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Abstract

We find that targets backed by venture capital (VC) syndication receive higher acquisition premiums and spend more time negotiating transaction terms. The acquirers of syndicate-backed targets experience lower cumulative abnormal returns surrounding the acquisition announcements, but the returns outperform those of individual-backed targets over the long-term. We show that VC syndication creates value for entrepreneurial firms by leading to the appointment of larger and more independent boards of directors prior to acquisitions. VC syndication aligns the incentives of the acquirers' CEO to those of their shareholders by increasing CEO equity and variable pay. Syndicate-backed targets prefer stock as the method of payment in acquisitions. Collectively, we show that VC syndication creates value for not only entrepreneurial firms but also their acquirers in the long-term.

***Keywords*:** venture capital; syndication; mergers and acquisitions;

***JEL classification*:** G34; G24.

1. Introduction

Syndication arises when venture capitalists (VCs) invest in entrepreneurial firms jointly. In the United States, VC syndication accounts for approximately 70% of entrepreneurial financing. The importance of syndication has long been recognized in the VC literature. However, most studies focus on the *formation* of VC syndication (Lerner, 1994; Brander, Amit, and Antweiler, 2002; Casamatta and Haritchabalet, 2007; Du, 2016; Bayar, Chemmanur, and Tian, 2019; Bubna, Das, and Prabhala, 2020). This study examines the *benefits* of VC syndication for mergers and acquisitions (M&As), the dominant exit route of entrepreneurial firms.[1] From 1990 to 2017, about 60% of entrepreneurial firms exited through M&As (compared to 20% that exited through IPOs). Though M&As are widely considered to be a successful exit pathway (Brander et al., 2002; Hochberg et al., 2007; Nahata, 2008), due to the difficulty of collecting data on the acquisitions of *private* entrepreneurial firms (Cumming, 2010; Cumming, Grilli, and Murtinu, 2017), most studies on the influence of VC syndication on entrepreneurial firms focus on IPOs.[2] We fill that gap in the literature by studying the benefits of VC syndication for this popular type of exit.

Existing theories offer competing predictions regarding the effects of VC syndication on entrepreneurial firms' ("targets" hereafter) premiums. Among earlier studies, Wilson (1968), Sah and Stiglitz (1986), and Lerner (1994) argue that VCs who are uncertain about an entrepreneurial firm's prospects prefer to co-invest and learn from the other VCs' evaluations during the screening process. Therefore, the selection hypothesis predicts that the most promising projects are those taken up as standalone investments, while the projects with less potential are those put in syndication. Based on these studies, we first hypothesize that syndicate-backed targets, on average, receive lower premiums than do individual-back targets

[1] Our sample includes only VC-backed targets. We focus on the benefits of VC syndication for M&As compared to those of individual VCs.
[2] For example, Filatotchev, Wright, and Arberk (2006), Lehmann (2006), and Tian (2012).

in VC-backed M&As. However, Brander et al. (2002) propose the value-added hypothesis, wherein VCs add value to targets rather than screen to select the best ones. Different VCs have different skills and information (Brander et al., 2002; Tian, 2012). By investing together, VCs can add value to entrepreneurial firms. Consequently, we propose a competing hypothesis that syndicate-backed targets have higher premiums than individual-backed ones in the event of an acquisition.

We test these competing hypotheses by collecting a sample of private VC-backed M&As from SDC VentureXpert, acquisition characteristics from SDC M&A, stock data from CRSP, and acquirers' characteristics from Compustat. Our final sample consists of 2,614 VC-backed transactions from 1990 to 2017. We define a target as a syndicate-backed firm if there is more than one venture capitalist invested in the target prior to the transaction announcement, following Kogut, Urso, and Walker (2007), Krishnan, Ivanov, Masulis, and Singh (2011), and Cumming, Chahine, Filatotchev, Hoskisson, and Arthurs (2019). In our sample of VC-backed acquisitions, 75% of the targets are syndicate-backed.

We find that syndicate-backed targets have a higher sales multiple than individual-backed targets. The sales multiple increases 15.298 times when targets are syndicate-backed. We further adjust the sales multiple to the median of the sales multiples of similar transactions and find that the adjusted sales multiple also increases significantly for syndicate-backed firms.[3] Our evidence supports the value-added hypothesis that VC syndication is linked to higher target premiums.

We also examine the effect of VC syndication on the time-to-completion of VC-backed M&As. Golubov, Petmezas, and Travlos (2012) demonstrate that advisors who have superior

[3] We identify similar transactions as follows. For each VC-backed acquisition, we search for all transactions announced two years before and after, have a target value ranging between 50% and 150% of its value, and share the same target industry (defined by the first two digits of the target's SIC code).

advisory and monitoring skills spend more time negotiating acquisition terms. Building on their findings, we propose that members of VC syndication who possess heterogeneous skills, information, industry expertise, and networks can provide a broad range of inputs for targets during the negotiation and will thus spend more time completing acquisition transactions. Our first measure of time-to-completion is a dummy variable that equals one if targets complete the acquisition deal in one day or more. The second measure is the natural logarithm of one plus the number of days between the acquisition announcement date and the effective date (Grinstein and Hribar, 2004). We find that VC syndication is associated with longer time-to-completion for M&A transactions.

While VC syndication improves outcomes for targets, it negatively affects acquirers' cumulative abnormal returns (CAR) surrounding the acquisition announcement date. In particular, the acquirers of syndicate-backed firms experience announcement returns, CAR(-2, 2), that are 1.2% lower than those of individual-backed firms. We similarly find a negative effect (-1.5%) of VC syndication on acquirers' CAR when we extend the event window to 11 days. Our findings suggest that VC syndication benefits targets at the time of the acquisition, which significantly hinders the acquirer's short-term performance.

We further investigate whether the acquirers of syndicate-backed targets outperform over the long-term. We argue that acquirers of syndicate-backed targets benefit from the value-added services that VC syndication offers to entrepreneurial firms when they change from a private corporation into a component of a public corporation (Hochberg, 2012; Tian, Udell, and Yu, 2016). We find that the long-term operating efficiency of the acquirers of syndicate-backed targets, measured by return on total assets (ROA) and adjusted ROA to the average ROA of similar-sized acquirers in the same industry, increases by 3.9% and 4.8% (respectively) within three years relative to that of individual-backed targets. We also follow Cremers, Litov, and Sepe (2017) and Elnahas and Kim (2017) to use acquirers' long-term stock returns as a

proxy of long-term performance. Specifically, we employ the methodology of Peyer and Vermaelen (2009) to estimate monthly abnormal returns by constructing acquirers' calendar time equally-weighted portfolios for 36 months using a three-factor model (Fama and French, 1993), five-factor model (Fama and French, 2015), six-factor model (Carhart, 1997), and seven-factor model (Pástor and Stambaugh, 2003). We show that the long-term stock performance is positive and significant for the acquirers of syndicate-backed targets but negative or close to zero for the acquirers of individual-backed targets.

