Financing Acquisitions with Earnouts

Thomas W. Bates
Arizona State University
thomas.bates@asu.edu

Jordan B. Neyland*
University of Melbourne and
Financial Research Network (FIRN)
jordan.neyland@unimelb.edu.au

Yolanda Wang
University of Melbourne
yulong.wang@unimelb.edu.au

May 17, 2016

Abstract

We present evidence that earnout agreements in acquisitions provide a substantial source of financing to acquirers, averaging 10.71% of acquirer size. Bidders with earnouts are significantly less likely to access external debt or equity to fund acquisitions, consistent with substitution for costly external finance. However, these bids garner higher premiums, suggesting bidders compensate target shareholders for deferring payment. The use of earnouts depends on acquirers' ability to finance investment, as financially constrained acquirers are twice as likely to use an earnout as unconstrained acquirers. We also document supply-side effects, as earnouts are more likely when target parents have higher cash holdings. Overall, our evidence suggests acquirers use earnouts as part of a broader financing decision in acquisitions.

*The corresponding author is Jordan Neyland. jordan.neyland@unimelb.edu.au Tel: +61 4 9035 3763.

I Introduction

In Modigliani and Miller's (1958) perfect capital market, all profitable investments receive funding. However, market frictions drive a wedge between the efficient allocation of capital and value-increasing investments. In response to a lack of access to capital markets, firms must pass on valuable projects, engage in liquidity management, or find alternative sources of capital to fund investment. Within the context of corporate mergers, Harford (2005) shows sufficient capital and liquidity must be available to effectively reallocate assets after economic and technological shocks. Almeida, Campello, and Hackbarth (2011) demonstrate the importance of financial slack from credit lines to finance acquisitions. Given the importance of financing in the market for corporate control–a market worth $1.53 trillion in 2014–there is little evidence on how acquirers design acquisition agreements when facing financial constraints.[1]

We examine this issue by studying earnout agreements in acquisitions. Earnout agreements stipulate that acquirers withhold a portion of the total merger consideration until target managers achieve pre-specified performance objectives, such as meeting an earnings target. Using 2,467 earnout agreements from a sample of 28,097 bids from 1988 to 2014, we find the size of earnouts is significant, averaging 10.71% (32.76%) of bidder (target) size. We hypothesize that this large, deferred payment acts as a form of seller financing and substitutes for costly external funds.

Consistent with this hypothesis, we find that constrained acquirers are twice as likely to use an earnout agreement compared to unconstrained acquirers. For example, a bidder with a Whited-Wu (2006) Index above the sample median is more than twice as likely to use an earnout as a less constrained acquirer (12.40% vs. 5.86%, t-stat=-5.24). The positive relation between financial constraints and the use of earnouts remains significant in multivariate analysis after controlling deal

[1] Data on the value of the M&A market comes from Reuters at http://share.thomsonreuters.com/general/PR/MA-4Q14-(E).pdf.

characteristics and proxies of target information asymmetry and moral hazard. Moreover, if constrained firms use earnouts, the size of the earnout relative to the size of the deal is larger by 5.76% on average (34.30% vs. 28.54%), consistent with constrained firms retaining financial slack with earnouts. Our results are robust to using other measures of financial constraints including Hadlock and Pierce's (2010) "SA Index", industry cash flow volatility, C&I loan rate spread, bidder size, relative size of the deal, dividends, credit ratings, cash hedging needs, and abnormal debt.

Evidence from the financial crisis further supports the view that earnouts provide acquisition financing. Prior literature establishes a reduction in investment during the crisis, primarily for constrained firms (e.g., Duchin, Ozbas, Sensoy, 2010). The highest incidence of earnouts occurs in the years following the crisis, and this increase appears to be tied to the deterioration in credit markets. In multivariate analysis, we interact an indicator for the crisis with several proxies of bidder financial constraints. These constrained bidders are significantly more likely to use an earnout when market liquidity and financing are in short supply. That is, earnouts appear to substitute for external finance when outside sources of finance are in short supply.

We find further support for a substitution effect by examining external funding. Earnouts are significantly negatively correlated with the use of external debt and equity to finance acquisitions. Due to the fact that managers consider both the source of financing and the acquisition agreement simultaneously, the use of earnouts and outside financing are endogenously determined. We account for the endogenous selection of earnouts using two instruments to aid in identification. First, we use the change in accounting standards in 2001 that eliminated the pooling-of-interests method of acquisition accounting. Because earnouts must be used with the purchase method, earnouts became relatively less costly after 2001, and we observe an increased use of earnouts during this period. Second, SFAS 141 changed the accounting treatment of contingent consideration (e.g., earnouts) in

2009. Acquirers are now required to estimate the fair value of the payment and record a liability that must be updated every quarter until the payment is finalized. This rule increased the complexity and cost of earnouts, especially for firms with smaller auditors (Allee and Wangerin, 2013). Importantly, we do not expect this accounting change impacts the external cost of financing, satisfying our exclusion restriction. After correcting for selection, we find that earnouts continue to be negatively related to the use of outside financing.

We also find evidence that target shareholders price earnouts as financial contracts. We observe higher premiums on average, as proxied by deal value-to-sales and price-to-book ratios. Because target shareholders defer consideration with an earnout agreement and partially finance the purchase of the target, higher premiums are consistent with the target owners incorporating the time value of money into earnout agreements. We find further evidence that earnout agreements garner higher premiums in times of higher external financing costs. During the financial crisis and times of high spreads, proxied by the spread between commercial and industrial loans and the treasury rate (C&I spread), earnouts are associated with even higher premiums for target shareholders.

Further evidence shows that the financial slack of target owners plays a role in the use of earnouts. Parents of subsidiary targets are more likely to agree to receive deferred compensation through an earnout if they have more retained cash and marketable securities. We find that cash holdings of the parent, the ratio of parent cash-to-assets, and parent cash-to-deal value are all positively related to the probability that the deal includes an earnout. These results suggest that financing with an earnout is more likely when sellers have sufficient liquidity, consistent with the supply of funds also determining the use of earnouts.

Our evidence contributes to the literature on financial constraints and problems of underinvestment. Largely following Fazzari, Hubbard, and Petersen (1988), this literature

emphasizes problems in financial contracting and the importance of sources of finance other than external capital markets. Primarily, this literature examines the extent to which firms must rely on internal financial slack (e.g., cash flows) to finance investment. Related work emphasizes the need for financial slack, and specifically, cash holdings to hedge against the inability to finance investment from cash flows. This paper presents evidence that seller-financed investment can alleviate problems related to financial constraints by showing that earnout agreements provide a potentially large source of acquisition financing.

This study also adds to work on the motivations of acquisitions. Golubov, Yawson, and Zhang (2015) reveal that existing literature on the sources of takeover gains remains inconclusive, as simple firm fixed effects describe as much variation in acquirer returns as an exhaustive list of previously studied economic determinants. Hypothesized merger motivations include operational synergies (Jensen and Ruback, 1983), agency problems (Jensen, 1986), managerial hubris (Roll, 1986), misvaluation (Shleifer and Vishny, 2003), tax benefits (Hayn, 1989), and financial synergies. Lewellen (1971) proposes that one of the financial benefits of mergers is increased debt capacity due to lower cash flow variability. We present another source of financial synergies resulting from the target managers' and shareholders' ability to reduce the impact of market frictions on financing investment with a form of seller financing.

More directly, our paper relates to studies on the role of financial slack in acquisitions. Myers and Majluf (1984) suggest mergers can create value by allocating financial resources to slack-poor firms if managers can overcome problems arising from information asymmetry. Palepu (1986) shows that firms with more growth options and less financial slack are more likely to become takeover targets. Smith and Kim (1994) find higher announcement returns in acquisitions combining slack-rich and slack-poor firms. Erel, Jang, and Weisbach (2015) present evidence that acquisitions

relieve targets' financial constraints and improve investment. Almeida, Campello, and Hackbarth (2011) show that liquid acquirers use their slack to acquire assets of constrained firms within an industry. While these papers demonstrate the importance of allocating slack across firms that merge, we show that the acquisition agreement itself can provide a source of financial slack through the use of deferred payments.

The remainder of the paper is organized as follows. Section 2 provides background on earnouts and presents hypotheses earnouts and financial constraints. Section 3 describes the data and variables of interest. Section 4 presents the multivariate results. Section 5 concludes.

II. Earnouts and Financing Constraints

Earnout agreements require that the acquirer withholds a portion of the final merger consideration until the target meets a pre-specified performance objective. Examples of objectives include meeting earnings targets, obtaining sales objectives, or receiving regulatory approval for a drug. Since part of the payment to target shareholders is conditional on the target's performance, Caselli, Gatti, and Visetti (2006) suggest earnouts protect acquirers from overpayment and help resolve issues related to information asymmetry and moral hazard.

Problems of information asymmetry arise as acquirers have incomplete information about the value of a target firm. Incomplete information reduces the acquirer's estimate of the target's value. Earnouts alleviate these problems because the time between the acquisition and the earnout payment allows the acquirer to learn more about the target firm and verify its value. In theoretical work, Lukas, Reuer, and Welling (2012) find that the size of an earnout increases with uncertainty, and Choi (2014) suggests that target managers can use earnouts as a signal of the quality of the deal. Datar, Frankel, and Wolfson (2001) and Kohers and Ang (2000) present empirical evidence that acquirers are more likely to include earnouts in acquisitions of targets that are difficult to value, such

as private, growth, high-tech, and service sector targets. Raggozzino and Reuer (2009) show that acquirers use earnouts when targets are young and operate in unrelated industries, while Reuer, Shenkar, and Ragozzino (2004) show internationally inexperienced acquirers use earnouts in foreign acquisitions. Barbopoulos and Sudarsanam (2012) and Kohers and Ang (2000) examine the wealth effects of earnouts and demonstrate that earnout acquisitions generate significantly higher returns in industries with high information risk.

In addition to addressing problems of information asymmetry, earnouts aid in resolving moral hazard issues in acquisitions. If the acquirer has the ability to withhold payment, the target shareholders retain a strong incentive to ensure the target is successfully integrated into the acquiring firm. Barbopoulos and Wilson (2013) find that long-run returns are higher in acquisitions of financial targets with earnout agreements, consistent with effective post-merger integration. The incentive effects of earnouts are particularly salient if the acquirer intends to retain target management following the acquisition. If target managers have significant ownership in the target, their employment incentives will increase with an earnout. Cadman, Carrizosa, and Faurel (2014) show that target managers stay with the combined firm longer in the presence of earnouts.

In this paper, we focus on the deferral of payment of the earnout, while prior literature focuses exclusively on the contingent nature of the payment in resolving information and moral hazard problems. That is, we are the first paper to focus on an earnout agreement as a source of financing, rather than a type of payment. The fact that payment is deferred makes an earnout resemble a financing contract. From the target shareholder's perspective, the withheld consideration makes the target shareholder a claimant on the cash flows of the acquirer and combined firm. This claim motivates target shareholders and managers to reduce problems related to moral hazard and information asymmetry, but it also places the target shareholders in a position similar to the

acquirer's creditors. In addition, there is generally no requirement or contractual obligation for the acquirer to invest the contingent consideration in particular assets, and hence, the retained payment provides a source of financial slack, as either increased cash, unused credit, or unissued equity, which motivates the following hypothesis.

> H1: Earnout agreements provide financial slack to acquirers and substitute for external finance, as the withheld contingent consideration can be used prior to the earnout settlement date.

