Do Managers Keep Their Word? The Disclosure of Merger Intention at Pre-merger Issuance and M&A Performance

Jie (Michael) Guo
Email: jie.guo@durham.ac.uk

Durham University Business School, Mill Hill Lane, Durham, DH1 3LB, UK

Lu Li
Email: lu.li2@durham.ac.uk

Durham University Business School, Mill Hill Lane, Durham, DH1 3LB, UK

Nan Hu

Email: nan.hu@glasgow.ac.uk

Glasgow University Adam Smith Business School. Glasgow, G12, 8QQ

Xing Wang*
Email: xing.wang@durham.ac.uk

Durham University Business School, Mill Hill Lane, Durham, DH1 3LB, UK

Abstract

This paper investigates whether disclosing merger intention at the announcement of equity/debt issuance has an impact on subsequent M&A transactions. We find that companies tend to issue higher proceeds when they reveal their merger intentions, and, subsequently, they are more likely to complete the merger deal itself and pay a higher bid premium. However, we did not find a significant difference in merger performance between firms revealing merger intention and others. Our finding is consistent with the capital need theory.

Keywords: Merger Intention, Equity Issuance, Debt Issuance, Mergers & Acquisitions, and Event Studies

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*Corresponding author: Xing Wang, Durham Business School, Mill Hill Lane, Durham, UK, DH1 3LB, phone: +44 (0) 1913345200, fax: +44 (0) 1913345201, e-mail: xing.wang@durham.ac.uk. We are grateful to Yichen Li, Pei Liu, Changyun Wang, Dimitris Petmezas, and the participants of the 2016 Midwest Finance Association Annual Conference,2016 Eastern Finance Association Annual Conference as well as well as seminars at Durham University, Surrey University, Strathclyde University, Renmin University, Beijing University for their helpful comments and suggestions in an earlier version of the paper. Any remaining error is ours.

1. Introduction

The Securities and Exchange Commission requires a firm to disclose the intention of proceeds usage for debt or equity offering. With a large degree of discretion over content, issuers have the option to voluntarily reveal either specific intentions or vague generalisation. The main interest of this paper is the disclosure of acquisition intention at debt or equity issuance and its relation to the subsequent acquisition performance.

As strategic moves, mergers and acquisitions (M&As) are generally kept secret before deal announcement because the disclosure may contain proprietary message and limit a firm's flexibility. However, approximately one-fifth of US public acquirers reveal their M&As intention in advance at pre-merger issuance over the period 1985-2015. Consequently, several questions have been raised. Why would a firm be willing to reveal its acquisition plan at issuance? Does the disclosed acquisition intention have economic impacts on the follow-on takeover?

Previous studies mainly focus on information disclosure around merger announcement. There is little evidence on the disclosed merger intention at pre-deal issuance, which might serve as an important channel to obtain corporate information for forecasting. On the one hand, by disclosing merger intention, managers may credibly communicate with investors that they would allocate the proceeds efficiently. Therefore, the disclosed information can be used to signal that the subsequent merger transaction is a value-enhancing project (Walker & Yost 2008; Autore *et al.* 2009).

On the other hand, instead of conveying credible information, the capital need theory suggests that firms disclose merger intention at issuance simply for raising more capital.[1] Cumming and Walz (2010) find that fund managers tend to voluntarily disclose an inflated valuation of the unsold private equity investment to acquirer more funds. Similarly, by catering to investors' preferences for conglomerates (Baker *et al.* 2009), the acquisition intention might be stated for raising higher proceeds at issuance. With higher cash reserves, bidders would face fewer obstacles during the negotiation with target firms. Therefore, the revealed merger plan may facilitate a follow-on merger to some extent, e.g. a higher completion rate, but is not necessarily related to a superior performance.

[1] The capital need theory argues that greater disclosure helps firms raise capital at a low cost, for example Diamond and Verrecchia (1991) and Botosan (1997).

This study employs a sample of 8,903 U.S. mergers and acquisitions over the period 1985-2015. Our analysis shows that issuers announcing merger intention raise more capital but after that they conduct smaller takeover. Next, we find that the revealed merger intention at pre-deal issuance is associated with a higher probability of follow-on acquisition success and a higher takeover premium. However, such higher completion rates and higher premiums do not indicate a value-increasing merger transaction. Our analyses show that acquirers with the disclosed merger intention experience significant lower abnormal returns in both the short-run and long-run. Overall our findings suggest that the revealed acquisition intention at issuing activity is mainly for raising higher proceeds, rather than signalling good investment, which is consistent with the capital need theory.

Our study contributes to literature in several ways. First, to the best of our knowledge, it is the first study to investigate the motivation behind the disclosed merger intention at issuance and provide evidence of how effectively the proceeds are allocated afterwards. Second, unlike previous research focusing on the disclosure around merger announcement, our study examines the disclosed information at pre-merger issuance, enabling us to investigate takeovers from an earlier stage. Third, our paper contributes to the literature by introducing the disclosed merger intention to the existing framework of the capital structure and firm value (Myers 1984; Jensen & Smith 1985; Malcolm Baker & Wurgler 2002).