In the first set of tests for VC syndication's value creation, we propose that VC syndication adds value by increasing board size and improving board independence. The presence of VCs is associated with larger boards for entrepreneurial firms (Rosenstein, Bruno, Bygrave, and Taylor, 1993; Gabrielsson and Huse, 2002), which often leads to better firm performance (Daily and Dalton, 1992; Dalton, Daily, Johnson, and Ellstrand, 1999). The primary reason for this effect is that the boards of directors of VC-backed entrepreneurial firms are more involved in both strategy formation and evaluation (Fried, Bruton, and Hisrich, 1998) and have better access to resources and external knowledge spillovers (Audretsch and Lehmann, 2006). We use data on the targets' governance at the time of acquisition exit obtained from VentureXpert to show that VC syndication leads to the appointment of larger and more independent boards of directors in the targets, as both the number and ratio of independent directors increase in the presence of VC syndication.

Second, we explore whether VC syndication influences the pay of acquirers' CEOs. VC syndication can align a CEO's wealth with stockholders' benefits, which improves the acquirers' long-term performance (Shleifer and Vishny, 1997; Deckop, Merriman, and Gupta, 2006). We measure CEO–shareholder incentive alignment over the long-term using CEO variable pay and CEO equity pay (Anderson and Bizjak, 2003; Bebchuk et al., 2011). We demonstrate that VC syndication significantly increases the incentive alignment between CEO

and acquirers' shareholders in the long-term. Specifically, CEO equity (variable) pay increases 12.8% (4.9%) and 13.1% (7.2%) in three years and five years, respectively, if the target is syndicate-backed.

Third, we examine whether syndicate-backed targets prefer stock as the method of payment in acquisitions. We hypothesize that VCs who choose stock as the payment for acquisition continue to monitor and advise the merged firms, because their ultimate goal is to maximize their funds' performance in order to satisfy their partners (Da Rin, Hellmann, and Puri, 2013). Furthermore, in the event of an exit, VCs often form blockholding in the acquirers, and using equity is an important factor in enhancing shareholders' wealth (Slovin et al., 2005; Adra and Menassa, 2019). We find that syndicate-backed targets are 4.8% more likely to receive all-stock payment than individual-backed targets. In terms of the proportion of stock payments, syndicate-backed targets receive 10.6% more stock compared to individual-backed targets.

We then use a battery of robustness checks. First, we employ an alternative measure of VC syndication to mitigate concerns regarding the explanatory power of our main independent dummy variable. We follow Tian (2012) and Altintig, Chiu, and Goktan (2013) and use the natural logarithm of the number of VCs invested in the target. The results are consistent with the main findings. Second, we address the potential endogeneity issues that may have biased our findings, including omitted VC characteristics and reverse causality (Sorenson and Stuart, 2001; Nanda, Samila, and Sorenson, 2020). Our results are shown to be robust after we control for VC reputation and VC network position. We also observe that these VC characteristics have no significant effect on acquisition premiums, the acquirer's announcement returns, or long-term operating efficiency. Moreover, we employ Heckman's (1979) two-step and propensity score matching techniques to address the self-selection bias. These methods reaffirm our earlier results. Finally, we address the concern that a common venture capitalist

between the targets and their acquirers may bridge the information gap and improve acquisition performance. We restrict the sample to non-VC-backed acquirers and confirm that our findings are not sensitive to common VCs.

To the best of our knowledge, our study is one of the first comprehensive investigations into the effect of VC syndication on acquisition outcomes. The richness of the data on private VC-backed M&As allows us to examine VC syndication's influence on acquisition outcomes from both the targets' and acquirers' perspectives instead of merely exploring the likelihood of having a successful exit (Brander et al., 2002; Das, Jo, and Kim, 2011). Our empirical evidence extends the literature's understanding of the factors that drive M&A outcomes (Schmidt, 2015; Li, Qiu, and Shen, 2018; Cornaggia and Li, 2019; Ma, Whidbee, and Zhang, 2019), especially in the context of private firms (Ivanov and Xie, 2010; Masulis and Nahata, 2011; Bayar and Chemmanur, 2012). While Masulis and Nahata (2011) suggest that conflicts of interests might induce VCs to advise or pressure entrepreneurial firms to pursue strategies that benefit their exit-oriented interests, we provide the new insight that VC syndication can mitigate this agency problem and lead to a significantly higher target sales multiple and lower acquirer announcement returns.

More broadly, our study contributes to a growing field of research that considers the role of syndication in private equity investments. The literature has established that VC syndication creates value for entrepreneurial firms by mitigating VCs' moral hazard problem, improving monitoring, and providing product and financial market value (Das et al., 2011; Tian, 2012; Bayar et al., 2019). Furthermore, the diversity across VC types, locations, and networks in syndication is associated with a higher likelihood of exit and more successful outcomes (Hochberg, Ljungqvist, and Lu, 2007, Chemmanur, Hull and Krishnan, 2016; Cumming, Grilli and Murtinu, 2017). Similarly, syndication is significantly important for low-skill firms in leveraged buyouts (LBOs) as they can overcome firm-specific deficiencies and

improve buyout performance (Stanfield, 2019). However, few studies have raised concerns about collusion among private equity syndication in LBOs (Officer, Ozbas, and Sensoy, 2010; Cao, Cumming, Goh, and Wang, 2019). We demonstrate that VC syndication can bring value to both entrepreneurial firms and their acquirers in the long-term, thus complementing the literature and its emphasis on the important role of syndication in private equity investments.

The remainder of our paper is organized as follows. Section 2 explains the study's sample selection, variable measurements, and descriptive statistics. Sections 3 and 4 describe the effect of VC syndication on acquisition outcomes from the target's and acquirer's perspectives, respectively. Section 5 presents further tests on VC syndication's value creation. Section 6 presents robustness checks. Finally, Section 7 concludes the paper.

2. Sample Selection, Variable Measurements, and Descriptive Statistics

2.1 Sample Selection

We construct our sample as follows. We begin with data on all private VC-backed M&As taken from the SDC VentureXpert database covering January 1, 1990, to December 31, 2017. We retain only targets that operate in the United States and have a value equal to or greater than $1 million. We exclude transactions where the percentage of the target acquired is less than 100% and transactions that are classified as the acquisition of partial interest, acquisition of remaining interest, buy-back, exchange offer, or recapitalization. This process produces 5,136 announcements.