If earnouts substitute for acquisition financing, bidding managers can use earnouts to supplement other sources of financing. Moreover, if earnouts provide acquisition financing at lower cost, they can potentially provide financial slack to managers when other sources of funds are unavailable or prohibitively costly. The intuition here is similar to the literature on the hedging benefits of cash holdings. Almeida, Campello, and Weisbach (2004) provide empirical evidence that constrained firms save cash from cash flows to invest in profitable projects. Bates, Kahle, and Stulz (2008) show that increases in cash holdings over time coincide with increases in cash flow volatility and suggest high cash holdings hedge against cash flow shocks when capital market access is costly. Faulkender and Wang (2006) find that financially constrained firms place a high value on cash reserves. Denis and Sibiilkov (2010) provide further evidence that the hedging-value of cash is high for constrained firms, as cash holdings allow for valuable investment. If earnouts provide financial slack, this slack should be more valuable to managers of constrained firms, which leads to our next hypothesis.

> H2: Financially constrained acquirers are more likely to use earnout agreements in acquisitions to provide financial slack.

Using earnouts to provide financial slack suggests that target shareholders and managers are willing to provide acquisition financing to acquirers at lower cost than other capital market participants. Otherwise, acquirers would prefer typical debt or equity markets. In the absence of market frictions, it is difficult to imagine that target shareholders provide the cheapest form of financing. However, the target shareholders could be willing to provide a lower cost of financing due to reduced transaction and contracting costs of incorporating earnouts in merger negotiations.

For example, target and acquirer managers have candid conversations during merger negotiations about potential synergies and the value of the combined firm. Managers also setup "data rooms" and agree to confidentiality agreements to facilitate the flow of information (Boone and Mulherin, 2007). This information provides insights into the future cash flows, value, and creditworthiness of the combined firm. That is, many of the transaction and information-gathering costs an outside creditor faces are already sunk by the target managers. Adding a financial contract on top of the merger agreement minimizes the duplication of effort on the part of the target manager-creditors who are already investigating the worth of the combined firm. The target managers' incentives to investigate will be even stronger than an outside creditor, given earnouts are mostly used in private deals in which they own large equity stakes and frequently receive shares in the bidding company.

In addition to reduced contracting costs, we posit that the earnout itself increases the value of promised payments to target shareholders. The earnout contract is designed to reduce moral hazard and information problems related to the acquisition. This internalizes many of the agency costs that a typical creditor faces. Outside creditors demand higher returns for their funds with greater information and moral hazard problems. They cannot mitigate agency problems as well as target managers who have superior information and possibly direct control over the future cash flows of

the firm, if such managers are retained by the combined firm. Financially constrained bidders will likely benefit the most from using earnouts as financial slack, as the capital market frictions are greatest, and target managers, who desire a high bid premium, are likely to argue the value of synergies is high, which implies a lower discount rate should be applied to the source of funds for the acquisition. Overall, we expect earnouts are more likely for situations in which the target managers are better positioned than outside creditors to negotiate acquisition financing.

III. Data Sources

i. Sample Statistics

We obtain our sample of acquisitions from Thomson Financial's Securities Data Company (SDC) database. We include transactions completed by U.S. listed companies between January 1, 1988 and December 31, 2014 with an announced deal value of at least $1 million. We restrict the sample to publicly listed bidders with less than 50% ownership who are seeking majority control of target firms. We require targets to be public, private, or subsidiary companies, and we exclude equity carveouts, spinoffs, splitoffs, recaps, privatizations, repurchases, and restructurings.

We obtain accounting information from the Compustat quarterly database and equity price data from CRSP. Accounting and stock data are matched to SDC from the quarter ending prior to acquisition announcement. We restrict our sample to transactions with non-missing data on book asset value for acquirers in the sample. The merged sample contains 28,097 transactions. In order to mitigate the effect of outliers, we winsorize all continuous variables at the 1% level. We obtain U.S. commercial and industrial loan rate spread data from the Federal Reserve website. Details on variable definitions are in Table 1.

Panel A of Table 2 reports sample earnout characteristics. *Earnout Value* is the dollar value in millions of the contingent payments specified in the earnout contracts, as reported in SDC. *Earnout Ratio* is the ratio of the earnout value to transaction value. In 2,467 earnout agreements, we have the earnout value in 1,823 transactions. The mean earnout value is $28.17 million with a median earnout value of $6 million. While earnouts are not very large on average in terms of dollars, they can reach large values with a 99th percentile of $500 million. The value of earnouts is also large relative to deal value. The payments constitute 32.76% of the transaction value on average with a median of 28.10%, suggesting they are meaningful relative to the size of the investment. The 99th percentile of earnout ratio is close to 1 indicating that a few of the transactions are almost completely financed by earnouts. Panel A also shows the relative size of the average earnout compared to the bidder's asset size. At 10.71% of the bidder's assets, earnouts provide a significant liability to acquirers and offer a potentially large source of financial slack.

Panel A of Table 2 presents statistics on the ownership structure of firms with earnouts. The vast majority (77.46%) of targets with earnouts are private firms, which have concentrated ownership structures. Within private targets, earnouts are present in 13.43% of deals. Earnouts are also frequently observed in subsidiary acquisitions, which comprise 20.55% of earnout acquisitions, and earnouts are found in 6.35% of subsidiary acquisitions. Only 1.99% of earnouts arise in public target acquisitions, and earnouts are only 0.01% of public acquisitions in the sample.

Panel B of Table 2 breaks down the incidence of earnouts in acquisitions by year. We document a significant increase in the use of earnouts in recent years. The proportion of deals with earnouts fluctuates around 5%-6% in the 1990s, but has become increasingly popular since 2000, peaking in the financial crisis at over 16% of the sample. In 2007, there is a significant jump in earnout use, with over 14% of acquisitions including contingent payments, and this percentage stays

above 14% through 2012. T-tests reveal these annual averages are significantly higher at the 1% level than the sample average, in which 9.72% of bids include earnouts. This increase is somewhat surprising, given the increased accounting disclosures required for contingent payments by SFAS 141(R) starting in 2009, which likely increased the costs and decreased the attractiveness of using earnouts. Rather, the increase in earnout use coincides with the lack of liquidity during the financial crisis, consistent with financial motivations for the use of earnouts.

ii. Deal Characteristics and Measures of Financial Constraints

Table 3 reports descriptive statistics on deal characteristics. We compute the sample statistics for the full sample, sub-sample with earnouts, and sub-sample without earnouts. We also present the results of t-tests to compare the mean differences between the earnout sub-sample and the non-earnout sub-sample. The t-values testing differences are reported in column 11.

We study several control variables related to the target firm's information environment and moral hazard issues following prior literature. We find that targets are significantly smaller by $177.51 million in acquisitions with earnouts. Similar to Officer, Poulsen, and Stegemoller (2008), we expect private targets provide less public information than public targets, so we create indicators for the private, public, and subsidiary status of target firms. Earnout acquisitions are significantly more likely to involve a private firm (77.46% vs. 48.05%). On average, less earnout deals involve subsidiary targets than non-earnout deals, but subsidiary targets are 10.33 (20.55%/1.99%) times more common relative to public deals in acquisitions with earnouts. The greater relative frequency of private deals and subsidiary deals is consistent with earnouts bridging valuation differences in acquisitions with high information asymmetry, consistent with prior literature. However, we also note that this is consistent with financial contracting, as private sellers and parent corporations are likely to be wealthier and have more funds to finance a sale, relative to public firm, retail investors.

Due to the lack of firm-level data on private firms and subsidiaries, we follow Cain, Denis, and Denis (2011) and proxy for information asymmetry about target assets with target-industry characteristics. We measure the median R&D expense, market-to-book ratio, and quarterly return volatility for public firms in each industry-quarter using 2-digit SIC code industry definitions. We recognize that these variables can differ between public and private firms within industry. However, we only require that there is enough correlation between firms within an industry to capture a significant portion of the information asymmetry faced by the acquirer. Remaining differences between public and private firms are largely captured with an indicator controlling for the public/private status of the target firm. T-tests confirm that target industry characteristics related to information asymmetry drive the use of earnouts. Volatility, R&D expenses, and market-to-book ratios are significantly higher in deals with earnout agreements. Additionally, acquirers are significantly more likely make cross-industry acquisitions outside of their 2-digit SIC code in bids with earnout agreements, consistent with bidders using earnouts if they are relatively uninformed about the value of the target firm. We also include several deal characteristics as control variables including indicators for termination fees, lock-ups, toeholds, tender offer status, and all-cash payments.

Table 3 presents univariate statistics on financial characteristics and earnouts. While prior literature primarily studies target characteristics related to information asymmetry, we test for the impact of constraints on the use of earnouts by focusing on acquirer characteristics. Extant papers suggest that firm size is related to a firm's ability to access financial markets, consistent with Hadlock and Pierce (2010). We find acquirer size, proxied by book assets and market value, is significantly lower in deals with earnouts. We also examine the relative size of the deal, defined as the value of the transaction divided by the acquirer's book assets. The motivation for this variable is simple. We

expect larger deals will be relatively more difficult for an acquirer to finance, given limited financial slack. We find acquirers use earnouts more often with relatively large targets.

Table 3 also reveals that earnout acquisitions are more likely to involve acquirers from industries with higher cash flow volatility, which increases demand for precautionary liquidity (Bates, Kahle, and Stulz, 2008). We use credit rating data and proxy for financial constraints with an indicator for the presence of a rated debt (Harford and Uysal, 2014; Kashyap, Lamont, and Stein, 1994). An indicator for dividends captures the idea that constrained firm do not payout cash (Lamont, Polk, and Saa-Requejo, 2001). We also use the index from Whited and Wu (2006) and the "SA Index" from Hadlock and Pierce (2010) to proxy for constraints at the firm level. At an economy-wide level, we use the C&I spread to capture constraints, as Harford (2005) suggests this spread is correlated with overall market liquidity.[2]

We also follow Uysal (2011) and model firm leverage with a multivariate model for Compustat firms for the years 1988 to 2014. We take the error term of this model as a measure of "abnormal" leverage. We interpret a positive value of this measure as suggestive that a firm has too much leverage and has difficulty obtaining additional debt. Similarly, we model cash holdings for all Compustat firms following Bates, Kahle, and Stulz (2008). This model of cash holdings predicts the cash needs of firms, consistent with firms hoarding cash if they expect to have high hedging needs due to an inability to access external finance. Hence, we take the expected value of this model as a proxy for cash and hedging needs. With the proxies of financial constraints, we show that firms are more likely to be constrained at the 1% level in acquisitions with earnouts.

[2] In unreported analysis, we also examine the "Kaplan-Zingales Index". Prior literature finds the KZ index produces conflicting results compared to more recently developed measures of financial constraints (e.g., Almeida, Campello, and Weisbach, 2004; Denis and Sibilkov, 2010; Faulkender and Wang, 2006). Hence, we exclude this measure from our analysis.

In Table 4, we examine the magnitude and frequency of earnouts for constrained and unconstrained acquirers. We use the same proxies of financial constraints as in Table 3 and categorize our sample acquirers as constrained by these proxies including having no credit ratings, no dividends, a small (below sample median) market value, high (above sample median) relative size, high industry cash flow volatility, high Whited-Wu index, or high SA index. We also classify bidders as constrained during quarters in which the C&I spread is above the sample median. Due to the inability to directly measure constraints, we use several proxies to assure that our results are not driven by the choice of a particular variable. In deals with small bidders, earnouts are 4.61% more likely, which is a relative increase of 70.70% (4.61/6.52). If we use relative size of the target to the acquirer to proxy for financial constraints, the average size of an earnout is not significantly different across constrained and unconstrained firms, but constrained acquirers use earnouts about 2.90% more frequently. That is, earnouts are 39.56% (2.90%/7.33%) relatively more likely to be included when the target is large relative to the acquirer.

Table 4 shows that the probability of having an earnout is 4.98% higher and the earnout ratio is 1.35% larger for acquirers in industries with above-median cash flow volatility, consistent with earnouts aiding firms with high cash hedging needs. We also proxy for financial constraints with indicators for bidders without credit ratings or dividends. These bidders are 5.45% and 4.06% more likely to use earnouts, while earnout ratios are 4.53% and 5.44% larger, respectively. For acquisition bids made in quarters when the C&I spread is above the median for sample quarters, earnouts are 4.31% more likely, and the earnouts are approximately 1.36% larger, relative to the size of the deal. Bidders with a Whited-Wu index or SA index above the median are also more likely to use earnouts by 6.54% and 5.10%, and earnout ratios are higher by 5.84% and 5.63%, respectively. By these measures, acquirer managers are nearly twice as likely to include earnouts in acquisition contracts

when they are financially constrained. Overall, univariate evidence suggests that bidders' ability to obtain financing is strongly related to their propensity to retain financial slack with an earnout.