2. Hypothesis Development

Prior research shows that the motivation of voluntary disclosure arises from two conflicting strategies. On the one hand, firms disclose merger intention at issuance to convey a favourable information that they will efficiently allocate the proceeds to a value-increasing deal (Walker & Yost 2008; Autore *et al.* 2009). On the other hand, the intention to conduct acquisition is revealed for catering to the preferences of investors on M&As, which is actually aimed at a larger issue size. Building on these views, we first investigate issue size and propose two competing hypotheses:

H1a*: Disclosure of merger intention in the prospectus will have no effect on issue size.*

H1b*: Disclosure of merger intention in the prospectus will positively influence issue size.*

Walker *et al.* (2016) suggest that a firm disclosing specific investment intention should achieve it afterwards, which helps the firm build credibility with investors. On the contrary, firms who

reveal future move without successful action would experience a loss of trust among investors and face a higher future financing cost. Therefore, we hypothesize that:

***H2**: Acquirers of revealed deals have higher success rate than non-revealed deals.*

Previous studies, e.g. Betton *et al.* (2008), argue that the realized benefit of merger transaction has a positive influence on the takeover premium. Additionally, to facilitate merger completion, acquirers would also tend to offer a higher price for target firm. Therefore, we would expect that:

***H3**: Acquirers of revealed deals pay higher premiums than non-revealed deals.*

Different motivations behind the disclosed merger intention can lead to different performance of follow-on mergers. For firms who attempt to credibly signal good investment via the disclosure on proceeds usage at issuance, we hypothesize that:

***H4a**: Acquirers of revealed deals will enjoy better performance than acquirers of non-revealed deals.*

In contrast, if firms' management make use of the disclosed merger intention to deceive the market and raise more capital, we would expect that:

***H4b**: Acquirers of revealed deals will suffer worse performance than acquirers of non-revealed deals.*

3. Data

3.1 Dataset construction

The sample includes U.S. mergers and acquisitions over the period 1985-2015 from Thomson One. Acquirers are public firms and have stock price data and financial data from the CRSP and COMPUSTAT database, respectively. The transaction value is at least $1 million, in which the target is a public firm, a private firm, or a subsidiary of a public firm. Following these criteria, we construct a M&As dataset of 62,182 deals.

The data on issuance includes U.S. public equity and debt offerings over the period 1982-2015 from Thomson One. The time frame is selected as we consider issuance conducted during three years before the first listed deal in the M&As dataset. Next, we identify the disclosed merger intention via the SDC data item 'use of proceeds' which is labelled 'Future Acquisitions'. A

dummy variable *Intention* is constructed, equalling 1 if the firm state merger intention at issuance, and 0 otherwise. Finally, we obtain a sample of 203,839 issuance.

We use the CUSIP of acquirers and issuers to match a firm's acquisition with its pre-deal issuance, respectively. For each acquisition, any issuance following are removed and only the most recent equity or debt issuance is included. Next, as the financing decision before merger can have signal effect, we construct a dummy variable *Debt* for whether the type of pre-merger issuance is debt, and exclude any firms that issued both equity and debt during the three-year before merger announcement. The union of these data lead to a final sample of 8903 M&As deals.

3.2 Summary statistics

[Insert Table 1 Here]

Table 1 shows summary statistics for the sample. To assess the impact of merger intention disclosure, our sample is divided into two sub-samples – those with revealed acquisition intention at pre-merger issuance (henceforth "revealed deals") and those without such disclosure (henceforth "non-revealed deals"). In general, the evidence indicates remarkable differences between the sub-groups. Panel A and B show that firms of revealed deals significantly show a lower market value, leverage ratio, and cash flow ratio compared to ones of non-revealed deals. Panel C shows that the transaction value of revealed deals is considerably smaller, which might be attributed to the smaller bidder size. With smaller deal size, however, the proceeds size indicates that acquirers of revealed deals actually raise more capital at pre-merger issuance than ones of non-revealed group (*Proceeds Ratio* for the two groups are 4.32 and 3.78, respectively). The larger issuing size might be due to the fact that there is a need for more capital to prepare for a profitable growth opportunity (Ambarish *et al.* 1987). Alternatively, firms might simply increase liquidity. Table 1 also shows that bidders of revealed deals enjoy a remarkable higher completion rate (by 8.6%) and pay a higher premium (by 3.3%) compared to the non-revealed group. The evidence is preliminarily consistent with hypotheses *H1b, H2* and *H3*.

4. Empirical analysis

4.1 Does the disclosure of merger intention in the prospectus influence the size of offering?

[Insert Table 2 Here]

Table 2 presents the results of regression in which we investigate the link between the disclosed merger intention and the logarithm of issuing size. We observe that *Intention* significantly positively determines the issue size at the 1% level in all specifications, regardless of the issuance type, which is consistent with *H1b*. This finding suggests that issuers obtain more funds when they disclose the intention to fund future acquisitions, which might be explained by considering that the voluntary disclosure on proceeds usage reduces the asymmetric information and therefore leading to a lower cost. In terms of control variables, the signs are discussed in Appendix 2.

4.2 Does the disclosure of merger intention at pre-deal issuance help predict the probability of takeover success?

[Insert Table 3 Here]

Table 3 presents marginal effects of the probit model in which we relate the disclosed merger intention to takeover success. We observe significant positive coefficients on the variable *Intention* in all specifications, indicating that the probability of completing a merger increases with the presence of revealed intention at pre-merger issuance. After accounting for acquirer's and deal's characteristics, the marginal effect of *Intention* in Column 3 suggests that acquirers of revealed deals are 6.94% more likely to complete the deal than their counterparts of non-revealed deals, which is in line with *H2*. This can be explained by considering that acquirers of revealed deals should be more willing to complete mergers in order to build credibility with the market and avoid higher future financing costs (Walker *et al.* 2016). A discussion of the control variables is shown in Appendix 3.