We then match this sample with the private M&As listed in the SDC Platinum M&A database to obtain transaction details, such as the method of payment, the transaction multiple, and the SIC codes of the targets and acquirers. We also require that the acquirers are located in the United States; the deal status is "completed"; and the transaction type is not spinoff, recapitalization, self-tender, exchange offer, repurchase, minority stake purchase, acquisition

of remaining interest, or privatization. We exclude observations from the financial and utility industries (where the target's four-digit SIC code is between 4900–4999 and 6000–6999). After we drop observations with missing data on lead VCs or transaction characteristics, our final sample consists of 2,614 VC-backed transactions. We collect data on stock prices from CRSP and data on acquirers' characteristics from Compustat. We winsorize all continuous variables at the 1st and 99th percentiles.

2.2 Variable Measurement

We follow the literature (Brander et al., 2002; Kogut et al., 2007; Krishnan et al., 2011; Tian, 2012; Cumming et al., 2019) and measure our main explanatory variable, SYNDICATION, as a dummy variable that equals one if there is more than one VC firm invested in the target prior to the M&A announcement, and zero otherwise. We further provide robustness tests using the number of VCs invested in the target as an alternative measurement of VC syndication.

We construct two sets of variables to measure M&A outcomes. First, from the targets' perspective, we follow the literature (e.g., Masulis and Nahata, 2011) and measure the sales multiple, PREMIUM, as the ratio between the transaction value and the target's total sales available immediately before the announcement date. We also measure the adjusted premium, ADJ_PREMIUM, as the difference between the target's sales multiple and the median of the sales multiples of similar deals. We select these similar deals as follows. For a given VC-backed transaction, we search for all acquisitions that are announced two years before and after the announcement that have a value ranging between 50% and 150% and operate in the same target industry (defined by the first two digits of the SIC code). We then construct two measurements reflecting time-to-completion. First, we construct TIME as a dummy variable that equals one if the announcement date is similar to the effective date and zero otherwise.

Second, we measure LN(TIME) as the natural logarithm of one plus the number of days the target requires to complete the acquisition.

From the acquirers' perspective, we follow Masulis and Simsir (2018) and Masulis, Wang, and Xie (2019) and measure acquirer returns, CAR(-2, 2) and CAR(-5, 5), as the total abnormal returns during the periods (-2, 2) and (-5, 5), given time 0 as the announcement date. Abnormal returns are estimated using the market model in which parameters are estimated over the period of one (trading) year and CRSP value-weighted returns serve as the market benchmark. We calculate the long-term operating efficiency, ΔROA, as the three-year difference between the return on assets (ROA) at time -1 and time +2, given time 0 as the fiscal year of the announcement date. We also calculate ΔADJ_ROA as the change in the adjusted ROA, which is the difference between the acquirer's ROA and the average ROA of firms operating in the same industry and with total assets ranging between +50% and +150% of their total assets.

We include two groups of controls in our analysis following the literature (Masulis and Nahata, 2011; Tian, 2012; Cumming et al., 2017; Bayar et al., 2019; Cumming et al., 2019). First, we control for transaction characteristics, including STOCK_RATIO, the fraction of stock as the method of payment; target's financing stages, ACQ_STAGE, a dummy variable that equals one if the target receives an investment at the acquisition/buyout stage; LATER_STAGE, a dummy variable that equals one if the target receives an investment at the later stage[4]; RELATEDNESS, a dummy variable that equals one if the target's SIC code is the same as the acquirer's; DEAL_SIZE, the natural logarithm of the transaction value; and LEAD_VC_AGE, the natural logarithm of the lead VC's age. Second, we control for acquirer

[4] We control for acquisition/buyout and later financing stages since investors during these stages may be opportunistic and benefit from exits rather than by providing value-added services. Other stages to be compared in multivariate regressions include early stage, expansion, and start-up/seed.

characteristics, including firm size, SIZE, the natural logarithm of the acquirer's total assets; Q, the acquirer's market value of assets divided by the book value of assets; and LEVERAGE, the ratio of the acquirer's total debts to total assets.[5] A detailed description of the study's variables is presented in Appendix 1.

2.3 Descriptive Statistics

We provide annual and industry distributions of VC-backed M&As between 1990 and 2017 in Panels A and B of Table 1, respectively.[6] Panel A shows that the numbers of VC-backed targets and VC-syndicated-backed targets both peak around the 1999–2000 period. We observe the highest number (179) of VC-backed transactions in 2000; 141 of these transactions, or 78.8%, are syndicate-backed. After decreasing from 179 transactions to 120 in 2003, the number of VC-backed transactions increases significantly again from 2004 to 2007.

[Insert Table 1 here]

Panel B presents the distribution of VC-backed transactions by target industry, defined by the first two digits of their SIC codes. The distribution concentrates on Business Services, with 1,193 transactions, among which 79.9% are syndicate-backed. This is followed by Industrial Machinery & Equipment, with 242 transactions; this industry has the highest syndication rate of 84.8%. Other industries with a relatively high number of transactions are Chemical & Allied Products, Instruments & Related Products, and Communications.

We report the mean, standard deviation, and median for our full sample of 2,614 transactions as well as subsamples of 1,954 syndicated-backed (74.8%) and 660 individual-backed transactions (25.2%) in Table 2. There are, on average, 6.83 VCs invested in syndicate-

[5] In untabulated results, we control for the acquirers' status and produce consistent findings.
[6] We classify the industries in our sample using the first two digits of the SIC code. Our results are robust when employing the industry classification of VentureXpert.

back targets, with a standard deviation of 4.23. Column (10) presents univariate comparisons for the characteristics of syndicate-backed and individual-backed transactions.

[Insert Table 2 here]

Regarding target performance, the target sales multiple, PREMIUM, equals 24.36 on average with a standard deviation of 67.83. More than 50% of transactions have a sales multiple below 3.13, suggesting that the sales multiple is positively skewed. The difference of takeover premiums across the samples of syndicate-backed and individual-backed transactions equals 18.76, statistically significant at the 1% level. Similarly, the mean of ADJ_PREMIUM equals 27.09, with a median of 2.05. The difference of adjusted premiums in Column (10) is also economically significant between the two samples. Overall, the univariate comparisons indicate that syndicate-backed targets are traded at a better price than individual-backed targets are.

On average, it takes entrepreneurial firms 40.47 days to complete a VC-backed transaction. Syndicate-backed targets spend 1.53 more days than individual-backed targets, but the mean difference is not statistically significant. As Table 2 shows, TIME is equal to 0.74, indicating that 74% of transactions are not effective immediately after the transaction announcement. We observe a difference of 8% for TIME in Column (10), suggesting that targets that receive investments from multiple VCs tend to spend more time completing the transaction.