IV. Multivariate Analysis

i. Financial Constraints and Earnouts

We begin our multivariate analysis by testing if the positive relation between constraints and earnouts holds after controlling for target and deal characteristics. Table 5, Panel A presents marginal effects of probit regressions modelling the choice to use an earnout. Earnouts contribute to resolving valuation problems related to moral hazard and information asymmetry about the target. We follow Cain, Denis, and Denis (2011) and proxy for these frictions with target industry characteristics including volatility, R&D, and market-to-book ratio. The information environment is also likely to be poorer for smaller targets and private targets, and we include the log of the target size as well as an indicator for a private target. We control for cross-industry bids, because bidders will not be as knowledgeable about investments outside of their own industry. We also include control variables related to deal characteristics including indicators for termination fees and the presence of a lock-up provision, bid hostility, toehold, tender offer, and a cash bid.

After controlling for target and deal characteristics related to information asymmetry and moral hazard problems, we continue to find that the proxies for bidder financial constraints are statistically significantly related to the choice of earnout in Table 5. Smaller acquirers are more likely to use an earnout by 3.6%, which is a 39% (3.6%/8.8%) increase over the unconditional probability. Deals with an above-median relative size of the target to the acquirer are 3.8% more likely to include an earnout. This is equivalent to an increase of 43% (3.8%/8.8%) of the unconditional probability of including an earnout in a bid. Acquirers in industries with high cash flow volatility are 3.7% more likely to use earnouts, suggesting earnouts help bidders manage slack when future cash flows are

uncertain. Bidders without credit ratings and without cash dividends are 3.7% and 2.8% more likely to use an earnout, respectively.

We also find the SA and Whited-Wu indices are positively related to the use of earnouts, with each index increasing the probability of an earnout by 3.4% and 4.7%, respectively. These effects are significant at the 1% level. Our evidence also suggests that earnouts are more likely when economy-wide liquidity is scarce. In quarters with above-median C&I interest rate spreads, earnouts are 4.2% more common with a t-statistic of 10.78. Estimates of abnormal debt and predicted cash hedging needs are also related to earnout use, increasing the probability of an earnout by 0.9% and 4.7% for values above the median of abnormal debt and predicted cash, respectively.

We check the robustness of our results to several different specifications. We exclude bidder size and bidder market-to-book in most specifications, due to the potential correlation with financial constraints. However, we include acquirer size and market-to-book ratio in our specifications in unreported robustness results. While these variables may be correlated with financial constraints, we continue to find significant, positive relations between the use of earnouts and financial constraints, with the exception of size-related proxies (*Low Acquirer Market Value* and *High Relative Size),* which are highly correlated with acquirer size. Our results are generally robust to including industry fixed effects at the two-digit and three-digit SIC code level (exception industry cash flow volatility, which cannot be included with industry effects). Our results are also robust to including time fixed effects, although estimation with C&I spread is not reliable since this variable only varies by time.[3]

In Panel B of Table 5, we use the financial crisis to study how constrained firms behave when credit and liquidity are in short supply due to a shock to the supply of funds. Prior literature suggests that financial slack is relatively more important during periods of financial constraints. Cooper and

[3] Results are available upon request.

Jensen (2015) find that the relation between cash holdings and equity returns concentrates in periods of high financing costs, including the financial crisis. Similarly, Harford, Klasa, and Maxwell (2012) find firms with shorter-term debt hold more cash due to greater refinancing risk, and this association is stronger during times of tight credit conditions. Due to the greater need for liquidity and the relatively high cost of debt during times of tight credit conditions, we expect even greater earnout use during the financial crisis.

For each financial constraint variable, we interact the proxy of constraints with an indicator for the financial crisis, equal to one in the final quarter of 2007 through ten quarters after. We then include this interaction and the *Crisis* indicator variable in the earnout probit regressions. We find nine of the ten interactions are positively related to earnout use, with five of the ten interactions providing statistical significance at the 10% level or better. These positive relations hold after controlling for the effects of financial constraints and the crisis, both of which are significantly related to the use of earnouts. Overall, these results provide evidence that the availability of financing is a significant consideration for managers when agreeing to an earnout, and the magnitude of this effect is large with marginal effects up to a 5.2% increase in earnout use during the crisis.

We recognize that the inclusion of an earnout agreement is determined at the same time as the form of payment for an acquisition (i.e., cash vs. stock payment), and proper treatment of this decision should model form of payment and earnouts jointly to account for their endogenous determination. In appendix results, we model the cash payment decision with the decision to include an earnout in bivariate probit models that accounts for this endogenous selection. The bivariate probit models include an equation for including all-cash payment and an equation for the use of an earnout, and these equations are estimated jointly.

To aid in identification, we include an instrument in each model with the determinants of cash payment that is excluded from the equation with the determinants of an earnout. This instrument is the maximum individual capital gains rate, *Capital Gains*. Because capital gains taxation applies more frequently to cash acquisitions than stock acquisitions, we expect variation in the capital gains rate influences the decision to use cash as a form of payment. In the Appendix Table, the negative, significant coefficient on the tax rate suggests that higher taxes reduce the likelihood of a cash payment, validating our choice of instrument. Because the choice of an earnout agreement has limited capital gains tax implications, we do not expect the tax rate influences the choice of an earnout significantly other than through the choice of form of payment, providing some support for the instrument's exclusion restriction.

In the Appendix Table, we run individual bivariate probit models, each with two equations, for each of the financial constraints measures. In essence, we re-run each model of Panel A of Table 5 in a bivariate probit, rather than a single-equation probit model, to check that the interpretation of our results in Table 5 are robust to endogenous selection of form of payment. Coefficient estimates reveal that all measures of financial constraints remain significantly, positively related to the use of earnouts. These results suggest the relation between financial constraints and earnout use are not driven by endogenous selection of cash or stock payment, as constrained bidders could use stock due to the need to retain cash. Rather, the relation between constraints and earnout remains robust.

ii. Earnouts and Financing Decisions

The positive relation between acquirer financial constraints and earnout use is consistent with earnouts providing financial slack to firms that lack cheap access to capital markets. This slack could provide financing for the acquisition itself if outside capital is costly, or it could provide a hedge to allow the bidder to continue financing further investments. For bidders, the benefits for the slack

vary according to the investment opportunities and financing options available. We provide evidence on the benefits of this financial slack by examining financing decisions for the sample acquisitions.

Table 6 presents results of regressions modelling the choice of outside financing for sample acquisitions. Our sample is significantly reduced due to a lack of data availability. Regulatory requirements do not specifically require firms to disclose the source of financing for acquisitions. Notwithstanding this limitation, SDC collects data from SEC filings and press releases, which frequently provide data on the source of financing for the acquisition. Even with information on capital raising around acquisition announcement, the source of financing itself is obscure when the payment for the acquisition is cash. Martynova and Renneboog (2009) and Schlingemann (2004) note the difficulty in attributing a dollar of cash to a particular source of financing, as cash could have been raised from internal cash flows, prior debt issues, or prior equity offerings.

Subject to the caveats mentioned, we use SDC's data on the source of acquisition financing and classify bids as externally financed if SDC reports the source of funds as borrowings, debt issuance, bridge loan, credit line, or common stock. If SDC reports the source as corporate funds, we designate the deal as internally financed. After limiting the sample to bids with this information, we are left with a sample of 4,270 observations. If internal and external sources are used, we classify the bid as externally financed, but our results are robust to classifying bids with any internal funds as internally financed.

Table 6 reports marginal effect estimates for probit regressions modelling the choice of external financing. Column 1 presents the univariate regression with only an indicator for the presence of an earnout and an intercept term. The presence of an earnout is associated with a 5.9% lower probability of external financing, consistent with earnouts providing substitute financing when outside financing is costly or unavailable. Column 2 of Table 6 includes several deal and target

characteristics related to the use of earnouts and choice of financing. After controlling for these determinants, we find that the relation between earnout use and external financing is negative and significant at the 1% level with a marginal effect estimate of -6.0%. In Column 3, we include industry and year fixed effects and find the negative relation between earnouts and external financing remains with at marginal effect of -4.0%, significant at the 5% level.

While the negative relation between earnouts and outside financing suggests a substitution effect between earnouts and external capital, we recognize the endogenous nature of the choice of earnout and acquisition financing. To alleviate concerns of endogenous selection, we model the earnout and financing choices jointly using a bivariate probit. We aid the identification of the model by using two variables as instruments in the selection of an earnout agreement. First, we create an indicator equal to one following the 2001 change in accounting standards that eliminated the pooling-of-interests method of accounting for acquisitions. We expect this change increased the relative use of earnouts, because acquisitions with earnouts must be accounted for with the purchase method. Without the pooling option, there are fewer limitations on the use of earnouts, and we expect the use of earnouts increases with the relative ease of including them after 2001.

Second, we create an indicator equal to one for acquirers with smaller (non-Big-N) auditors after 2009, when SFAS 141 increased the reporting requirements associated with contingent consideration in acquisitions, i.e., earnouts. Under the new accounting standards, acquirers must record a fair value liability for the earnout and update this liability each quarter. Due to the onerous nature of determining the fair value of a liability with no publicly traded comparable, Allee and Wangerin (2013) provide evidence that earnouts are less likely for firms with smaller auditors after the rule change. Importantly, we do not expect the change in pooling vs. purchase method or the

use of small auditors after 2009 to be significantly related to the choice of acquisition financing, satisfying the exclusion requirement of our instruments.

With the inclusion of the two instruments as well as additional controls for the bidder's auditor size and the changes to SFAS 141 in 2009, we examine the endogenous relation between the choice of earnout and external financing in columns (4) and (5) of Table 6. In column (5), we present marginal effect estimates of the selection equation of the choice of earnout. As predicted, the elimination of the pooling method of accounting had a significant, positive impact on the use of earnouts. Conversely, the use of a non-Big-N auditor significantly reduced the likelihood of using an earnout after SFAS 141. Hence, we have evidence that our instruments meet the relevance requirement.

After instrumenting for the choice of earnout, we examine the choice of external financing in column (4) of Table 6. The marginal effect of the use of earnout on the choice of external financing is large after correcting for selection at -21.9%. The statistical significance remains large as well with a negative t-statisic of -4.18. While we are careful to interpret this result given the data limitations, this evidence is consistent with earnouts having a large influence on managers' decision to approach external capital markets for acquisition financing.

iii. Earnouts and Target Premiums

In this section, we further explore the motivations for using earnouts as an alternative source of financing. We first focus on the incentives of the target shareholders to provide acquisition financing. Cain, Denis, and Denis (2011) show that earnouts average two and a half years in duration with a maximum of 20 years in their sample. Given the length and magnitude of earnouts, acquirers stand to benefit a significant amount in terms of the time value of money if they use earnouts to defer payment, especially given the high cost of financing for risky or constrained bidders.

We examine the financial benefits of earnouts for target managers and shareholders by analyzing deal premiums. Due to the fact that few earnouts are used in the purchase of public targets, we cannot measure bid premiums relative to a pre-bid target share price. Instead, we follow Officer (2007) and use price multiples to compare premiums across targets with and without earnouts. This method allows us to examine prices paid relative to a target characteristic, such as firm size, and provides evidence on the relative difference in the price paid in deals with and without earnouts.