4.3 Does the disclosure of merger intention at pre-deal issuance influence takeover premiums?

[Insert Table 4 Here]

Table 4 displays the results of OLS regression where the takeover premium is regressed by the disclosed merger intention and other control variables. Consistent with the previous univariate

results and *H3*, we observe that the coefficient associated with *Intention* is positive and significantly different from zero in all specifications. More specifically, bidders revealing merger intention at debt or equity issuance remarkably pay a 2.78% higher premium than their non-revealing counterparts in the specification 3 with the firm and deal characteristics controlled for. This finding can be explained by considering that acquirers of revealed deals pay more to facilitate deal completion. Additionally, if the disclosed merger intention at issuance is driven by signalling the higher quality of subsequent deal, acquirers of revealed deals will pay more in return for higher synergies than ones in non-revealed deals (Betton *et al.* 2008). As for results on control variables, we include a discussion in Appendix 4.

4.4 Does the disclosure of merger intention at pre-deal issuance influence the valuation effects of takeovers?

4.4.1 Short-run analysis

[Insert Table 5 Here]

This section employs short-window event study to examine stock market reactions to merger announcements. Table 5 shows the results of OLS regression where the dependent variable is acquirers' 5-day cumulative abnormal returns (CARs). In all three models, the coefficient on *Intention* is negative and statistically significant at the 1% level, suggesting that acquirers with revealed merger intention experience lower announcement returns than their counterparts without such disclosure. Specifically, the announcement effect is 0.96% worse for acquirers with the revealed merger intention in specification 3 with related explanatory variables accounted for. This finding is supportive of *H4b* and the univariate tests. A discussion of the control variables is presented in Appendix 5.

4.4.2 Long-run analysis

[Insert Table 6 Here]

Table 6 presents the results of the long-term OLS regression analysis. Following Lyon *et al.* (1999), this paper uses size-adjusted buy-and-hold abnormal returns (BHARs) and calculate the bootstrapped t-statistics. Additionally, only completed takeover is included. Overall, we find that the coefficient on *Intention* is negative and significant in all specifications, which is consistent with the univariate analysis and *H4b*. Specifically, the disclosure of merger intention

worsens acquirer's long-run stock performance by 9.51% after controlling for firm and deal characteristics. This finding indicates that the disclosure of merger intention is not related to a future value-enhancing takeover. Instead, acquirers of revealed deals suffer a worse performance in the long run, suggesting that managers might simply make use of the disclosure to deceive the market and raise more capital. Following the disclosure, acquisitions are carried due to pre-commitment instead of value creation. With regard to control variables, the results are discussed in Appendix 6.

4.5 Endogeneity issue

Previous results suggest that instead of increasing shareholder value, acquirers completing deal merely to meet the commitment made at earlier issuance. However, establishing a causal relationship between the revealed takeover intention and deal completion requires a consideration of the endogeneity arising from reverse causality. To address this issue, we conduct the instrumental variable Probit model and employ the experience of disclosing merger intention (*D_Experience*), i.e. the total number of a firm's earlier issuances with disclosed merger intention, as the instrumental variable.

[Insert Table 7 Here]

As shown in Table 7, the probability of takeover success considerably increases with the decision to reveal takeover intention at pre-deal issuance, confirming our previous results. Additionally, the significant estimates from Wald test and Anderson-Rubin Wald test respectively provide evidence that we can reject the null hypothesis of no endogeneity and that *D_Experience* is a valid instrument variable. Other control variables have similar signs to the previous results of deal completion.

5. Conclusion

This paper investigates the relation between the disclosure of merger intention at pre-merger issuance and its follow-on M&As. By building the link between pre-merger issuance and merger activity, our paper is able to examine takeovers from their financing stage, which draws a more complete picture. Specifically, we find that firms disclosing merger intention tend to have a larger issuing size than ones not disclosing, though their subsequent takeover has a

significant smaller transaction value. Second, our results show that acquirers who disclose merger intention at the earlier issuance are more likely to complete deals and significantly pay a higher premium. Moreover, our evidence shows that acquirers of revealed deals experience a significant lower short-run and long-run performance than ones of non-revealed deals. Overall, our results indicate that disclosing merger intention at pre-merger issuing is largely for the purpose of raising higher proceeds, instead of conveying valuable information regarding the efficiency of the proceeds usage, which is consistent with the capital need theory.

Reference

Alexandridis, G., Petmezas, D., Travlos, N.G., 2010. Gains from Mergers and Acquisitions Around the World: New Evidence. Financial Management 39, 1671-1695