Regarding the acquirer's short-term performance, the average of cumulative abnormal returns equals 2%, suggesting that VC-backed M&As are value-creating, consistent with prior findings (Gompers and Xuan, 2009; Masulis and Nahata, 2011). Gompers and Xuan (2009) also find that the announcement returns of acquirers are larger when they share a common VC with the target. Using a sample of 245 transactions between 2001 and 2006, Masulis and Nahata

(2011) find that acquirers experience cumulative abnormal returns of 6.31% when the targets are VC-backed but only 3.38% when the targets are not. In Column (10) of Table 2, we compare the acquirer's announcement returns between syndicate-backed and individual-backed targets. We observe a negative and statistically significant difference of CAR(-2, 2) and CAR(-5, 5), suggesting that VC syndication in the targets reduces the acquirer's announcement returns.

Columns (1) and (3) of Table 2 show that the acquisitions of VC-backed targets decrease the value of the acquirers in the long-term. ΔROA has an average of -5% with a median of -2%, suggesting that the distribution of ΔROA is skewed to the left. The mean of ΔADJ_ROA is negative at -2%, and the distribution is also left-skewed with a median of -1%. Table 2 also shows that ΔROA and ΔADJ_ROA are less negative when the targets are syndicate-backed. Specifically, the difference of ΔADJ_ROA between syndicate-backed and individual-backed targets equals 2% and is statistically significant at the 10% level. The difference of ΔROA is positive but statistically insignificant.

Regarding transaction characteristics, VC-backed targets receive 29% of stock as the method of payment, on average. The stock proportions in syndicate-backed and individual-backed transactions equal 31% and 23%, respectively. As shown in Column (10) of Table 2, the difference of 8% is statistically significant at the 1% level, implying that syndicate-backed targets prefer stock as the method of payment. In addition, 21% of the targets obtain VC investments at the acquisition stage. In this stage, only 15% of syndicate-backed targets receive investments, while a large proportion of individual-backed targets receives VC investments (39%). The difference of -25% is statistically significant at the 1% level, indicating a lower financing rate at the acquisition stage for syndicate-backed targets. By contrast, syndicate-backed targets are more likely to receive financing at the later stage. Specifically, the mean

difference of LATER_STAGE in Column (1) equals 18% and is statistically significant at the 1% level. DEAL_SIZE has a mean and median of 4.25 and 4.32 in the full sample, respectively. The mean difference of DEAL_SIZE between syndicate-backed and individual-backed transactions is small at -0.02 and statistically insignificant, suggesting that targets with multiple investors are not significantly larger than are targets with only one investor. The share of transactions with a similar target and acquirer industry, RELATEDNESS, is 51%. The univariate comparison indicates that the ratio of relatedness is higher in the sample of syndicated-backed than it is in the sample of individual-backed targets. We also show that the lead VC of syndicate-backed targets is older than that of individual-backed targets.

Regarding acquirer characteristics, syndicate-backed and individual-backed targets have a similar acquirer size. The mean difference of SIZE measured as the natural logarithm of the acquirer's total assets is positive but statistically insignificant. We also find that syndicate-backed targets match with acquirers with lower leverage and high growth opportunities (measured as Tobin's Q).

3. The Effect of VC Syndication on Acquisition Outcomes from Target Perspective

3.1 VC Syndication and Acquisition Premiums

The sign of the effect of VC syndication on acquisition premiums is unclear ex ante. Previous studies propose contradictory predictions concerning the effect of VC syndication on targets' premiums in acquisitions. According to the selection hypothesis (Wilson, 1968; Sah and Stiglitz, 1986; Lerner, 1994), syndicate-backed targets should, on average, receive lower premiums than individual-back targets via M&A exit, because the most promising projects would be taken up as standalone investments, while projects with less potential would be put in the syndication pool. On the other hand, according to the value-added hypothesis (Brander et al., 2002; Tian, 2012; Tykvová, 2007), VCs add value to targets rather than screen to select

the best venture; consequently, syndicate-backed acquisitions should have higher premiums than individual-backed ones. To test these competing hypotheses, we estimate the following equation:

$$(1) \quad PREMIUM\ (ADJ\_PREMIUM)_{i,j,t} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + v_t + \varepsilon_{i,j,t}$$

where PREMIUM is the ratio between the transaction value and the target's total sales, and ADJ_PREMIUM is the difference between the target's sales multiple and the median of the sales multiples of similar transactions. The main independent variable, SYNDICATION, equals one if more than one VC firm is invested in the target and zero otherwise. $X_{i,j,t}$ is a vector of the acquisition characteristics at time *t*, and $Z_{i,j,t-1}$ represents acquirer characteristics at time *t-1*. Definitions of all variables are provided in Appendix 1. Following Gompers, Kovner, and Lerner (2009), we include n_j to indicate industry fixed effects, reflecting the concentration of VC investments across industries. We also include year fixed effects, v_t, to control for varying economic conditions across time, following Krishnan et al. (2011). The standard errors are robust to heteroscedasticity. The regression results of Equation (1) are presented in Table 3.

[Insert Table 3 here]

In Column (1) of Table 3, we show that syndicate-backed targets have higher takeover premiums than individual-backed targets. The coefficient estimate on SYNDICATION is positive and statistically significant at the 1% level. Specifically, the sales multiple increases 13.62 times when the targets are syndicate-backed, *ceteris paribus*. In Column (2), we further control for acquirer characteristics and find consistent results. In particular, we find a greater effect (15.298 times) of VC syndication on the sales multiple. In Columns (3) and (4), we replace the dependent variable PREMIUM by ADJ_PREMIUM and re-estimate Equation (1).

Similarly, SYNDICATION positively affects the adjusted sales multiple in both models, confirming that VC syndication improves transaction premiums. Our findings support the value-added hypothesis that VC syndication leads to better acquisition outcomes for targets.

Regarding the control variables, we find that targets that receive higher stock offers have better premiums, in line with Masulis and Nahata (2011). The acquisitions of targets that receive financing at later stages are traded at a discount relative to other targets, as the coefficient estimates on ACQ_STAGE and LATER_STAGE are negative and significant in all our regressions (except for Column (1) of Table 3). DEAL_SIZE is positively related to premiums, suggesting that large private targets may have more power in negotiating higher offer price, which is consistent with the findings of Greene (2017) who utilize acquisitions of unlisted targets. We also find a positive effect of relatedness and acquirers' Q on premiums.