We use the ratio of the deal value-to-total target sales and the ratio of price per share-to-book value of equity per share. The deal value and price variable include maximum payout value of earnouts. We exclude other valuation multiples that require earnings data due to the fact that targets with earnouts are, as expected, riskier, smaller, and frequently have zero or negative earnings. We note that the presence of smaller firms creates a positive skew in the ratios examined, and we take the log of the ratios in addition to winsorizing these ratios to provide a distribution closer to a normal distribution.

Table 7 presents coefficient estimates of regressions of deal premiums on the use of earnouts. Similar to prior regressions, we control for target industry characteristics related to information asymmetry and moral hazard, as well as several deal characteristics. Due to data limitations for private targets in our sample, the number of observations is reduced to 11,396 in regressions requiring sales data and 7,657 in regressions requiring the book value of equity of the target.

Column (1) of Table 7 presents the baseline regression for the deal value-to-sales ratio. After controlling for target industry and deal characteristics, the presence of an earnout is positively related to the premium paid, with statistical significance at the 1% level. That is, target managers recognize the value of the deferred payment and incorporate a time value into their negotiations over the

terms of the earnout. In column (4) of Table 7, we find similar results with the price-to-book ratio as a proxy for the acquisition premium. The use of an earnout is significantly, positively related to the price ratio with a t-statistic of 5.88.

We provide further evidence that prices paid incorporate a return for target shareholders if earnouts are used to defer acquisition compensation by studying the effects of market-wide risk premiums on the relation between earnouts and acquisition prices. We use indicators for the financial crisis and high loan spreads to proxy for times when capital markets demand relatively high returns. *High C&I Spread* is equal to one in quarters with above sample median C&I spreads, as provided by the Federal Reserve. *Crisis* is an indicator equal to one in the ten quarters including and following the last quarter of 2007.

We interact the crisis and spread indicators with the earnout variable in Table 7. We also include the un-interacted crisis and spread variables as controls in premium regressions. We find that during times of high discount rates, target shareholders demand higher premiums when they contract with earnout agreements. These results hold with significant coefficients using both the deal value-to-sales and price-to-book ratio as proxies for deal premiums. Overall, this evidence is consistent with target shareholders benefitting from using earnouts as a form a seller financing, as they receive a positive rate of return.

iv. Earnouts and the Supply of Seller Financing

In this section, we present further evidence that target shareholders view earnouts as part of a broader financing and investment decision. Specifically, we examine the financial slack of target shareholders by studying the cash holdings of parents of targets in subsidiary sales. If target shareholder-parents enter into earnout agreements, then as investors in a financial contract, we expect parents' financial slack available for investment influences the likelihood of entering into an

earnout agreement. However, if earnouts are used solely to bridge valuation gaps between buyers and sellers, there is no reason to expect parent's liquidity is related to the use of an earnout.

We limit our sample to subsidiary acquisitions in which the quarterly cash and marketable securities of their parents are available in Compustat. This leaves a sample of 2,992 observations. We use three proxies for the supply of funds available for financing acquisitions based on the parents' financial slack: the parent's cash-to-asset ratio, cash-to-deal value ratio, and dollar value of cash holdings. We take the log of the cash-to-deal value ratio and the dollar value of cash to reduce skew in the variables. To ensure we are not capturing a size effect, we control for the size of the parent with the log of the book value of parent assets.

Table 8 presents the results of probit regressions of the inclusion of an earnout on the cash and control variables. Column (1) reveals a strong positive relation between the cash-to-asset ratio of the target's parent and the use of an earnout with statistical significance at the 1% level. Columns (2) and (3) show similar results with the cash-to-deal value ratio and value of cash holdings, which are both significantly, positively related to the use of an earnout, even after controlling for parent size and target characteristics. That is, parents are more willing to provide earnout financing when they can provide financial slack to bidders, suggesting the use of earnouts is dependent on the supply of liquidity from target owners. Overall, the evidence is consistent with earnouts providing a financial market with both a supply and demand of funds for acquisition financing.

v. Financial Constraints and Earnout Fair Values

Following the adoption of revisions to SFAS 141 (R), acquirers must record the fair value of any contingent consideration as a liability on the balance sheet. These fair values are repoted in 10-Q's and updated each quarter until the bidder makes the final payment. Cadman, Carrizosa, and Faurel (2014) present evidence that these fair values are informative with market prices reacting to

their disclosure. They use the ratio of the fair value of the earnout relative to the maximum earnout payment to capture managers' expectations of paying the earnout in full.

We follow Cadman, Carrizosa, and Faurel (2014) and collect data on the fair values of earnouts following the adoption of SFAS 141 (R) in 2009. If managers record fair values in expectation of final earnout payments, we expect financially constrained acquirers record a fair value close to the maximum payment, which implies a fair value-to-maximum earnout ratio close to one. We expect a high fair value estimate, as the earnout resembles a financing agreement, and bidders would want to signal their intention to pay the target owner. I.e., bidders want to appear "creditworthy" to the sellers.

However, fair values of earnouts are difficult to estimate due to the lack of market values for comparable contracts. Due to the lack of market-based information, managers estimate earnout fair values from unobservable inputs, requiring assumptions about these inputs to construct a fair values. Due to the flexibility in making assumptions about earnout fair values, managers have significant discretion in assigning fair values. If managers of constrained firms prefer to understate their liabilities to increase their ability to obtain debt, managers could use their flexibility to provide lower earnout fair values when facing financial constraints. We, hence, provide an alternative that suggests fair value-to-maximum earnout ratios are lower for constrained firm.

As data on fair values is only required after 2009, we find only 320 fair value estimates for which we also have a maximum earnout value in our sample. We construct the fair value-to-maximum earnout ratio for these observations and test for understating of fair values by creating and indicator for low fair values. This indicator equals one if the fair value is in the bottom quarter of the sample, which corresponds to a ratio below one-third. We regress this indicator on measures for financial constraints and control variables related to deal and target characteristics in a probit

model. We exclude two financial constraints proxies from our regressions in Table 9. The C&I spread does vary above/below median during the sample period post-2009, limiting our ability to use statistical analysis. We also exclude the measure of abnormal leverage, because the fair value liability from earnouts is mechanically related to the leverage ratio.

The remaining proxies of financial constraints are all positively related to the likelihood of having a fair value estimate in the bottom quarter. For example, below-median acquirers are 10.2% more likely to report a fair value in the bottom quartile of fair values, relative to the maximum earnout size. This is significant at the 10% level and suggests managers use their flexibility in assigning fair values to push down their leverage and appear less financially constrained. This relation is particularly pronounced for bidders with high cash hedging needs. They are more than 19% more likely to report a low fair value ratio than bidders with low cash hedging needs who are most in need of liquidity, with statistical significance at the 1% level. We note that out of the eight financial constraint measures in Table 9, six a significantly related to having low fair value estimates in spite of the relatively low statistical power due to the smaller number of observations.

V. Conclusion

We provide evidence that earnouts provide acquisition financing, allowing for valuable investment for acquirers facing financial constraints. Specifically, we show that the ability to defer payments to target shareholders with earnouts is valuable to bidders, in particular those facing financial constraints. Our study supports existing literature on the importance of financial slack on corporate investment for constrained firms and demonstrates that financial contracting directly with the sellers of assets can create significant financial synergies.

We posit that earnouts offer an attractive substitute for costly external financing, as target shareholders are able to provide cheaper acquisition financing if there are frictions impeding

effective outside financing. These arrangements also benefit the sellers as they receive higher premiums that incorporate a return for deferring the receipt of funds. While the benefits of such financing arrangements are clear for small business, who are less able to find financing for investment, we show that seller financing through earnouts can be an efficient outcome, even for large publicly-traded corporations.

References

Allee, K. D., Wangerin, D., 2013. Auditors role in financial contracting: Evidence from SFAS 141 (R). Working paper.

Almeida, H., Campello, M., Hackbarth, D., 2011. Liquidity mergers. Journal of Financial Economics 102, 526–558.

Almeida, H., Campello, M., Weisbach, M. S., 2004. The cash flow sensitivity of cash. The Journal of Finance 59, 1777–1804.

Barbopoulos, L., Sudarsanam, S., 2012. Determinants of earnout as acquisition payment currency and bidders value gains. Journal of Banking & Finance 36, 678–694.

Barbopoulos, L., Wilson, J., 2013. The valuation effects of earnouts in mergers and acquisi- tions of us financial institutions.

Bates, T. W., Kahle, K. M., Stulz, R. M., 2009. Why do us firms hold so much more cash than they used to? The Journal of Finance 64, 1985–2021.

Boone, A. L., Mulherin, J. H., 2007. How are firms sold? The Journal of Finance 62, 847–875.

Cadman, B., Carrizosa, R., Faurel, L., 2014. Economic determinants and information environment effects of earnouts: New insights from SFAS 141 (R). Journal of Accounting Research 52, 37–74.

Cain, M. D., Denis, D. J., Denis, D. K., 2011. Earnouts: A study of financial contracting in acquisition agreements. Journal of Accounting and Economics 51, 151–170.

Caselli, S., Gatti, S., Visconti, M., 2006. Managing M&A risk with collars, earn-outs, and CVRs. Journal of Applied Corporate Finance 18, 91–104.

Chava, S., Roberts, M. R., 2008. How does financing impact investment? The role of debt covenants. The Journal of Finance 63, 2085–2121.

Choi, A. H., 2014. Facilitating mergers and acquisitions with earnouts and purchase price adjustments. Working paper.

Cooper, M., and Jensen, T., 2015. When cash is king: Funding conditions and the value of cash holdings. Working paper.

Datar, S., Frankel, R., Wolfson, M., 2001. Earnouts: The effects of adverse selection and agency costs on acquisition techniques. Journal of Law, Economics, and Organization 17, 201–238.

Denis, D. J., Sibilkov, V., 2009. Financial constraints, investment, and the value of cash holdings. Review of Financial Studies 23, 247–269.

Duchin, R., Ozbas, O., Sensoy, B., 2010. Costly external finance, corporate investment, and the subprime mortgage credit crisis. Journal of Financial Economics 97, 418–435.

Erel, I., Jang, Y., Weisbach, M. S., 2015. Do acquisitions relieve target firms financial constraints? The Journal of Finance 70, 289–328.

Faulkender, M., Wang, R., 2006. Corporate financial policy and the value of cash. The Journal of Finance 61, 1957–1990.

Fazzari, S., Hubbard, R. G., Petersen, B., 1988. Investment, financing decisions, and tax policy. The American Economic Review 78, 200–205.

Golubov, A., Yawson, A., Zhang, H., 2015. Extraordinary acquirers. Journal of Financial Economics 116, 314–330.

Hadlock, C. J., Pierce, J. R., 2010. New evidence on measuring financial constraints: Moving beyond the KZ index. Review of Financial Studies 23, 1909–1940.

Harford, J., 1999. Corporate cash reserves and acquisitions. The Journal of Finance 54, 1969–1997.

Harford, J., 2005. What drives merger waves? Journal of Financial Economics 77, 529–560.

Harford, J., Klasa, S., and Maxwell, W., 2012. Refinancing risk and cash holdings. Journal of Finance 69, 975–1012.

Harford, J., Uysal, V. B., 2014. Bond market access and investment. Journal of Financial Economics 112, 147–163.

Hartzell, J. C., Ofek, E., Yermack, D., 2004. What's in it for me? CEOs whose firms are acquired. Review of Financial Studies 17, 37–61.

Hayn, C., 1995. The information content of losses. Journal of Accounting and Economics 20, 125–153.

Jensen, M. C., 1986. Agency cost of free cash flow, corporate finance, and takeovers. American Economic Review 76, 323–329.

Jensen, M. C., Ruback, R. S., 1983. The market for corporate control: The scientific evidence. Journal of Financial Economics 11, 5–50.

Kashyap, A. K., Stein, J. C., 1994. Monetary policy and bank lending. In: Monetary policy, The University of Chicago Press, pp. 221–261.

Kashyap, A. K., Lamont, O., Stein, J. C., 1994. Credit conditions and the cyclical behavior of inventories. Quarterly Journal of Economics 109, 565-592.