Ambarish, R., John, K., Williams, J., 1987. Efficient Signalling with Dividends and Investments The Journal of Finance 42, 321-343
Autore, D.M., Bray, D.E., Peterson, D.R., 2009. Intended use of proceeds and the long-run performance of seasoned equity issuers. Journal of Corporate Finance 15, 358-367
Baker, M., Greenwood, R., Wurgler, J., 2009. Catering through Nominal Share Prices. The Journal of Finance 64, 2559-2590
Baker, M., Pan, X., Wurgler, J., 2012. The effect of reference point prices on mergers and acquisitions. Journal of Financial Economics 106, 49-71
Betton, S., Eckbo, B.E., Thorburn, K.S., 2008. Corporate takeovers In Handbook of Corporate Finance: Empirical Corporate Finance. Amsterdam: North Holland
Botosan, C.A., 1997. Disclosure Level and the Cost of Equity Capital The Accounting Review 72, 323-349
Bouwman, C.H.S., Fuller, K., Nain, A., 2009. Market Valuation and Acquisition Quality: Empirical Evidence. Review of Financial Studies 22, 633-679
Bulow, J., Klemperer, P., 1996. Auctions Versus Negotiations. The American Economic Review 86, 180-194
Butler, A., Grullon, G., Weston, J.P., 2005. Stock Market Liquidity and the Cost of Issuing Equity. Journal of Financial and Quantitative Analysis 40, 331-348
Cumming, D., Walz, U., 2010. Private equity returns and disclosure aorund the world. Journal of International Business Studies 41, 727-754
Diamond, D.W., Verrecchia, R.E., 1991. Disclosure, Liquidity, and the Cost of Capital. The Journal of Finance 46, 1326-1359
Frank, M.Z., Goyal, V.K., 2003. Testing the pecking order theory of capital structure. Journal of Financial Economics 67, 217-248
Galizia, F., O'Brien, D., 2001. Do capital expenditures determine debt issues? European Investment Bank: Economic and Financial Report
Grossman, S., Hart, O., 1982. Corporate Financial Structure and Managerial Incentives. The Economics of Information and Uncertainty, National Bureau of Economic Research, Inc. , 107-140
Harford, J., 1999. Corporate Cash Reserves and Acquisitions. The Journal of Finance 54, 1969-1997
Jarrell, G.A., 1985. The Wealth Effects of Litigation by Targets: Do Interests Diverge in a Merge? . The Journal of Law & Economics 28, 151-177
Jensen, M.C., Meckling, W.H., 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. Journal of Financial Economics 3, 305-360
Jensen, M.C., Smith, C.W., 1985. Stockholder, Manager, and Creditor Interests: Applications of Agency Theory. Recent Advances in Corporate Finance, 93-131
Kisgen, D.J., 2006. Credit Ratings and Capital Structure. THE JOURNAL OF FINANCE 61, 1035 - 1072
Lyon, J.D., Barber, B.M., Tsai, C., 1999. Improved Methods for Tests of Long-Run Abnormal Stock Returns. Journal of Finance 54, 165-201
MacKie-Mason, J.K., 1990. Do Taxes Affect Corporate Financing Decisions? The Journal of Finance 45, 1471-1493
Malcolm Baker, Wurgler, J., 2002. Market Timing and Capital Structure. The Journal of Finance 57, 1-32
Moeller, S.B., Schlingemann, F.P., Stulz, R.M., 2004. Firm size and the gains from acquisitions. Journal of Financial Economics 73, 201-228
Myers, S.C., 1984. The Capital Structure Puzzle. The Journal of Finance 39, 574-592
Myers, S.C., Majluf, N.S., 1984. Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics 13, 187-221
Schwert, G.W., 2000. Hostility in Takeovers: In the Eyes of the Beholder? The Journal of Finance 55, 2599-2640

Travlos, N.G., 1987. Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Returns. The Journal of Finance 42, 943-963
Walker, M.D., Yost, K., 2008. Seasoned equity offerings: What firms say, do, and how the market reacts Journal of Corporate Finance 14, 376-386
Walker, M.D., Yost, K., Zhao, J., 2016. Credibility and Multiple SEOs: What Happens When Firms Return to the Capital Market? Financial Management 45, 675-703

Appendix 1: Definitions of the variables used

Variable	Definition
Panel A: **Dependent Variables**	
Issue Size	The logarithm of total issuing proceeds.
Deal Completion	Dummy variable that takes the value of 1 if merger transaction is completed.
Takeover Premium	We specify the premium as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement.
Acquirer CAR [-2, +2]	Cumulative abnormal return of the acquiring firm in the 5-day event window (−2, +2) surrounded on the announcement day. The expected returns are from a Fama-French 5 factors model with the parameters estimated over 240 trading days ending 50 days before the announcement. As benchmark we use the CRSP value-weighted index.
Acquirer BHAR36	Buy-and-hold abnormal return of the acquiring firm from size-adjusted model in the 36-month event window following the announcement.
Panel B: **Key independent variable**	
Intention	Dummy variable that equals 1 if acquirers disclose merger intention at pre-merger debt or equity issuance.
Panel C: **Firm characteristics**	
I_LNMV	The logarithm of the issuer market value measured 4 weeks before the issuance. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the issuance announcement.
I_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the issuer's assets.
I_Leverage	The ratio of total debt by total capital at the fiscal year end before the issuance announcement.
I_CF2TA	The ratio of cash flows by the total assets at the fiscal year end before the issuance announcement.
I_Earnings	The ratio of earnings before interest and taxes by total assets at the fiscal year end before the issuance announcement..
I_FundingDeficit	Following Frank and Goyal (2003), we specify the funding deficit as the sum of cash dividends, net investment and change in working capital less the internal cash flow at the fiscal year end before the issuance announcement.

I_Rating	The Standards & Poor's long-term credit ratings of the issuers in numerical formal. AAA corresponds to 1, AA+ corresponds to 2, AA corresponds to 3, and so on.
I_Tax	The ratio of income taxes by total assets at the fiscal year end before the issuance announcement.
I_Runup	The market-adjusted return of issuing firms over the period from 200 trading days to 2 months before the issuance announcement.
Ln(TradingVolume)	The logarithm of the average monthly trading volume in the six months before the issuance announcement.
A_LNMV	The logarithm of the acquirer market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&As announcement.
A_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the acquirer's assets.
A_Leverage	The ratio of acquirer's total debt by total capital at the fiscal year end before the M&As announcement.
A_CF2TA	The ratio of acquirer's cash flows by the total assets at the fiscal year end before the M&As announcement.
T_LNMV	The logarithm of the target market value measured 4 weeks before the merger announcement. The market value is calculated as the number of shares outstanding multiplied by the respective stock price at 4 weeks before the M&As announcement.
T_TobinQ	We specify Tobin's Q as the ratio of market value by book value of the target's assets.
T_Leverage	The ratio of target's total debt by total capital at the fiscal year end before the M&As announcement.
T_CF2TA	The ratio of target's cash flows by the total assets at the fiscal year end before the M&As announcement.
T_52WeekHigh	Following Baker *et al.* (2012), this variable is defined as the percentage difference of the target's 52-week high stock price over the stock price 4 weeks before the M&As announcement.
Panel D:	
Deal characteristics	
Proceeds Ratio	The variable was calculated as the value of proceeds raised at pre-merger issuance divided by the transaction value of merger.
Ln(TransactionValue)	The logarithm of the merger transaction value.
Yield	Three-month U.S. Treasury Bill yield before the issuance announcement.