3.2 VC Syndication and Time-to-completion

In this subsection, we examine the effects of VC syndication and the time to complete VC-backed M&As. We argue that, if VC syndication adds value to target firms, syndicate-backed acquisitions will take more time to complete. This conjecture is consistent with the view of Golubov et al. (2012) that top-tier advisors are better-skilled at advising and monitoring the target and will spend more time negotiating the transaction terms. We test the effect of VC syndication on the time-to-completion by, first, calculating TIME as a dummy variable that equals one if the time-to-completion is greater than zero and zero otherwise. Second, we measure LN(TIME) as the natural logarithm of one plus the number of days between the announcement date and the effective date. We estimate the following equation:

$$(2) \qquad TIME/LN(TIME)_{i,j,t} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + v_t + \varepsilon_{i,j,t}$$

We present the regression results of Equation (2) in Table 4. We find that VC syndication leads to more time being spent examining the transaction terms. As shown in

Columns (1) and (2) of Table 4, the likelihood of spending one day or more to complete the transaction increases by 4.6% and 8.3%, respectively. Columns (3) and (4) show Tobit regressions of the time-to-competition, LN(TIME), on VC syndication. The coefficient of LN(TIME) is statistically significant at the 5% and 1% levels in Columns (3) and (4), respectively, suggesting that syndicate-backed targets take a longer time to complete the transaction than individual-backed targets do. Overall, this evidence supports our argument that VC syndicates spend more time negotiating terms that benefit the target.[7]

[Insert Table 4 here]

We further support the existing literature by finding that deals with stock payments take more time to complete, that small deals are completed faster than large deals, and that acquirer size and Q reduce the time-to-completion (Golubov et al., 2012; Deng et al., 2013; Nguyen and Phan, 2017).

4. The Effect of VC Syndication on Acquisition Outcomes from Acquirer Perspective

4.1 VC Syndication and Acquirer's Announcement Returns

In the previous section, we find evidence supporting the value-added hypothesis that syndicate-backed targets receive better premiums. We also find that syndicate-backed targets spend more time negotiating transaction terms. We predict that, as the targets benefit from the acquisition, the acquirer's performance will be negatively affected in the short-term. To test this prediction, we regress the acquirers' announcement returns on venture capital syndication as follows:

$$(3) \qquad CAR_{i,j,t} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + \nu_t + \varepsilon_{i,j,t}$$

[7] There is potential free riding problem that may bias our results. Although we cannot completely rule this possibility, our results indicate that overall acquisitions of syndicate-backed targets take longer time to completion.

where CAR is the acquirer's announcement returns, following Masulis and Simsir (2018) and Masulis, Wang, and Xie (2019). Table 5 reports that the acquisitions of syndicate-backed targets generate lower returns for the acquirers. Column (1) shows that acquirer returns, CAR(-2, 2), are 1.2% lower when the targets are syndicate-backed, and the coefficient estimate of SYNDICATION is statistically significant at the 10% level. Likewise, when we extend the event window to 11 days and use CAR(-5, 5) as the dependent variable, Column (2) shows a reduction of 1.5% in the acquirer's abnormal returns when the targets are syndicate-backed. Our findings suggest that VC syndication influences the price of acquisitions through careful deal-term negotiations that negatively affect the acquirer's short-term performance.

[Insert Table 5 here]

We also find that DEAL_SIZE is positive and statistically significant in both columns, as in Slovin et al. (2005). In addition, acquirer size, SIZE, is negatively and statistically significant at the 1% level. This evidence is consistent with the earlier finding that small acquirers tend to perform better than large ones (Moeller, Schlingemann, and Stulz, 2004; Alexandridis, Fuller, Terhaar, and Travlos, 2013). The coefficient estimate on LEVERAGE is positive and statistically significant in Column (2), implying that a high debt level positively improves acquirer returns.

4.2 VC Syndication and Acquirer's Long-term Performance

In the previous subsection, we propose that the acquirer's performance will be negatively affected in the short-term following the acquisition of a syndicate-backed target. In this subsection, we explore whether acquirers benefit from the value VC syndication adds to the target in the long-term. According to Hochberg (2012) and Tian et al. (2016), VCs provide value-added services to portfolio firms when they transition from a private to a public corporation. Moreover, VC firms keep holding shares of IPO firms instead of liquidating them

to influence the firms' long-term performance using their superior management skills (Jain, 2001; Krishnan et al., 2011). Based on these studies, we hypothesize that the acquirers of syndicate-backed firms perform better over the long-term than those of individual-backed targets. We first measure acquirers' long-term performance using the change in their operating efficiency (Brooks, Chen, and Zeng, 2018; Fich and Nguyen, 2020) by examining the following equation:

$$(4) \qquad \Delta ROA\ (\Delta ADJ\_ROA)_{i,j,t+2} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + \nu_t + \varepsilon_{i,j,t}$$

where the dependent variable, ΔROA, is the three-year difference between the return on total assets of the acquirer at year -1 and year +2, given 0 as the fiscal year of the announcement date.[8] ΔADJ_ROA is the difference between ADJ_ROA in year -1 and year +2. We use a size-matching technique similar to that used by Barber and Lyon (1996) and Agrawal and Jaffe (2003) to measure the adjusted return on total assets, ADJ_ROA, as the difference between the acquirer's ROA and the average ROA of firms operating in the same industry and with total assets ranging from +50% to +150% of the acquirer's total assets.

[Insert Table 6 here]

As Table 6 shows, we find that VC syndication improves the acquirer's long-term performance. SYNDICATION is positive and statistically significant at the 1% level in Column (1), suggesting that the acquirer's return on total assets will increase 3.9% within three years of the announcement date if the target is syndicate-backed, *ceteris paribus*. In Columns (2), the coefficient of SYNDICATION is also positive and statistically significant at the 1% level. The acquirers' adjusted return on total assets, ΔADJ_ROA, increases 4.8% when the target receives investments from multiple VCs.

[8] We find consistent results when calculating the difference for one-year and two-year windows.

Second, we proxy acquirers' long-term performance using long-term stock returns, following the literature (Cremers, Litov, and Sepe, 2017; Elnahas and Kim, 2017). We assign each acquirer into a portfolio of syndicate-backed targets or individual-backed targets at the beginning of the month following the announcement. The acquirers are retained in their assigned portfolios for 36 months. Then, we follow the methodology of Peyer and Vermaelen (2009) and estimate monthly abnormal returns by constructing calendar time equally-weighted portfolios and using four different models: a three-factor model (Fama and French, 1993), five-factor model (Fama and French, 2015), six-factor model (Carhart, 1997), and seven-factor model (Pástor and Stambaugh, 2003). We estimate the following model:

$$R_{p,t}\text{-}R_{f,t}=\alpha_p+\sum_{i=1}^{n}\beta_i FACTOR_{i,t}+e_t \quad (5)$$

where $R_{p,t}$ and $R_{f,t}$ are the portfolio's monthly returns and the risk-free rate, respectively. α is the average monthly abnormal returns on the portfolio. The vector of factors, FACTOR, includes MKTRF, the market portfolio's excess return; SMB, the difference in the returns between small and large market capitalization stock portfolios; HML, the difference in the returns between high book-to-market and low book-to-market stock portfolios; RMW, the difference between the returns on a diversified portfolio of stocks with robust and weak profitability; CMA, the difference in returns between high- and low-investment stock portfolios; LIQ, the liquidity factor; and UMD, the momentum factor.[9] We employ a weighted least square method to estimate Equation (5). We present the results of the long-term abnormal returns following announcements for the subsample of syndicate-backed and individual-backed targets in Table 7.