Kohers, N., Ang, J., 2000. Earnouts in mergers: Agreeing to disagree and agreeing to stay. The Journal of Business 73, 445–476.

Lamont, O., Polk, C., Saa-Requejo, J., 2001. Financial constraints and stock returns. Review of Financial Studies 14, 529–554.

Lewellen, W. G., 1971. A pure financial rationale for the conglomerate merger. Journal of Finance 26, 521–537.

Lukas, E., Reuer, J. J., Welling, A., 2012. Earnouts in mergers and acquisitions: A game- theoretic option pricing approach. European Journal of Operational Research 223, 256– 263.

Martynova, M., Renneboog, L., 2009. What determines the financing decision in corporate takeovers: Cost of capital, agency problems, or the means of payment? Journal of Corporate Finance 15, 290–315.

Modigliani, F., Miller, M. H., 1958. The cost of capital, corporation finance and the theory of investment. The American Economic Review 48, 261–297.

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.

Palepu, K. G., 1986. Predicting takeover targets: A methodological and empirical analysis. Journal of Accounting and Economics 8, 3–35.

Officer, M. S., Poulsen, A. B., Stegemoller, M., 2009. Target-firm information asymmetry and acquirer returns. Review of Finance 13, 467-493.

Ragozzino, R., Reuer, J. J., 2009. Contingent earnouts in acquisitions of privately held targets. Journal of Management 35, 857–879.

Reuer, J. J., Shenkar, O., Ragozzino, R., 2004. Mitigating risk in international mergers and acquisitions: The role of contingent payouts. Journal of International Business Studies 35, 19–32.

Roll, R., 1986. The hubris hypothesis of corporate takeovers. Journal of Business 59, 197–216.

Schlingemann, F. P., 2004. Financing decisions and bidder gains. Journal of Corporate Fi- nance 10, 683–701.

Shleifer, A., Vishny, R. W., 2003. Stock market driven acquisitions. Journal of Financial Economics 70, 295–311.

Smith, R. L., Kim, J.-H., 1994. The combined effects of free cash flow and financial slack on bidder and target stock returns. Journal of Business 67, 281–310.

Whited, T. M., Wu, G., 2006. Financial constraints risk. Review of Financial Studies 19, 531–559.

Wulf, J., 2004. Do CEOs in mergers trade power for premium? Evidence from mergers of equals. Journal of Law, Economics, and Organization 20, 60–101.

Table 1
Variable Definitions

Variable	Definition
Deal Characteristics	
Cash Deal	An indicator variable equal to one if the acquisition is funded by 100% of cash.
Cross Industry	An indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code, zero if they are in the same two-digit industry. SIC codes are provided by SDC.
Earnout	An indicator variable equal to one if the merger agreement includes and earnout.
Earnout Ratio	The ratio of earnout value to transaction value.
Earnout Value ($mil)	The dollar value of the contingent payments under the earnout agreement, in millions.
Lock-Up	An indicator variable equal to one if the target grants the acquirer an option to purchase stock or assets (e.g. a division or subsidiary) in order to make a competing bid more expensive or less attractive.
Private Target	An indicator variable equal to one if the target is a private company, zero otherwise.
Relative Size	The ratio of transaction value to the value of acquirer's assets.
Target Industry Market-to-Book	The median ratio of market value of total assets (book value of total assets - book value of equity + market value of equity) to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement.
Target Industry R&D	The median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement.
Target Industry Volatility	The annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement.
Tender Offer	An indicator variable equal to one if the deal is a tender offer.
Termination Fee	Target termination fees as a percentage of transaction Value.
Toehold	The percentage of target's equity hold at announcement.
Transaction Value	Value of acquisition reported by SDC in millions of dollars.

Variable	Definition
Acquirer Characteristics	
Abnormal Leverage	The error term of a model of firm leverage, following Uysal (2011).
Acquirer Assets	Book value of acquirer's assets in millions.
Acquirer Market Value	Acquirer's market value of equity in millions.
Industry Cash Flow Volatility	The standard deviation of an acquirer's industry asset-scaled cash flow over the last 10 fiscal quarters prior to the announcement of the acquisition.
No Credit Rating	An indicator variable equal to one if the acquirer did not have a credit rating from S&P, Moody's, Fitch, or Duff & Phelps in the fiscal quarter preceding the announcement of the acquisition, zero otherwise.
No Dividend Payout	An indicator variable equal to one if the acquirer did not pay a dividend in the fiscal quarter preceding the announcement of the acquisition, zero otherwise.
Predicted Cash	The predicted component of a model of a firm's cash ratio estimating cash hedging needs, following Bates, Kahle, and Stulz (2008).
S-A Index	The index is constructed following Hadlock and Pierce (2010) as –0.737Size + 0.043Size2 – 0.040Age, where Size equals the log of inflation-adjusted Compustat item at (in 2004 dollars), and Age is the number of years the firm is listed on Compustat.
WW Index	The index is constructed following Whited and Wu (2006) and Hennessy and Whited (2007), calculated using Compustat variables as follows: –0.091 [(ib +dp)/at] – 0.062[indicator set to one if dvc + dvp is positive, and zero otherwise] + 0.021[dltt/at] – 0.044[log(at)] +0.102[average industry sales growth (three-digit SIC) and each year] – 0.035[sales growth].
Other Variables	
C&I Loan Rate Spread	The difference between the average borrowing rate on commercial and industrial loans and the federal funds rate.
Crisis	An indicator equal to one in the ten quarters starting in the final quarter of 2007.
Non-Big-N Auditor	An indicator equal to one if the acquirer's auditor is no a large "Big-N" auditor.
Parent Cash	The dollar value of cash and marketable securities for the parent of a subsidiary target, in millions.
Parent Cash-to-Assets	The ratio of cash and marketable securities divided by the book value of assets for parent of a subsidiary target.
Parent Cash-to-Deal Value	The ratio of cash and marketable securities of a parent divided by the transaction value of the subsidiary target.
Post-Pooling Method	An indicator equal to one after 2001, when the pooling treatment of acquisitions was eliminated.
Post-SFAS 141	An indicator equal to one after the year 2009, when the accounting treatment of contingent payments was revised.

Table 2
Descriptive Statistics

Panel A: Earnout Characteristics

Ownership Status	Earnout Size	N	Mean	Median	Std. Dev.	1%	99%
Private Target	Earnout Value ($mil)	1,394	27.03	5.50	68.31	0.25	425.00
	Earnout Ratio	1,394	33.72%	29.88%	21.65%	3.20%	99.76%
Subsidiary Target	Earnout Value ($mil)	388	30.83	7.63	76.20	0.37	500.00
	Earnout Ratio	388	29.89%	24.27%	22.15%	3.08%	99.76%
Public Target	Earnout Value ($mil)	41	41.78	18.30	83.20	0.38	500.00
	Earnout Ratio	41	27.24%	23.11%	20.50%	3.34%	77.93%
All Targets	Earnout Value ($mil)	1,823	28.17	6.00	70.42	0.25	500.00
	Earnout Ratio	1,823	32.76%	28.10%	21.79%	3.08%	99.76%
Public Acquirer	Earnout Value ($mil)	1,823	28.17	6.00	70.42	0.25	500.00
	Acquirer Earnout Ratio	1,823	10.71%	3.33%	25.50%	0.04%	194.10%

Panel B: Earnout Use by Year

Year	All Mergers	Mergers with Earnouts	Percentage with Earnouts	Mean Earnout Value ($mil)	Mean Target Earnout Ratio	Mean Bidder Earnout Ratio
1988	467	13	2.78%	34.64	56.58%	22.96%
1989	561	32	5.70%	9.51	33.83%	16.80%
1990	486	31	6.38%	4.99	36.12%	18.67%
1991	572	44	7.69%	4.85	38.23%	23.34%
1992	840	55	6.55%	11.32	38.92%	24.15%
1993	1,118	99	8.86%	11.89	32.53%	15.58%
1994	1,463	99	6.77%	7.34	34.31%	12.60%
1995	1,521	84	5.52%	18.75	29.76%	16.33%
1996	1,824	82	4.50%	19.38	31.94%	8.32%
1997	2,258	140	6.20%	12.68	36.00%	11.19%
1998	2,228	155	6.96%	14.08	31.80%	7.67%
1999	1,872	105	5.61%	14.29	30.85%	10.56%
2000	1,660	113	6.81%	29.66	33.30%	14.14%
2001	1,075	97	9.02%	32.80	29.91%	7.18%
2002	970	121	12.47%	19.07	33.54%	7.34%
2003	945	95	10.05%	22.25	32.05%	6.24%
2004	1,058	121	11.44%	28.78	34.14%	8.11%
2005	1,062	137	12.90%	16.66	29.75%	5.91%
2006	1,038	116	11.18%	26.67	28.70%	11.39%
2007	992	139	14.01%	33.30	29.95%	8.78%
2008	682	108	15.84%	32.31	34.74%	13.94%
2009	454	76	16.74%	40.74	36.00%	7.77%
2010	550	76	13.82%	67.39	36.10%	6.03%
2011	588	91	15.48%	42.45	37.87%	9.91%
2012	618	91	14.72%	61.74	28.02%	6.44%
2013	536	60	11.19%	66.52	34.79%	11.82%
2014	659	87	13.20%	57.68	28.79%	14.98%
Average	1,041	91	9.72%	27.47	34.02%	12.15%
Total	28,097	2,467	N/A	N/A	N/A	N/A

This table reports descriptive statistics for a sample of 28,097 mergers completed between 1988 and 2014. 2,467 mergers include an earnout provision. Panel A presents the average dollar value of earnout payments and ratio of earnout value to transaction value for acquisition bids with earnout agreements. The sample is split by the public, private, or subsidiary status of the target. The *Acquirer Earnout Ratio* is the value of an earnout relative to the book value of acquirer assets. Panel B presents sample statistics by year for the sample of bids.

Table 3
Deal Characteristics

	All Bids			Mergers without Earnouts			Mergers with Earnouts			Difference (5)-(8)	
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.	Mean	T-statistic
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Acquirer Characteristics											
Acquirer Assets	28,097	5,292.558	16,566.040	25,630	5,587.923	17,032.670	2,467	2,223.970	10,063.530	3,363.953	14.70
Relative Size	28,097	0.304	0.652	25,630	0.305	0.659	2,467	0.288	0.582	0.018	1.42
Acquirer Market Value	27,779	4,534.515	15,592.440	25,327	4,717.318	15,921.400	2,452	2,646.324	11,497.450	2,070.994	8.19
Industry Cash Flow Volatility	27,781	0.331	0.618	25,349	0.315	0.600	2,432	0.490	0.763	-0.174	-10.95
No Credit Rating	28,097	0.684	0.465	25,630	0.672	0.470	2,467	0.818	0.386	-0.147	-17.70
No Dividend Payout	28,097	0.717	0.451	25,630	0.708	0.455	2,467	0.811	0.392	-0.103	-12.26
SA Index	28,097	-3.261	0.752	25,630	-3.282	0.752	2,467	-3.039	0.715	-0.244	-16.10
WW Index	23,738	-0.196	0.143	21,570	-0.201	0.143	2,168	-0.145	0.136	-0.055	-18.00
C&I Spread	28,097	2.106	0.432	25,630	2.093	0.424	2,467	2.240	0.486	-0.148	-14.61
Abnormal Leverage	16,160	0.010	0.069	14,456	0.009	0.069	1,704	0.015	0.069	-0.006	-3.23
Predicted Cash	15,955	0.162	0.123	14,372	0.158	0.123	1,583	0.202	0.123	-0.044	-13.55
Deal Characteristics											
Transaction Value	28,097	252.583	806.905	25,630	268.169	838.013	2,467	90.657	301.327	177.512	22.15
Cross Industry	28,097	0.384	0.486	25,630	0.378	0.485	2,467	0.443	0.497	-0.065	-6.24
Private Target	28,097	0.506	0.500	25,630	0.480	0.500	2,467	0.775	0.418	-0.294	-32.78
Subsidiary Target	28,097	0.284	0.451	25,630	0.292	0.455	2,467	0.206	0.404	0.086	10.01
Termination Fee	28,097	0.005	0.017	25,630	0.005	0.017	2,467	0.001	0.012	0.004	16.78
Lock-up	28,097	0.030	0.171	25,630	0.033	0.179	2,467	0.001	0.028	0.032	25.74
Toehold	28,097	0.016	0.126	25,630	0.017	0.129	2,467	0.008	0.090	0.009	4.46
Tender Offer	28,097	0.030	0.172	25,630	0.033	0.179	2,467	0.002	0.040	0.032	22.84
Cash Deal	28,097	0.480	0.500	25,630	0.477	0.499	2,467	0.507	0.500	-0.030	-2.87
Target Industry Volatility	28,097	0.033	0.013	25,630	0.033	0.013	2,467	0.035	0.013	-0.001	-5.26
Target Industry R&D	28,097	0.005	0.008	25,630	0.005	0.008	2,467	0.007	0.010	-0.003	-12.13
Target Industry Market-to-Book	28,097	1.541	0.484	25,630	1.531	0.485	2,467	1.653	0.459	-0.122	-12.54

