquisition announcement year (t_{+1}).
Post-acquisition equally weighted long run return	Equally-weighted monthly buy and hold return earned buy the acquirer for the 36-month period following the acquisition month.
Acquirers' governance characteristics:	
Board size	The number of directors on the board.
% of independent directors	The proportion of independent directors on the board.
CEO duality	Indicator variable that takes the value of one if both CEO and chair positions are held by the same person, and zero otherwise.
Bid characteristics:	
Cash only dummy	Indicator variable that takes the value of one if the acquisition is 100% financed with cash, and zero otherwise.
Stock only dummy	Indicator variable that takes the value of one if the acquisition is 100% financed with stock, and zero otherwise.
Related dummy	Indicator variable that takes the value of one if the bidder and the target belong to different four-digit primary SIC codes reported by SDC, and zero if they belong to same SIC codes.
Hostile bid dummy	Indicator variable that takes the value of one if the SDC classifies the bid as a hostile takeover, and zero otherwise.
Multiple bid dummy	Indicator variable that takes the value of one if the bidder acquires three or more targets in a given year, and zero otherwise.

Acquisition efficiency measures:	
Bid premium	The ratio of the final offer price to the target stock price four weeks prior to the original announcement date minus one.
Days to complete the deal	Natural logarithm of the number of days taken to complete the deal.
Announcement period cumulative abnormal return	Cumulative abnormal return earned by the acquirer during the three-day announcement period.
Instruments:	
Percent of female employee	Annual percentage of female labour force in each state.
Equal Rights Amendment (dummy for each state and year)	An indicator variable assigned the value of 1 for observations coming from states that have ratified the Equal Rights Amendment (ERA) to the US Constitution and 0 for states that have not.