[Insert Table 7 here]

[9] The factors are collected from Kenneth French's website: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html.

We find that the long-term stock performance is positive and significant for the acquirers of syndicate-backed targets but negative or close to zero for those of individual-backed targets. Panel A shows that there are positive average monthly abnormal returns α over 36 months following M&A announcements for the acquirers of syndicate-backed targets, except for Column (1). By contrast, in Panel B, α in the three-factor model is negative and statistically significant at the 10% level. These results consistently support our hypothesis that the acquirers of syndicate-backed targets enjoy better long-term performance than those of individual-backed targets. Overall, the acquirers of syndicate-backed targets experience lower cumulative abnormal returns in the short-term; in the long run, however, they outperform those of individual-backed targets.

5. Further Tests

5.1 VC Syndication and Targets' Board of Directors

The literature indicates that the board sizes of entrepreneurial firms increase with the presence of VCs (Rosenstein, Bruno, Bygrave, and Taylor, 1993; Gabrielsson and Huse, 2002). Indeed, VCs serve on the boards of directors (Barry et al., 1990; Rosenstein et al., 1993; Suchard, 2009) or use networks to recruit new expert directors with industry experience (Suchard, 2009). For private and small entrepreneurial firms, larger board size often leads to better firm performance (Daily and Dalton, 1992; Dalton, Daily, Johnson, and Ellstrand, 1999) because the boards of directors in VC-backed entrepreneurial firms are more involved in both strategy formation and evaluation (Fried, Bruton, and Hisrich, 1998). These firms can also obtain access to resources and external knowledge spillovers through their directors (Audretsch and Lehmann, 2006). We collect data on targets' board structures at the time of acquisition from VentureXpert and estimate the following equation:

(6) $$BOARD_{i,j,t} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + v_t + \varepsilon_{i,j,t}$$

We use four proxies for BOARD: BDSIZE is the natural logarithm of one plus the number of directors on the target's board; INDSIZE is the natural logarithm of one plus the number of independent directors; IND is the ratio of the number of independent directors to total board size; and IND_D is the ratio of the number of independent directors to the number of dependent directors. The estimation results of Equation (6) are presented in Table 8.

[Insert Table 8 here]

In Column (1), we show that the coefficient estimate of BDSIZE is positive and statistically significant at the 1% level, indicating that the number of directors increases by 32.6% when the target is backed by VC syndication, *ceteris paribus*. We also find that the number of independent directors increases when the target is syndicate-backed, as the coefficient estimate of INDSIZE in Column (2) is positive and statistically significant at the 1% level. In Columns (3) and (4), we show that the ratio of independent directors to total board size, IND (and to dependent directors, IND_D), increases by 0.070 (0.933) when there are multiple VCs in the target, *ceteris paribus*.

Our evidence indicates that VC syndication leads to the appointment of more directors and the hiring of more independent directors in the targets, consistent with the literature. Brickley, Coles, and Terry (1994) show that independent directors serve the interests of shareholders. Hochberg (2012) finds that the boards of directors of IPO firms are more independent when they are VC-backed. Hart (1995) points out that independent directors can be considered as "delegated monitors" who oversee management's use of firm resources.

5.2 VC Syndication and Acquirers' CEO–Shareholders Incentive Alignment

In this subsection, we examine whether VC syndication can improve the acquirers' CEOs compensation after acquisition.[10] We focus on CEO variable pay and CEO equity pay, as these measurements represent the alignment between CEO's wealth and the benefits of stockholders (Anderson and Bizjak, 2003; Bebchuk et al., 2011). This alignment improves the firms' long-term performance (Shleifer and Vishny, 1997; Deckop et al., 2006). We estimate the following equation to examine the effect of VC syndication on CEO–shareholder incentive alignment in the long-term:

$$(7) \qquad CEO\_EQP(CEO\_VAR)_{i,j,t+3/t+5} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + v_t + \varepsilon_{i,j,t}$$

where CEO_EQP is the sum of the CEO's restricted stock grants and stock option grants scaled by the CEO's total compensation measured three or five years after the announcement. CEO_VAR is measured as the difference between the CEO's total compensation and salary scaled by the CEO's total compensation measured three or five years after the announcement date.

[Insert Table 9 here]

Table 9 shows that the coefficient estimates of SYNDICATION are positive and statistically significant in all model specifications, suggesting that VC syndication increases the incentive alignment between acquirers' CEO and shareholders in the long-term. In Columns (1) and (2), CEO equity (variable) pay increases 12.8% (4.9%) in three years if the target is syndicate-backed, *ceteris paribus*. Columns (3) and (4) extend the period of examination to five years. Similarly, we find that VC syndication has a positive effect of 13.1%

[10] Syndicate-backed targets may be more risky than individual-backed targets. As more risky firms typically have stronger incentive-based compensation systems, our results may be biased because of the omitted target risk characteristics that we cannot directly observe either before or at the M&A announcement.

and 7.2% on the acquirers' CEO equity and variable pay in five years after the announcement, respectively.[11]

5.3 VC Syndication and Method of Payment

In this subsection, we examine the effect of VC syndication on the method of payment in M&As. We propose that VCs who choose stock as the acquisition payment continue to monitor and advise the merged firms.[12] While earlier studies show that VCs prefer stock as the method of payment because it facilitates the strategy of offering value-added services during the post-IPO period through the holding of shares (Krishnan et al., 2011; Chou, Cheng, and Chien, 2013; Megginson, Meles, Sampagnaro, and Verdoliva, 2019), we expect that VCs' motives are relevant for M&As as well, for two reasons. First, Da Rin, Hellmann, and Puri (2013) suggest that the ultimate goal of VCs is to maximize their funds' performance to satisfy their partners. Moreover, the literature proposes that, in the event of an exit, VCs often form blockholding in the acquirer, and the use of equity is an important factor in enhancing shareholder wealth (Slovin et al., 2005; Adra and Menassa, 2019).