MV	Following Bouwman *et al.* (2009), we identify high-, neutral- and low-valuation markets by comparing the detrended P/E ratio of the value-weighted market index with its past 5-year average.
Relative Size	The variable was calculated as merger transaction value divided by the acquirer market value of equity 4 weeks before the merger announcement.
Hostile	Dummy variable that equals 1 if the M&As deal attitude is identified as hostile.
Stock	Dummy variable that equals 1 if the M&As deal is 100% paid by stock.
Competing Bid	Dummy variable that equals 1 if there are more than one bidder.
Private	Dummy variable that equals 1 if the target is a private firm.
Tender	Dummy variable that equals 1 if the M&As deal is identified as a tender offer.
Diversification	Dummy variable that equals 1 if the acquirer and the target have the different first two-digit of primary SIC code.
Debt	Dummy variable that equals 1 if the acquirer has issued debt before merger.
Financial Crisis	Dummy variable that equals 1 if the M&As deal is conducted during the period between 2007 and 2009.
Panel E: Instrumental variables	
D_Experience	The total number of a firm's earlier issuance with disclosed merger intention.

Appendix 2: Other determinants of issue size

Focusing on other control variables included in Table 2, we observe that there is a significant and positive relation between firm size and offering size in all specifications, which is supportive of MacKie-Mason (1990) suggesting that asymmetric information and financial distress costs decrease as firm size increase. Next, we find a positive coefficient related to the *I_FundingDeficit* variable, which is consistent with the pecking order theory of Myers and Majluf (1984). They argue that firms with insufficient retained earnings would turn to external financing, i.e. debt and equity via capital market. Moreover, the coefficient on the variable *I_Leverage* is significantly positive in the regressions of debt offering size, which indicates that firms issuing more debt have higher leverage ratio. This can be explained by the fact that firms with high level of leverage ratio also have high leverage targets or frequently weak cash flows

(Galizia & O'Brien 2001). Further, we find that issue size is positively associated with the deal value of subsequent merger, and this effect is significant in equity issuance. This suggests that firms would raise external financing, especially external equity, to fund the following acquisition. In terms of debt-related financing cost, we observe that the variable *I_Rating* exhibits a considerable positive coefficient, which is in line with the literature suggesting that firms with better credit quality enjoy lower financing cost (Kisgen 2006). As for equity issuance, the issue size is also positively determined by firm's trading volume (*I_TradingVolume*) which is a proxy for stock liquidity, and the effect is significant at the 1% level. Butler *et al.* (2005) document that higher liquidity leads to a reduction in adverse selection, and thus a lower financing cost.

Appendix 3: Other determinants of takeover completion

Examining the control variables, the results on most of the deal characteristics in specification 3 of Table 3 show significant signs. In particular, the most significant predictor of completion is the private deal indicator (*Private*), which presents a positive coefficient with a z-statistic of 37.27. This suggests that the likelihood of completing a merger increases when the target firm is a private one. In addition to the role played by the private target, the results in column 3 also show that the coefficients on *A_LNMV, Proceeds Ratio, Stock, Tender, and Diversification* are positive and significant**.** These results indicate that larger acquirers with larger pre-merger issuing sizes, the choice of stock payment, the choice of tender offer, and the choice of target firms in other industries tend to complete mergers. In contrast, the results on *Hostile* and *Competing Bid* have negative and significant signs, which suggest that acquirers in hostile takeover and deals with multiple bidders are less likely to complete mergers.

Appendix 4: Other determinants of takeover premium

The results in Table 4 show that there is a significant and positive relation between *T_52WeekHigh* and takeover premium, which is consistent with Baker *et al.* (2012). The coefficient suggests that a 10% increase in *T_52WeekHigh* is related to a 0.47% higher bid premiums. We also observe that the coefficients on other control variables are generally in accordance with prior literature. Specifically, the *Competing Bid* is shown to be a significant and positive coefficient, suggesting that bid premiums tend to be higher in deals with multiple acquirers as there are more firms bidding up the price (Bulow & Klemperer 1996; Alexandridis

et al. 2010). In addition, the coefficient on the deal attitude indicator (*Hostile*) is positive and significant, which suggests that bidders conducting hostile takeover pay a higher price to obtain target shareholder's approval. Another possible explanation may be that the defence strategy employed by target firms can bring new bidders and arouse competition, leading to higher bid premium (Jarrell 1985; Schwert 2000). Moreover, the evidence on the method of payment indicates that there is a positive relation between stock payment and offer premium, which is consistent with the overvaluation hypothesis of Myers and Majluf (1984).