This table reports summary statistics of sample acquisitions from the SDC database for the years 1988 through 2014, including comparisons between transactions with and without an earnout. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. *Acquirer Assets* is the book value of acquirer assets. *Relative Size* is the ratio of transaction value to the book value of acquirer's assets. *Acquirer Market Capitalization* is the market capitalization of the acquirer from CRSP measured at the end of the previous fiscal quarter before bid announcement. *Industry Cash Flow Volatility* is the standard deviation of acquirers' industry cash flow over the last 10 fiscal quarters prior to the announcement of the acquisition. *No Credit Rating* is an indicator variable equal to one if the acquirer did not have a credit rating from S&P, Moody's, Fitch, or Duff & Phelps in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *No Dividend Payout* is an indicator variable equal to one if the acquirer did not pay a dividend in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *SA Index* is an index constructed following Hadlock and Pierce (2010). *WW Index* is an index constructed following Whited and Wu (2006) and Hennessy and Whited (2007). *C&I Spread* is the difference between the average borrowing rate on commercial and industrial loans and the federal funds rate. *Abnormal Leverage* is the error term of a model of a firm's leverage ratio, following Uysal (2011). *Predicted Cash* is a firm's predicted cash hedging needs, following the model of Bates, Kahle, and Stulz (2008). *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code, zero if they are in the same two-digit industry. *Private Target* is an indicator variable equal to one if the target is a private company, zero otherwise. *Subsidiary Target* is an indicator variable equal to one if the target is a subsidiary, zero otherwise. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. The mean difference between transactions without and with earnouts is reported in column (10) and corresponding t-statistic in column (11).

Table 4
Financial Constraints and Earnout Characteristics

	Unconstrained		Constrained		Difference (1)-(3)		Difference (2)-(4)	
	Percentage with Earnouts	Mean Earnout Ratio	Percentage with Earnouts	Mean Earnout Ratio	Mean	Z-statistic	Mean	T-statistic
Financial Constraint Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Low Acquirer Market Value	6.52%	30.87%	11.13%	33.95%	-4.61%	-13.54	-3.07%	-2.90
High Relative Size	7.33%	33.42%	10.23%	32.36%	-2.90%	-8.58	1.06%	0.99
High Industry Cash Flow Volatility	6.26%	31.72%	11.24%	33.07%	-4.98%	-14.68	-1.35%	-1.26
No Credit Rating	5.05%	29.01%	10.50%	33.55%	-5.45%	-14.99	-4.53%	-3.41
No Dividend Payout	5.87%	28.34%	9.93%	33.79%	-4.06%	-10.82	-5.44%	-4.53
High SA Index	6.23%	29.15%	11.33%	34.78%	-5.10%	-15.11	-5.63%	-5.39
High WW Index	5.86%	28.56%	12.40%	34.41%	-6.54%	-17.48	-5.84%	-5.24
High C&I Spread	6.61%	31.86%	10.91%	33.22%	-4.31%	-12.75	-1.36%	-1.30
Abnormal Leverage	10.09%	33.01%	11.00%	32.01%	-1.00%	-1.90	1.07%	0.88
Predicted Cash	6.54%	27.65%	13.77%	34.38%	-7.23%	-15.24	-6.73%	-5.08

This table compares earnout use and earnout characteristics for sample acquisitions from the SDC database for the years 1988 through 2014 across unconstrained and constrained samples, using multiple proxies for financial constraints. The earnout ratio is the ratio of the amount of contingent payments offered to the target divided by the total amount of consideration offered to the target firm in the merger. *Low Acquirer Market Value* is an indicator variable equal to one if the acquirer's market value is lower than the median. *High Relative Size* is an indicator eaqual to one if relative size of target to the acquirer is higher than the median. *High Industry Cash Flow Volatility* is an indicator equal to one if the acquirer's industry cash flow volatility is higher than the median. *No Credit Rating* is an indicator variable equal to one if the acquirer did not have a credit rating from S&P, Moody's, Fitch, or Duff & Phelps in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *No Dividend Payout* is an indicator variable equal to one if the acquirer did not pay a dividend in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *High S-A Index* is an indicator variable equal to one if SA Index (Hadlock and Pierce, 2010) is higher than the median. *High WW Index* is an indicator variable equal to one if the acquirer's WW Index (Whited and Wu, 2006) higher than median. *High C&I Spread* is an indicator variable equal to one if C&I loan rate spread is higher than the median. *High Abnormal Leverage* equals one if the error term of a model of a firm's leverage ratio is greater than the sample median, following Uysal (2011). *High Predicted Cash* is an indicator equal to one if a firm's predicted cash hedging needs are above the sample median, following the model of Bates, Kahle, and Stulz (2008). The difference in means between unconstrained and constrained acquirer's earnout use and earnout size is reported in columns (5) and (7), respectively. Z-statistics of binary difference test between (1) and (3) are reported in column (8), and t-values of differences in (2) and (4) are reported in column (8).

Table 5
Determinants of Earnout Use

Panel A: Earnouts and Financial Constraints

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Low Acquirer Market Value	0.036***									
	(7.75)									
High Relative Size		0.038***								
		(9.29)								
High Industry Cash Flow Volatility			0.037***							
			(8.51)							
No Credit Rating				0.037***						
				(6.75)						
No Dividend Payout					0.028***					
					(5.62)					
High SA Index						0.034***				
						(7.30)				
High WW Index							0.047***			
							(9.60)			
High C&I Spread								0.042***		
								(10.78)		
High Abnormal Leverage									0.009*	
									(1.83)	
High Predicted Cash										0.047***
										(7.80)
Log of Transaction Value	-0.000	-0.008***	-0.007***	-0.002	-0.004***	-0.001	0.000	-0.007***	-0.008***	-0.003*
	(-0.12)	(-6.02)	(-5.41)	(-1.63)	(-3.37)	(-1.08)	(0.07)	(-5.95)	(-4.60)	(-1.67)
Target Industry Volatility	-0.338**	-0.518***	-0.492***	-0.422***	-0.457***	-0.550***	-0.644***	-0.305*	-0.949***	-0.955***
	(-2.05)	(-3.12)	(-3.06)	(-2.58)	(-2.79)	(-3.32)	(-3.53)	(-1.95)	(-3.96)	(-4.07)
Target Industry R&D	2.608***	2.611***	2.345***	2.599***	2.609***	2.786***	2.759***	2.398***	3.093***	2.954***
	(9.49)	(9.57)	(8.65)	(9.46)	(9.62)	(10.22)	(9.54)	(8.94)	(8.35)	(8.51)
Target Industry Market-to-Book	0.006	0.000	-0.002	0.002	0.003	-0.001	-0.003	0.006	-0.007	-0.005
	(1.41)	(0.05)	(-0.42)	(0.53)	(0.75)	(-0.13)	(-0.68)	(1.46)	(-1.02)	(-0.69)
Cross Industry	0.019***	0.018***	0.020***	0.020***	0.021***	0.020***	0.018***	0.020***	0.009*	0.017***
	(4.97)	(4.83)	(5.10)	(5.20)	(5.35)	(5.21)	(4.27)	(5.09)	(1.71)	(3.13)
Private Target	0.083***	0.081***	0.077***	0.078***	0.079***	0.080***	0.086***	0.077***	0.098***	0.091***
	(17.94)	(17.88)	(16.69)	(16.85)	(17.29)	(17.58)	(17.19)	(16.93)	(15.51)	(14.59)
Termination Fee	-1.123***	-1.048***	-1.145***	-1.144***	-1.090***	-1.080***	-1.030**	-1.173***	-0.611	-1.467**
	(-2.65)	(-2.60)	(-2.71)	(-2.67)	(-2.62)	(-2.61)	(-2.34)	(-2.67)	(-1.44)	(-2.34)
Lock-up	-0.159***	-0.149***	-0.156***	-0.162***	-0.166***	-0.156***	-0.138***	-0.154***	-0.092*	-0.110*
	(-4.59)	(-4.32)	(-4.57)	(-4.71)	(-4.85)	(-4.54)	(-3.81)	(-4.49)	(-1.96)	(-1.83)
Toehold	-0.025	-0.020	-0.025	-0.020	-0.022	-0.020	-0.029	-0.028	-0.027	-0.019
	(-1.41)	(-1.15)	(-1.42)	(-1.17)	(-1.30)	(-1.14)	(-1.49)	(-1.58)	(-1.08)	(-0.83)
Tender Offer	-0.125***	-0.128***	-0.121***	-0.126***	-0.123***	-0.127***	-0.129***	-0.120***	-0.162***	-0.132***
	(-4.55)	(-4.70)	(-4.32)	(-4.54)	(-4.49)	(-4.53)	(-4.31)	(-4.30)	(-4.06)	(-3.87)
Cash Deal	0.019***	0.022***	0.007*	0.017***	0.015***	0.019***	0.017***	0.006	0.009	0.001
	(4.78)	(5.38)	(1.87)	(4.21)	(3.83)	(4.62)	(3.94)	(1.45)	(1.55)	(0.16)
Observations	27,779	28,097	27,781	28,097	28,097	28,097	23,738	28,097	16,160	15,955
Pseudo R-squared	0.083	0.084	0.083	0.081	0.079	0.081	0.086	0.086	0.066	0.087