We construct two proxies for stock as the method of payment. STOCK is a dummy variable that equals one if the transaction is financed 100% by stock and zero otherwise. We also calculate STOCK_RATIO as the fraction of stock as the method of payment. We estimate the following equation to examine the relation between VC syndication and the choice of stock as the method of payment in M&As:

$$(8) \qquad STOCK\ (STOCK\_RATIO)_{i,j,t} = \alpha + \beta SYNDICATION_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + v_t + \varepsilon_{i,j,t}$$

[11] There may be a reverse relation in which acquirers with high CEO equity/variable pay prefer syndicate-backed targets. We examine the effect of CEO equity and variable pay on the likelihood of acquiring syndicate-backed targets but find no significant results.

[12] The desire for stock payment may also be motivated by tax preferences. Facio and Masulis (2005) suggest that targets will choose stock as the method of payment if they have a low tax basis or if they can defer their tax liabilities. Furthermore, Di Giuli (2013) argues that targets will choose stock payment if they want to avoid taxes.

Table 10 shows that syndicate-backed firms are more likely to receive all-stock payments and a higher proportion of stock payments. Specifically, Columns (1) and (2) show that the likelihood of all-stock payment increases by 3.3% and 4.8% when the target is syndicate-backed, *ceteris paribus*. In Columns (3) and (4), syndicate-backed targets receive 14.3% and 10.6% more stock than individual-backed targets do. The effects are statistically significant at the 1% level, which is consistent with our prediction.

[Insert Table 10 here]

6. Robustness Checks

6.1 Alternative Measure of VC Syndication

In the analyses above, we use a dummy variable, SYNDICATION, as the main independent variable. Some information may be lost when we compress two or more VCs into one category (a syndicate-backed target) and the statistical power of the effect of VC syndication on the dependent variables is reduced (Irwin and McClelland, 2003). It is also possible that the creation of the syndication dummy leads to spurious significant results because the independent variables might be correlated (Maxwell and Delaney, 1993). To address these concerns, we follow Tian (2012) and Altintig, Chiu, and Goktan (2013) and use the natural logarithm of the number of VCs invested in the target, LN(VC), as an alternative measurement of VC syndication. We present the results in Table 11.

[Insert Table 11 Here]

The coefficient estimates of LN(VC) in Columns (1) and (2) are positive and statistically significant at the 5% level, indicating that VC syndication increases the sales multiple and adjusted sales multiple. This means that syndicate-backed targets are valued higher in M&As. Although the coefficient of LN(VC) is statistically significant at only the 5% level in Column (4), it is negative in both Columns (3) and (4), suggesting that VC syndication

reduces the acquirer's announcement returns. In the last two columns of Table 11, we observe that VC syndication increases the acquirer's long-term operating efficiency. Specifically, the coefficients of LN(VC) are both positive and statistically significant at the 1% level in Columns (5) and (6). Overall, our main findings remain robust to the alternative measurement of VC syndication.

6.2 VC Characteristics

One could argue that highly reputed and better-networked VCs tend to syndicate because they have the ability and experience required to choose a valuable partner or identify a good entrepreneurial firm (Lerner, 1994). In this subsection, we address this concern by controlling for the VC characteristics of reputation and network position.[13]

Our first measurement of VC reputation is REP_NAH, defined as the lead VC's cumulative market capitalization of IPOs (Nahata, 2008). Specifically, we aggregate the IPO proceeds for each VC from 1980 to the year of acquisition and divide it by the cumulative IPO proceeds of all VCs. Our second measurement of VC reputation is REP_KRIS, calculated as the lead VC's IPO market share in the three years preceding the acquisition (Krishnan et al., 2011). The construction of REP_KRIS is similar to that of REP_NAH, but it employs a rolling window of three years to reflect recent IPO market conditions. Our last measure of VC reputation is LEAD_VC_CAP, measured as the natural logarithm of the capital under management of the lead VC, following Tian et al. (2016). We control for these additional variables in our baseline regressions in Equations (1), (3), and (4). We present the results in Panel A of Table 12.

[Insert Table 12 Here]

[13] We thank the anonymous reviewers for suggesting this analysis.

As shown in Panel A of Table 12, we find results consistent with our baselines, as the coefficient estimates of SYNDICATION remain positive and statistically significant. Our evidence reaffirms that VC syndication increases premiums and the acquirer's operating efficiency but decreases the acquirer's announcement returns, *ceteris paribus*. Regarding our additional control variables, we find in all our specifications (except for Column 9) that none of these variables is significant, suggesting that VC reputation does not significantly contribute to acquisition premiums, the acquirer's announcement returns, or the acquirer's long-term performance.

Second, regarding the position of VCs in the VC network, we follow Hochberg et al. (2007) and use three measures of VC network centrality reflecting the influence of each VC (node) in the network of VCs. We collect data on round-by-round VC investments from VentureXpert and create a VC network wherein VC firms are represented as nodes, and co-investment in a portfolio company represents the ties among them. As the VC network can change over time (due to changes of relationship, entry, or exit), we establish adjacency matrices over trailing three-year windows showing the relationships between VCs. Using these matrices, we construct DEGREE, defined as the number of ties of each node in the network; BETWEENESS, representing how a node may act as an intermediary connecting nodes that lack a direct relationship between them; and CLOSENESS, measuring the extent to which a node is close to all other nodes. Panel B of Table 12 re-performs our main models with additional control variables for VC network position. As shown, the coefficient estimates of SYNDICATION remain statistically significant in all specifications. We also observe that VC network position has no significant effect on acquisition premiums, the acquirer's announcement returns, or the acquirer's operating efficiency.[14]

[14] In untabulated results, we add both VC reputation and VC network position as additional control variables in the regressions and produce consistent findings.

6.3 Heckman Two-step Selection Model

The effect of VC syndication on M&A outcomes may reflect the fact that promising targets attract more VC firms (Sorenson and Stuart, 2001; Nanda et al., 2020), or it may arise from VC syndication's advisory efforts. To separate VC syndication's selection effect from the influence of VC syndication's value-added services, we employ the Heckman (1979) two-step procedure. We use LN(CLUSTER_VC) as the instrument in the first step. LN(CLUSTER_VC) is measured as the natural logarithm of the number of VC firms with investments in the same state and industry as the target, as classified in VentureXpert, within three years prior to the announcement date.[15] We propose that more active VCs in the same location and industry is associated with a higher probability of VC syndication for two reasons. First, syndication is more likely to be formed among VCs that have similar levels of experience, are of the same type, and are from the same country of origin (Du, 2016). Second, close physical distance promotes the probability of random interactions between VCs (Blau and Schwartz, 1984; Sorenson and Stuart, 2001). Therefore, VCs in the same location are more likely to form a syndicate (Tian, 2012; Du, 2016). We thus estimate a probit model to predict the likelihood of the target being backed by VC syndication as follows:

$$(9) \qquad SYNDICATION_{i,j,t} = \alpha + \beta LN(CLUSTER\_VC)_{i,j,t} + \gamma X_{i,j,t} + \delta Z_{i,j,t-1} + n_j + \nu_t + \varepsilon_{i,j,t}$$

In the untabulated first stage of the Heckman model, we find that LN(CLUSTER_VC) is positive at 0.13 and is statistically significant at the 1% level with an average marginal effect of 0.03. This result supports our argument that the higher the number of VCs near the target with expertise in the target's industry, the more likely the target is to be backed by a VC syndicate.