Appendix 5: Other determinants of bidders' CARs

As for firm-specific factors, the result shows that the announcement returns decrease with the larger size of acquirers in columns 2 and 3 of Table 5 (*A_LNMV*). This can be explained by the fact that the role of managerial hubris playing in the decisions of large firms may result in value-destroying deals (Moeller *et al.* 2004). We also observe that the coefficient on *A_TobinQ* is significant and negative in columns 2 and 3, suggesting that this ratio captures more information on stock overvaluation than investment opportunities (Myers & Majluf 1984). Another variable significantly negatively associated with the acquirer's CARs is acquirer's cash flow ratio (*A_CF2TA*). This finding is in line with Harford (1999) who argues that acquiring firms with higher cash flow experience lower abnormal returns.

In terms of deal characteristics, our evidence shows that the use of stock payments in acquisitions is related to 1.47% lower announcement returns, which is consistent with Travlos (1987). In addition, we find that *Debt* is positively related to CARs, which is significant at the 10% level. The finding indicates that a market inferring pre-merger debt issue is a favourable signal. Consistent with Grossman and Hart (1982), this can be explained by the fact that debt financing offers managers a strong incentive to act in the shareholders' interest.

Appendix 6: Other determinants of bidders' BHARs

With regard to control variables, the result shows a significant positive coefficient on *A_CF2TA* in regressions 2 and 3 of Table 6, which is in contrast to the evidence of the short-term analysis. This evidence suggest that the market reactions are more favourable to acquirers with better pre-merger operations. In addition, the coefficient on *Debt* is positive and significant at the 1% level, which is consistent with the result in the short-run analysis. This finding indicate that

issuing debt before a merger can improve the performance of follow-on mergers, which provides supportive evidence for agency theory that debt issuance leads to effective management (Jensen & Meckling 1976; Grossman & Hart 1982).

Table 1 – Summary statistics

This table reports the summary statistics of 8903 U.S. M&A samples with acquirers that engaged in debt or equity issuance during the three years before merger announcement. Panel A reporting issuer related firm characteristics. Panel B reporting acquirer related characteristics. Panel C reporting issuance and merger deal related characteristics. All variables are defined in Appendix 1. M&A deals are restricted by the following criteria. First, the announcement date is between January 1, 1985 and December 31, 2015. Second, the acquirer is a public firms and the target firm can be public, private or subsidiary. Then, all completed and withdrawn deals with a deal value of at least $1 million are considered. First, we present the values for the full sample. Next, we sub-divide our sample based on whether acquirers reveal merger intention at pre-merger debt or equity issuance. The Student's t-test is used to test for statistical significance. All continuous variables are winsorized at the 1% and 99% levels. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

	Full Sample (I)			**Revealed Deals (II)**			**Non-revealed Deals (III)**			**(III) – (II)**
	Obs.	**Mean**	**Std. Dev.**	**Obs.**	**Mean**	**Std. Dev.**	**Obs.**	**Mean**	**Std. Dev.**	**Difference**
Panel A – Issuer related										
I_LNMV	8610	6.96	2.01	1477	6.43	1.80	7131	7.07	2.03	0.64***
I_TobinQ	7263	2.95	3.81	1249	3.16	4.10	6014	2.90	3.75	-0.26**
I_Earnings	6974	9.47%	0.21	1217	8.11%	0.22	5757	9.75%	0.21	1.64%**
I_FundingDeficit	2691	0.10	0.26	519	0.10	0.26	2172	0.10	0.27	0.00
I_Leverage	8100	38.48%	0.31	1402	34.95%	0.33	6698	39.22%	0.30	4.27%***
I_CF2TA	7582	3.03%	0.23	1318	1.89%	0.25	6264	3.27%	0.22	1.38%*
Panel B - Acquirer related										
A_LNMV	8610	6.99	2.01	1477	6.53	1.80	7133	7.08	2.03	0.55***
A_TobinQ	7263	2.79	3.40	1249	2.82	2.93	6014	2.78	3.48	-0.04
A_Leverage	8100	39.25%	0.30	1402	34.85%	0.29	6698	40.18%	0.30	5.33%***
A_CF2TA	7582	3.54%	0.23	1318	2.36%	0.30	6264	3.79%	0.21	1.44%**
Panel C - Deal related										
Transaction Value ($million)	8903	550.12	1530.11	1521	380	1150	7382	585.17	1595.05	205.17***
Relative Size	8610	0.22	0.94	1477	0.28	1.24	7133	0.21	0.87	-0.07***
Premium	3410	21.73%	19.89	468	24.54%	20.55	2942	21.28%	19.75	-3.26%***

All Cash Deals	5477	61.52%	0.49	821	53.98%	0.50	4656	63.07%	0.48	9.09%***
All Stock Deals	1394	15.66%	0.36	240	15.78%	0.36	1154	15.63%	0.36	-0.15%
Mixed Deals	2032	22.82%	0.42	460	30.24%	0.46	1572	21.30%	0.41	-8.95%***
Public	5178	58.16%	0.49	704	46.29%	0.50	4474	60.61%	0.49	14.32%***
Private	2233	25.08%	0.43	504	33.14%	0.47	1729	23.42%	0.42	-9.71%***
Subsidiary	1492	16.76%	0.37	313	20.58%	0.40	1179	15.97%	0.37	-4.61%***
Competing Bid	159	1.79%	0.13	33	2.17%	0.15	126	1.71%	0.13	-0.46%
Hostile	94	1.06%	0.10	15	0.99%	0.10	79	1.07%	0.10	0.08%
Tender Offer	381	4.28%	0.20	41	2.70%	0.16	340	4.61%	0.21	1.91%***
Diversification	2202	24.73%	0.43	412	27.09%	0.44	1790	24.25%	0.43	-2.84%**
Completed	5498	61.75%	0.49	1048	68.90%	0.46	4450	60.28%	0.49	-8.62%***
Proceeds Ratio	8899	3.87	7.34	1519	4.32	7.76	7380	3.78	7.25	-0.54***
Debt	4071	45.72%	0.50	430	28.27%	0.45	3641	49.32%	0.50	21.05%***