Panel B: Earnouts, Constraints, and the Financial Crisis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Low Acquirer Market Value	0.036***									
	(7.73)									
Crisis X Low Acquirer Market Value	0.007									
	(0.51)									
High Relative Size		0.036***								
		(8.78)								
Crisis X High Relative Size		0.029**								
		(2.15)								
High Industry Cash Flow Volatility			0.033***							
			(7.67)							
Crisis X High Industry Cash Flow Volatility			0.006							
			(0.33)							
No Credit Rating				0.032***						
				(5.93)						
Crisis X No Credit Rating				0.047**						
				(2.51)						
No Dividend Payout					0.024***					
					(4.78)					
Crisis X No Dividend Payout					0.052***					
					(3.06)					
High SA Index						0.033***				
						(6.92)				
Crisis X High SA Index						0.035**				
						(2.38)				
High WW Index							0.046***			
							(9.18)			
Crisis X High WW Index							0.026*			
							(1.67)			
High C&I Spread								0.039***		
								(9.78)		
Crisis X High C&I Spread								0.010		
								(0.55)		
High Abnormal Leverage									0.009*	
									(1.82)	
Crisis X High Abnormal Leverage									-0.005	
									(-0.27)	
High Predicted Cash										0.043***
										(7.03)
Crisis X High Predicted Cash										0.029
										(1.43)
Crisis	0.054***	0.044***	0.041**	0.018	0.015	0.043***	0.041***	0.038**	0.059***	0.025
	(5.10)	(4.15)	(2.29)	(1.08)	(0.96)	(4.23)	(3.61)	(2.15)	(4.02)	(1.50)
Log of Transaction Value	-0.001	-0.008***	-0.007***	-0.003**	-0.005***	-0.002	-0.000	-0.008***	-0.008***	-0.003**
	(-0.49)	(-6.56)	(-5.69)	(-2.20)	(-3.86)	(-1.49)	(-0.25)	(-6.22)	(-4.94)	(-2.00)
Target Industry Volatility	-0.466***	-0.637***	-0.583***	-0.536***	-0.559***	-0.661***	-0.751***	-0.425***	-1.044***	-1.055***
	(-2.78)	(-3.78)	(-3.57)	(-3.23)	(-3.36)	(-3.93)	(-4.04)	(-2.64)	(-4.30)	(-4.44)
Target Industry R&D	2.477***	2.471***	2.258***	2.470***	2.468***	2.645***	2.617***	2.306***	2.956***	2.836***
	(9.10)	(9.14)	(8.39)	(9.08)	(9.18)	(9.81)	(9.13)	(8.66)	(8.03)	(8.23)
Target Industry Market-to-Book	0.011**	0.005	0.002	0.007	0.008*	0.004	0.001	0.010**	-0.001	0.001
	(2.46)	(1.12)	(0.55)	(1.57)	(1.75)	(0.93)	(0.26)	(2.33)	(-0.21)	(0.09)
Cross Industry	0.020***	0.019***	0.020***	0.021***	0.021***	0.020***	0.019***	0.020***	0.010*	0.018***
	(5.11)	(5.00)	(5.19)	(5.35)	(5.45)	(5.33)	(4.45)	(5.20)	(1.86)	(3.24)
Private Target	0.081***	0.079***	0.076***	0.077***	0.077***	0.079***	0.085***	0.076***	0.096***	0.089***
	(17.61)	(17.53)	(16.48)	(16.60)	(16.99)	(17.29)	(16.93)	(16.70)	(15.27)	(14.37)
Termination Fee	-1.148***	-1.074***	-1.154***	-1.163***	-1.105***	-1.101***	-1.051**	-1.185***	-0.629	-1.515**
	(-2.66)	(-2.61)	(-2.70)	(-2.67)	(-2.62)	(-2.62)	(-2.35)	(-2.68)	(-1.46)	(-2.36)
Lock-up	-0.155***	-0.145***	-0.153***	-0.158***	-0.162***	-0.152***	-0.135***	-0.151***	-0.088*	-0.106*
	(-4.49)	(-4.21)	(-4.51)	(-4.63)	(-4.74)	(-4.45)	(-3.74)	(-4.43)	(-1.87)	(-1.79)
Toehold	-0.024	-0.019	-0.024	-0.019	-0.021	-0.019	-0.028	-0.027	-0.026	-0.017
	(-1.42)	(-1.12)	(-1.42)	(-1.11)	(-1.22)	(-1.13)	(-1.48)	(-1.58)	(-1.06)	(-0.76)
Tender Offer	-0.125***	-0.129***	-0.123***	-0.127***	-0.124***	-0.128***	-0.129***	-0.122***	-0.162***	-0.134***
	(-4.59)	(-4.76)	(-4.40)	(-4.59)	(-4.57)	(-4.60)	(-4.37)	(-4.37)	(-4.14)	(-3.96)
Cash Deal	0.017***	0.019***	0.005	0.014***	0.012***	0.016***	0.015***	0.004	0.006	-0.001
	(4.13)	(4.78)	(1.38)	(3.49)	(3.12)	(3.99)	(3.37)	(0.99)	(1.05)	(-0.25)
Observations	27,779	28,097	27,781	28,097	28,097	28,097	23,738	28,097	16,160	15,955
Pseudo R-squared	0.087	0.088	0.086	0.085	0.084	0.086	0.09	0.089	0.069	0.09

This table reports probit regressions of earnout use, measured as an indicator equal to one if an earnout is included in a bid, zero otherwise. The sample bids occur between 1988 and 2014. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. Marginal effect estimates are presented with t-statistics reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer. Panel A presents estimates of the impact of variables related to financial constraints, the cost of capital, and deal characterisitics on earnout use. Panel B includes the same variables as Panel A and interacts financial variables with an indicator for the financial crisis. *Low Acquirer Market Value* is an indicator variable equal to one if the acquirer's market value is lower than the median. *High Relative Size* is an indicator eaqual to one if relative size of target to the acquirer is higher than the median. *High Industry Cash Flow Volatility* is an indicator equal to one if the acquirer's industry cash flow volatility is higher than the median. *No Credit Rating* is an indicator variable equal to one if the acquirer did not have a credit rating from S&P, Moody's, Fitch, or Duff & Phelps in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *No Dividend Payout* is an indicator variable equal to one if the acquirer did not pay a dividend in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *High S-A Index* is an indicator variable equal to one if SA Index (Hadlock and Pierce, 2010) is higher than the median. *High WW Index* is an indicator variable equal to one if the acquirer's WW Index (Whited and Wu, 2006) higher than median. *High C&I Spread* is an indicator variable equal to one if C&I loan rate spread is higher than the median. *High Abnormal Leverage* equals one if the error term of a model of a firm's leverage ratio is greater than the sample median, following Uysal (2011). *High Predicted Cash* is an indicator equal to one if a firm's predicted cash hedging needs are above the sample median, following the model of Bates, Kahle, and Stulz (2008). *Crisis* is an indicator equal to one in the ten quarters starting in the final quarter of 2007, zero otherwise. *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code, zero if they are in the same two-digit industry. *Private Target* is an indicator variable equal to one if the target is a private company, zero otherwise. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement.

Table 6
Earnout Use and Funding of Acquisitions

	Probit			Bivariate Probit	
	(1)	(2)	(3)	(4)	(5)
Earnout Indicator	-0.059***	-0.060***	-0.040**	-0.219***	
	(-2.83)	(-2.86)	(-2.02)	(-4.18)	
Log of Transaction Value		0.031***	0.045***	0.036***	-0.013***
		(7.03)	(11.74)	(5.00)	(-4.08)
Target Industry Volatility		-0.687	-3.040***	-1.923***	-0.101
		(-0.85)	(-3.58)	(-2.67)	(-0.17)
Target Industry R&D		-2.673***	0.274	-1.056	1.300*
		(-2.79)	(0.25)	(-1.03)	(1.70)
Target Industry Market-to-Book		0.019	-0.008	0.001	-0.003
		(0.95)	(-0.35)	(0.04)	(-0.20)
Cross Industry		-0.005	-0.010	-0.000	0.020*
		(-0.39)	(-0.79)	(-0.02)	(1.79)
Private Target		-0.001	0.018	0.014	0.070***
		(-0.03)	(1.27)	(0.90)	(6.77)
Termination Fee		-0.292	0.118	-0.322	-3.351***
		(-0.58)	(0.34)	(-0.60)	(-2.86)
Lock-up		-0.082**	-0.078**	-0.072***	0.015
		(-2.31)	(-2.36)	(-2.60)	(0.28)
Toehold		-0.002	-0.026	-0.016	-0.001
		(-0.05)	(-0.73)	(-0.53)	(-0.03)
Tender Offer		-0.106***	-0.167***	-0.126***	-0.126***
		(-4.11)	(-8.19)	(-4.53)	(-3.11)
Cash Deal		-0.064***	-0.032**	-0.055***	-0.024**
		(-4.77)	(-2.55)	(-3.72)	(-2.18)
Non-Big N Auditor				0.044*	0.001
				(1.75)	(0.09)
Post-SFAS 141				-0.121***	0.013
				(-7.61)	(0.99)
Non-Big N Auditor X Post-SFAS 141					-0.048*
					(-1.93)
Post-Pooling Method					0.049***
					(3.66)
Observations	4,270	4,270	4,270	4,092	4,092
Pseudo R-squared	0.002	0.057	0.154		

This table reports probit regressions of the use of external finance. The dependent variable equals one if SDC classifies the source of acquisition funds as borrowings, debt issuances, bridge loans, credit lines, or common stock issues. The sample bids occur between 1988 and 2014. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. Marginal effect estimates are presented with t-statistics reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer. Columns (4) and (5) present the results of a bivariate probit model that accounts for the endogenous selection of an earnout in the choice of financing. *Earnout Indicator* is equal to one if the bid includes and earnout, zero otherwise. *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code. *Private Target* is an indicator variable equal to one if the target is a private company, zero otherwise. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Non-Big N Auditor* is and indicator equal to one if the acquirer uses an auditor outside of the "Big N". *Post-SFAS 141* is an indicator equal to one if a bid was announced after January 1, 2009. *Post-Pooling Method* is an indicator equal to one if a bid was announced after January 1, 2001, zero otherwise.

Table 7
Earnout Use and Target Premiums

	Log of Deal Value-to-Sales			*Log of Price-to-Book*		
	(1)	(2)	(3)	(4)	(5)	(6)
High C&I Spread		0.152***			0.010	
		(5.75)			(0.37)	
Earnout Indicator X High C&I Spread		0.215**			0.281*	
		(2.35)			(1.83)	
Crisis			0.271***			0.041
			(5.15)			(0.66)
Earnout Indicator X Crisis			0.486***			0.523**
			(3.00)			(2.08)
Earnout Indicator	0.135***	-0.012	0.049	0.485***	0.329***	0.418***
	(2.68)	(-0.18)	(0.97)	(5.88)	(2.78)	(4.82)
Log of Transaction Value	0.234***	0.228***	0.229***	0.133***	0.132***	0.132***
	(28.02)	(27.32)	(27.56)	(17.13)	(16.77)	(17.04)
Target Industry Volatility	0.300	0.368	0.397	6.651***	6.696***	6.702***
	(0.22)	(0.27)	(0.29)	(4.70)	(4.73)	(4.72)
Target Industry R&D	14.679***	13.659***	14.056***	-4.943**	-5.212**	-5.198**
	(6.88)	(6.42)	(6.61)	(-2.26)	(-2.36)	(-2.38)
Target Industry Market-to-Book	0.424***	0.442***	0.431***	0.740***	0.745***	0.742***
	(11.22)	(11.78)	(11.41)	(18.13)	(18.14)	(18.21)
Cross Industry	-0.172***	-0.169***	-0.169***	0.056*	0.057*	0.057*
	(-6.09)	(-6.03)	(-6.01)	(1.91)	(1.93)	(1.96)
Private Target	0.303***	0.292***	0.286***	0.852***	0.851***	0.851***
	(8.12)	(8.01)	(7.60)	(16.65)	(16.66)	(16.61)
Termination Fee	2.250***	1.878**	2.092**	-3.715***	-3.757***	-3.725***
	(2.74)	(2.37)	(2.50)	(-4.78)	(-4.90)	(-4.75)
Lock-up	0.268***	0.304***	0.282***	0.010	0.013	0.012
	(6.67)	(7.41)	(7.03)	(0.35)	(0.43)	(0.42)
Toehold	0.101	0.115	0.113	-0.082	-0.080	-0.080
	(1.36)	(1.55)	(1.52)	(-1.33)	(-1.31)	(-1.30)
Tender Offer	-0.185**	-0.170**	-0.175**	-0.147**	-0.146**	-0.144**
	(-2.56)	(-2.41)	(-2.40)	(-2.34)	(-2.30)	(-2.30)
Cash Deal	-0.118***	-0.139***	-0.137***	-0.002	-0.004	-0.007
	(-4.58)	(-5.46)	(-5.36)	(-0.05)	(-0.13)	(-0.24)
Observations	11,396	11,396	11,396	7,657	7,657	7,657
Adjusted R-squared	0.184	0.188	0.189	0.246	0.246	0.247

This table reports regressions of proxies of private-firm premiums. The sample bids occur between 1988 and 2014. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. Marginal effect estimates are presented with t-statistics reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer. *Deal Value-to-Sales* is the ratio of the value of the bid divided by target sales. *Price-to-Book* is the ratio of the price offered per target share divided by the per share value of the targets assets. *Earnout Indicator* equals one if the bid includes an earnout, zero otherwise. *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code. *Private Target* is an indicator variable equal to one if the target is a private company, zero otherwise. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *High C&I Spread* is an indicator variable equal to one if C&I loan rate spread is higher than the median. *Crisis* is an indicator equal to one in the ten quarters starting in the final quarter of 2007, zero otherwise.

Table 8
Earnout Use and Target Parent Liquidity

	(1)	(2)	(3)
Parent Cash-to-Assets	0.071***		
	(2.80)		
Log of Parent Cash-to-Deal Value		0.007**	
		(2.35)	
Log of Parent Cash			0.008***
			(2.73)
Log of Parent Assets	-0.004*	-0.011***	-0.012***
	(-1.74)	(-3.33)	(-3.68)
Log of Transaction Value	-0.001	0.006	-0.001
	(-0.25)	(1.46)	(-0.28)
Target Industry Volatility	-0.366	-0.342	-0.344
	(-0.93)	(-0.87)	(-0.87)
Target Industry R&D	1.026*	1.008*	0.961*
	(1.81)	(1.78)	(1.70)
Target Industry Market-to-Book	0.004	0.005	0.005
	(0.34)	(0.42)	(0.42)
Cross Industry	0.008	0.007	0.007
	(0.89)	(0.81)	(0.79)
Termination Fee	-1.337	-1.351	-1.356
	(-1.38)	(-1.38)	(-1.38)
Lock-up	-0.364***	-0.355***	-0.357***
	(-10.03)	(-9.79)	(-9.84)
Toehold	0.031	0.031	0.031
	(0.49)	(0.50)	(0.50)
Tender Offer	-0.376***	-0.365***	-0.366***
	(-5.39)	(-5.17)	(-5.17)
Cash Deal	-0.029***	-0.030***	-0.030***
	(-3.16)	(-3.19)	(-3.18)
Observations	2,992	2,992	2,992
Pseudo R-squared	0.035	0.036	0.038

This table reports probit regressions of the use of earnouts. The sample bids occur between 1988 and 2014. Sample bids are restricted to subsidiary targets with data available on the cash holdings and asset size of the parent of the target. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. Marginal effect estimates are presented with t-statistics reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer. *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Parent Cash-to-Assets* is the ratio of cash and marketable securities to book assets for the parent of the target. *Parent Cash-to-Deal Value* is the ratio of parent cash to the value of the bid. *Parent Cash* is the dollar holdings of cash and marketable securities for parents of sample target subsidiaries.

Table 9
Financial Constraints and Earnout Fair Values

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Low Acquirer Market Value	0.102*							
	(1.81)							
High Relative Size		0.092*						
		(1.87)						
High Industry Cash Flow Volatility			0.092					
			(1.33)					
No Credit Rating				0.142**				
				(2.22)				
No Dividend Payout					0.136**			
					(2.11)			
High SA Index						0.022		
						(0.41)		
High WW Index							0.113**	
							(2.15)	
High Predicted Cash								0.194***
								(2.85)
Log of Transaction Value	0.006	-0.016	-0.009	0.004	-0.006	-0.007	0.003	-0.006
	(0.33)	(-1.04)	(-0.58)	(0.24)	(-0.40)	(-0.41)	(0.19)	(-0.36)
Target Industry Volatility	-5.453	-5.449	-6.088*	-5.425	-6.025*	-5.605	-5.668	-11.106**
	(-1.56)	(-1.59)	(-1.72)	(-1.61)	(-1.72)	(-1.64)	(-1.57)	(-2.53)
Target Industry R&D	7.471***	7.476***	7.463***	7.331***	7.650***	7.761***	6.356**	4.865
	(2.71)	(2.72)	(2.73)	(2.70)	(2.75)	(2.83)	(2.24)	(1.63)
Target Industry Market-to-Book	-0.070	-0.072	-0.093	-0.062	-0.069	-0.077	-0.054	0.007
	(-0.92)	(-0.93)	(-1.20)	(-0.83)	(-0.91)	(-1.01)	(-0.67)	(0.08)
Cross Industry	0.002	0.012	0.007	0.023	0.012	0.007	0.027	0.001
	(0.04)	(0.24)	(0.14)	(0.47)	(0.26)	(0.15)	(0.55)	(0.02)
Private Target	-0.158***	-0.151***	-0.175***	-0.167***	-0.170***	-0.165***	-0.138**	-0.123**
	(-2.97)	(-2.81)	(-3.26)	(-3.15)	(-3.18)	(-3.10)	(-2.52)	(-2.17)
Termination Fee	-1.519	-1.530	-1.702	-1.780	-1.670	-1.620	-1.874	-1.331
	(-1.39)	(-1.38)	(-1.45)	(-1.48)	(-1.44)	(-1.39)	(-1.20)	(-1.21)
Lock-up	-1.288***	-1.277***	-1.278***	-1.254***	-1.261***	-1.277***	-1.288***	0.000
	(-10.50)	(-10.48)	(-10.54)	(-10.34)	(-10.42)	(-10.22)	(-10.20)	(.)
Toehold	-1.123***	-1.098***	-1.164***	-1.037***	-1.025***	-1.153***	-1.113***	-0.838***
	(-9.38)	(-8.71)	(-9.37)	(-7.64)	(-7.67)	(-9.28)	(-8.71)	(-5.53)
Tender Offer	1.515***	1.462***	1.501***	1.445***	1.464***	1.496***	1.485***	1.657***
	(11.20)	(11.22)	(11.52)	(10.91)	(11.09)	(11.63)	(10.71)	(10.16)
Cash Deal	-0.001	0.002	-0.029	-0.010	-0.014	-0.023	0.011	0.036
	(-0.02)	(0.03)	(-0.58)	(-0.21)	(-0.28)	(-0.46)	(0.21)	(0.62)
Observations	320	320	318	320	320	320	303	246
Pseudo R-squared	0.085	0.084	0.081	0.088	0.088	0.075	0.087	0.106

This table reports probit regressions modelling the probability that the ratio of an earnout's fair value-to-maximum payment is in the bottom quartile of all sample ratios. The sample consists of acquisitions with earnouts after the 2009 implementation of SFAS 141 (R), which required the disclosure of fair values. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. Marginal effect estimates are presented with t-statistics reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer industry. *Low Acquirer Market Value* is an indicator variable equal to one if the acquirer's market value is lower than the median. *High Relative Size* is an indicator eaqual to one if relative size of target to the acquirer is higher than the median. *High Industry Cash Flow Volatility* is an indicator equal to one if the acquirer's industry cash flow volatility is higher than the median. *No Credit Rating* is an indicator variable equal to one if the acquirer did not have a credit rating from S&P, Moody's, Fitch, or Duff & Phelps in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *No Dividend Payout* is an indicator variable equal to one if the acquirer did not pay a dividend in the fiscal quarter preceding the announcement of the acquisition, zero otherwise. *High S-A Index* is an indicator variable equal to one if SA Index (Hadlock and Pierce, 2010) is higher than the median. *High WW Index* is an indicator variable equal to one if the acquirer's WW Index (Whited and Wu, 2006) higher than median. *High C&I Spread* is an indicator variable equal to one if C&I loan rate spread is higher than the median. *Crisis* is an indicator equal to one in the ten quarters starting in the final quarter of 2007, zero otherwise. *High Predicted Cash* is an indicator equal to one if a firm's predicted cash hedging needs are above the sample median, following the model of Bates, Kahle, and Stulz (2008). *Transaction Value* is the total transaction value of the takeover. *Cross Industry* is an indicator variable equal to one if the target and acquirer do not share the same two-digit SIC code. *Private Target* is an indicator variable equal to one if the target is a private company, zero otherwise. *Termination Fee* is value of any termination fee payable by the target scaled by the deal value. *Lock-up* is an indicator equal to one if the acquisition agreement contains a lock-up provision, zero otherwise. *Toehold* is an indicator equal to one if the bidder owns target shares prior to the acquisition announcement. *Tender Offer* is an indicator equal to one if the deal is structured as a tender offer, zero if it is structured as a statutory merger. *Cash Deal* equals one if SDC records the consideration as 100% cash, zero otherwise. *Target Industry Volatility is* the annualized volatility of the value-weighted return of the target two-digit SIC industry, measured over the last 100 days prior to the acquisition announcement. *Target Industry R&D* is the median R&D to sales ratio of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement. *Target Industry Market-to-Book* is the median ratio of market value of total assets to the book value of total assets of the target two-digit SIC industry in the fiscal quarter prior to the acquisition announcement.

Appendix Table
Endogenous Form of Payment and Earnout Use

Panel A: Earnouts, Financial Constraints, and Endogenous Form of Payment, Part 1

Model	(1)		(2)		(3)		(4)		(5)	
	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal
Low Acquirer Market Value	0.244***									
iii	(8.91)									
High Relative Size			0.246***							
iii			(10.08)							
High Industry Cash Flow Volatility					0.129***					
iii					(4.55)					
No Credit Rating							0.209***			
iii							(6.56)			
No Dividend Payout									0.152***	
iii									(5.21)	
Capital Gains		-5.591***		-5.553***		-5.505***		-5.520***		-5.523***
iii		(-24.87)		(-24.75)		(-23.87)		(-24.44)		(-24.47)
Cash Deal	1.199***		1.208***		0.942***		1.114***		1.095***	
iii	(19.77)		(20.17)		(11.63)		(16.95)		(16.82)	
Deal Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	27,779		28,097		27,781		28,097		28,097	

Appendix Table (continued)

Panel B: Earnouts, Financial Constraints, and Endogenous Form of Payment, Part 2

Model	(6)		(7)		(8)		(9)		(10)	
	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal	Earnout	Cash Deal
High SA Index	0.225***									
iii	(8.25)									
High WW Index			0.280***							
iii			(9.73)							
High C&I Spread					0.189***					
iii					(7.22)					
High Abnormal Leverage							0.047*			
iii							(1.84)			
High Predicted Cash									0.237***	
iii									(6.83)	
Capital Gains		-5.539***		-5.380***		-5.471***		-5.421***		-5.747***
iii		(-24.62)		(-22.08)		(-23.85)		(-18.76)		(-20.07)
Cash Deal	1.184***		1.130***		0.887***		1.005***		0.806***	
iii	(18.95)		(16.92)		(10.58)		(12.78)		(8.05)	
Deal Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,097		23,738		28,097		16,160		15,955	

This table reports coefficient estimates of bivariate probit models that account for the endogenous selection of the form of payment and the inclusion of earnout agreements. The second column of each model reports coefficient estimates of a model of cash payment. This column includes the maximum individual capital gains rate, *Capital Gains*, as an excluded instrument in the determinants of an all-cash payment. For each model, the determinants of cash payment are modeled jointly with the determinants of the presence of an earnout agreement, which are reported in the first column of each model. Unreported control variables include *Log of Transaction Value, Target Industry Volatility, Target Industry R&D, Target Industry Market-to-Book, Cross Industry, Private Target, Termination Fee, Lock-up, Toehold, and Tender Offer*. In Panel A, Models (1) to (5) individually include proxies for financial constraints including *Low Acquirer Market Value, High Relative Size, High Industry Cash Flow Volatility, No Credit Rating, and No Dividend Payout*. In Panel B, Models (6) to (10) include, respectively, *High SA Index*, *High WW Index*, *High C&I Spread*, *High Abnormal Leverage*, and *High Predicted Cash*. The sample bids from SDC occur between 1988 and 2014. All continuous variables are winsorized at the 1% and 99% levels to reduce the impact of outliers. T-statistics are reported in parentheses. *, **, and *** represent statistical significance at the ten, five, and one percent levels, respectively. Standard errors are clustered by acquirer.