Table 2: OLS regressions of firm's pre-merger issue size

This table reports results of OLS regressions of acquirer's pre-merger issue size. The dependent variable in Model (1) and (2) is the logarithm of the proceeds at debt issuance. The dependent variable in Model (3) and (4) is the logarithm of the proceeds at equity issuance. The key independent variable *Intention* equals to one if issuers include future acquisition as one of the proceeds usage, zero otherwise. All models include industry and year fixed effects. All other variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Issue Size	**Debt**	**Debt**	**Equity**	**Equity**
	(1)	**(2)**	**(3)**	**(4)**
Intention	0.4966***	0.3869***	0.1875***	0.1303**
	(4.86)	(3.29)	(4.38)	(2.01)
I_LNMV	0.3407***	0.3897***	0.6568***	0.5373***
	1(2.76)	(9.67)	4(1.43)	1(7.91)
I_TobinQ	-0.003	-0.0017	-0.0046*	-0.0035
	(-0.49)	(-0.25)	(-1.80)	(-0.84)
I_Earnings	-0.668	0.3393	0.2819*	0.2205
	(-1.23)	(0.34)	(1.94)	(0.99)
I_FundingDeficit	0.1854	-0.1485	0.2160***	0.1367
	(0.67)	(-0.42)	(2.82)	(1.20)
I_Leverage	0.3846***	-0.0603	0.1374**	0.0653
	(3.09)	(-0.38)	(2.50)	(0.87)
I_CF2TA	-0.0281	-1.0042	0.1875	0.2165
	(-0.06)	(-1.19)	(1.59)	(1.24)
Ln(TransactionValue)	0.0179	0.0025	0.0552***	0.0688***
	(0.79)	(0.10)	(4.11)	(3.33)
Yield		-0.002		
		(-0.07)		
I_Rating		-0.1779***		
		(-3.53)		
I_Tax		-1.6235		
		(-0.76)		
I_Runup				-0.058
				(-1.49)
Ln(TradingVolume)				0.1327***
				(4.79)
MV				0.0478
				(1.24)
Constant	-150.2455***	-127.7381***	13.6711**	9.0462
	(-15.41)	(-6.31)	(2.33)	(0.94)
Year fixed effects	Yes	Yes	Yes	Yes

Industry fixed effects	Yes	Yes	Yes	Yes
Observations	796	588	1528	608
Adjusted R^2	0.537	0.480	0.720	0.735

Table 3 – Probit models of deal completion

This table reports results of probit regressions of deal completion. All models regress the *Deal Completion* dummy against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. *Deal Completion* dummy equals one if the takeover transaction is completed, and zero otherwise. Model 1 only includes the key independent variable *Intention*; Model 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. The table reports marginal effects and t-statistics (in parentheses). Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Deal Completion	**Model (1)**	**Model (2)**	**Model (3)**
Intention	0.1107***	0.1025***	0.0694***
	(8.50)	(6.66)	(5.03)
Acquirer Ln(MV)		-0.0027	0.0149***
		(-0.81)	(4.13)
Acquirer Tobin's Q		0.0094***	0.0021
		(4.83)	(0.97)
Acquirer Leverage		-0.0418**	0.0166
		(-2.00)	(0.75)
Acquirer Cash Flows to Total Assets		-0.1225***	0.0498
		(-3.90)	(1.57)
Proceeds Ratio			0.0016*
			(1.71)
Relative Size			-0.0102
			(-1.44)
Hostile			-0.6007***
			(-17.27)
Stock			0.2324***
			(15.75)
Competing Bid			-0.1048*
			(-1.80)
Private			0.3871***
			(37.27)
Tender			0.2975***
			(26.08)
Diversification			0.3281***
			(29.09)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	8903	6632	6628
Chi^2	246.5234	227.8177	2427.826

Table 4 – OLS regressions of takeover premium

This table reports results of OLS regressions of takeover premium. All models regress takeover premium against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Takeover premium is computed as the difference between offer price and the target's stock price 4 weeks before the announcement divided by the target's stock price 4 weeks before the announcement. Model 1 only includes the key independent variable *Intention*; Model 2 and 3 further control for firm and deal characteristics. 52-week high, as a variable affecting the premium, is calculated as the percentage difference between the 52-week high share price and the target's stock price 4 weeks before the deal announcement. All models include industry and year fixed effects. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Takeover Premium	**Model (1)**	**Model (2)**	**Model (3)**
Intention	0.0347***	0.0330***	0.0278***
	(3.49)	(3.17)	(2.93)
A_LNMV		0.0585***	0.0493***
		(21.95)	(16.74)
A_TobinQ		0.0044**	0.0033**
		(2.45)	(2.04)
A_Leverage		-0.0303	-0.0107
		(-1.53)	(-0.59)
A_CF2TA		-0.0077	0.019
		(-0.23)	(0.62)
T_LNMV		-0.0743***	-0.0653***
		(-28.11)	(-21.87)
T_TobinQ		0.0019	0.0026
		(0.96)	(1.44)
T_Leverage		0.0315*	0.0212
		(1.72)	(1.27)
T_CF2TA		0.0247	0.009
		(1.03)	(0.41)
T_52WeekHigh			0.0471***
			(5.01)
Proceeds Ratio			-0.0042***
			(-7.19)
Relative Size			0.0304***
			(8.20)
Hostile			0.1208***
			(5.35)
Stock			0.0445***
			(4.42)
Competing Bid			0.1269***
			(6.74)
Private			-0.0613

			(-0.92)
Tender			0.0802***
			(7.40)
Diversification			0.0239**
			(2.23)
Constant	2.0398**	-2.0928**	-3.6674***
	(2.25)	(-2.09)	(-3.99)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	3410	2214	2212
Adjusted R^2	0.004	0.293	0.418

Table 5 – OLS regressions of acquirer short-term performance

This table reports results of OLS regressions of acquirer's cumulative abnormal returns. All models regress the five-day CAR against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Model 1 only includes the key independent variable *Intention*; Model 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Acquirer CAR [-2, +2]	**Model (1)**	**Model (2)**	**Model (3)**
Intention	-0.0057**	-0.0103***	-0.0096***
	(-2.22)	(-3.37)	(-3.12)
A_LNMV		-0.0046***	-0.0051***
		(-7.42)	(-6.87)
A_TobinQ		-0.0013***	-0.0010***
		(-3.93)	(-2.94)
A_Leverage		0.0038	0.0006
		(0.95)	(0.15)
A_CF2TA		-0.0166***	-0.0231***
		(-3.03)	(-4.19)
Proceeds Ratio			0.0000
			(0.08)
Relative Size			0.0021
			(1.54)
Hostile			-0.0207*
			(-1.75)
Stock			-0.0147***
			(-4.25)
Competing Bid			-0.0276***
			(-2.88)
Private			0.0011
			(0.41)
Tender			0.0110*
			(1.94)
Diversification			-0.0052**
			(-1.89)
Debt			0.0055*
			(1.89)
Financial Crisis			0.0020
			(0.49)
Constant	-0.1251	-0.6274**	-0.3166
	(-0.50)	(-1.99)	(-0.96)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes

Observations	8903	6632	6628
Adjusted R^2	0.000	0.015	0.021

Table 6 – OLS regressions of acquirer long-term performance

This table reports results of OLS regressions of acquirer's long-run performance. All models regress the 36-month BHAR against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. Model 1 only includes the key independent variable *Intention*; Model 2 and 3 further control for firm and deal characteristics. All models include industry and year fixed effects. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Acquirer BHAR36	**Model (1)**	**Model (2)**	**Model (3)**
Intention	-0.0880***	-0.0876*	-0.0951*
	(-2.76)	(-1.81)	(-1.81)
A_LNMV		0.0142	-0.0062
		(1.17)	(-0.37)
A_TobinQ		-0.0103*	-0.0065
		(-1.79)	(-1.00)
A_Leverage		0.0185	-0.0465
		(0.25)	(-0.49)
A_CF2TA		0.1911*	0.3463*
		(1.95)	(1.89)
Proceeds Ratio			0.0053
			(0.77)
Relative Size			0.0371
			(0.71)
Hostile			0.0202
			(0.09)
Stock			-0.0749
			(-1.13)
Competing Bid			-0.0214
			(-0.19)
Private			0.0028
			(0.05)
Tender			-0.0810
			(-1.00)
Diversification			-0.0743
			(-1.72)
Debt			0.1834***
			(4.00)
Financial Crisis			-0.0112
			(-0.26)
Constant	1.3459	-0.2622	-0.6694
	(0.43)	(-0.06)	(-0.16)
Yearly fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes

Observations	5123	3758	3755
Adjusted R^2	0	0.002	0.004

Table 7 IV regression of deal completion

This table reports results of IV regression of deal completion. The model regresses the *Deal Completion* dummy against the key dummy variable *Intention* indicating if acquirers disclose merger intention at pre-merger debt or equity issuance. The instrumental variable is *D_Experience*, which represents the total number of merger intention that a firm disclosed before the issuance of our interest. All regressions include industry and year fixed effects. All variables are defined in Appendix 1. All continuous variables are winsorized at the 1% and 99% levels. T-statistics are reported in parentheses. Significance at the 1%, 5% and 10% levels is denoted by ***, ** and * respectively.

Deal Completion	**First Stage**	**Second Stage**
Intention		0.0565***
		(4.19)
A_LNMV	-0.0268***	0.0157***
	(-10.09)	(4.91)
A_TobinQ	0.0022	-0.0001
	(1.5)	(-0.08)
A_Leverage	-0.0621***	0.0135
	(-3.84)	(0.72)
A_CF2TA	0.0548**	0.0292
	(2.44)	(1.11)
Proceeds Ratio	0.0015**	0.0005
	(2.31)	(0.67)
Relative Size	0.0151***	-0.0113*
	(2.71)	(-1.94)
Hostile	0.0106	-0.5259***
	(0.22)	(-9.07)
Stock	-0.0262*	-0.2184***
	(-1.88)	(11.64)
Competing Bid	0.0970**	-0.1150**
	(2.46)	(-2.56)
Private	0.0633***	0.3887***
	(5.47)	(26.37)
Tender	-0.0312	0.3827***
	(-1.35)	(11.90)
Diversification	0.0020	0.3179***
	(0.18)	(21.87)
D_Experience	0.0942***	
	(21.70)	
Constant	-3.0361**	
	(-2.16)	
Yearly fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes
Observations	6005	6005
Wald test of exogeneity		0.00***

Anderson-Rubin Wald test	0.00***
Chi^2	1567.68