[15] We require that these VCs have no investment in the target within three years prior to the announcement date. Our results remain robust when we extend the analysis to five years prior to the acquisition.

For the second stage of the Heckman Selection Model, we compute the inverse Mills ratio, IMR, from the first-step regression estimates. We include IMR as an additional control variable in the second-step regression of sales multiples, acquirer announcement returns, and acquirers' long-term performance as in Equations (1), (3), and (4), respectively. We report the regression results in Panel A of Table 13.

[Insert Table 13 Here]

In Column 1, we show that SYNDICATION positively affects PREMIUM after self-selection is controlled for. The evidence suggests that the ratio of transaction value to total sales increases 15.615 times when the target is syndicate-backed, *ceteris paribus*. Our results in Columns (2) and (3) confirm that SYNDICATION has a negative relation with the acquirer's announcement returns but is positively related to the acquirer's long-term performance, consistent with our previous findings. Overall, our results are robust to the self-selection of VC syndication.

6.4 Propensity Score Matching

To further address the selection bias, we employ the propensity score matching technique (PSM) proposed by Heckman, Ichimura, and Todd (1997, 1998). Although PSM does not match firm deal characteristics perfectly, it generally alleviates differences between syndicate-backed and individual-backed targets, which helps generate a more unbiased estimate of VC syndication. We estimate a logit model predicting the likelihood of VC syndication. We then identify matches based on propensity scores from the logit regression, with replacement,[16] for each syndicate-backed target.

[16] Our results remain robust when we use matching without replacement.

We report the estimation results in Panel B of Table 13. These results suggest that VC syndication is positively related to the sales multiple and the acquirer's long-term operating efficiency but negatively affects the acquirer's announcement returns. Specifically, using the matched sample, we find that the sales multiple increases 11.652 times when the target is syndicate-backed, *ceteris paribus*. Syndicate-backed targets reduce the acquirer's announcement returns, CAR(-2, 2), by 1.4 %, while it increases the difference in the return on assets (ΔROA) by 3.2%.

6.5 Non-VC-backed Acquirers

According to Gompers and Xuan (2009), the presence of a common venture capitalist between the target and acquirer can bridge the information gap between the two firms. Furthermore, this VC bridge-building conveys value-relevant information that significantly affects acquirers' announcement returns, and the effect is more pronounced in situations where the problem of asymmetric information is severe. To mitigate the concern regarding common VCs, we restrict our sample to non-VC-backed acquirers. We exclude transactions classified as "VC Company Acquired VC Company" and "VC Fund Acquired VC Company." Consequently, 533 VC-backed acquirers are excluded. We re-estimate the regressions in Equations (1), (3), and (4) and report the results in Panel C of Table 13.

In Column (1), the coefficient of SYNDICATION is positive and statistically significant at the 5% level, suggesting that syndicate-backed targets receive more premiums than individual-backed targets do. In Column (2), we show that VC syndication in the target reduces the acquirer's announcement returns by 1.3%. We find consistent evidence in Column (3) that syndicate-backed targets lead to better long-term performance for acquirers.

7. Conclusions

This study investigates the benefits of VC syndication for acquisition outcomes. We find that syndicate-backed targets have higher sales premiums and take longer to complete the deal. The acquirers of syndicate-backed firms experience lower announcement returns but outperform those of individual-backed targets in the long-term. Our findings support the value-added hypothesis that VC syndication creates value for targets that benefits acquirers over the long-term.

Furthermore, we find that VCs improve targets' board size as well as board independence before the targets exit via acquisition. VC syndication aligns the incentives of acquirers' CEOs with those of their shareholders by increasing CEO equity and variable pay post-acquisition. In addition, syndicate-backed targets prefer stock as the method of payment. Our results are robust to a battery of robustness tests, including the use of an alternative measure of VC syndication and analyses of VC characteristics, endogeneity issues, and sub-sample bias.

Our study has some limitations, however. Because of the unavailability of data on private M&As, we cannot completely control for VC contractual terms that may affect the exit strategy and VC ownership post-acquisition, which may explain VCs' value-added services to the merged firms. Moreover, in some of our specifications, the difficulty of collecting data for our initial sample produces a small sample size. Nevertheless, we show that VC syndication creates value not only for entrepreneurial firms but also for their acquirers over the long-term.

References

Adra, S., & Menassa, E. (2019). Paradigm conflict and the wealth effects of blockholder formation in private target acquisitions. *Journal of Behavioral Finance,* 20(1), 81-95.

Agrawal, A., & Jaffe, J. F. (2003). Do takeover targets underperform? Evidence from operating and stock returns. *Journal of Financial and Quantitative Analysis, 38*(4), 721-746.

Alexandridis, G., Fuller, K. P., Terhaar, L., & Travlos, N. G. (2013). Deal size, acquisition premia and shareholder gains. *Journal of Corporate Finance, 20,* 1-13.

Altintig, Z. A., Chiu, H. H., & Goktan, M. S. (2013). How does uncertainty resolution affect VC syndication? *Financial Management, 42*(3), 611-646.

Anderson, R. C., & Bizjak, J. M. (2003). An empirical examination of the role of the CEO and the compensation committee in structuring executive pay. *Journal of Banking & Finance, 27*(7), 1323-1348.

Audretsch, D. B., & Lehmann, E. (2006). Entrepreneurial access and absorption of knowledge spillovers: Strategic board and managerial composition for competitive advantage. *Journal of Small Business Management, 44*(2), 155-166.

Barber, B. M., & Lyon, J. D. (1996). Detecting abnormal operating performance: The empirical power and specification of test statistics. *Journal of Financial Economics, 41*(3), 359-399.

Barry, C. B., Muscarella, C. J., Peavy, J. W., & Vetsuypens, M. R. (1990). The role of venture capital in the creation of public companies. *Journal of Financial Economics, 27*(2), 447-471.

Bayar, O., & Chemmanur, T. J. (2012). What drives the valuation premium in IPOs versus acquisitions? An empirical analysis. *Journal of Corporate Finance, 18*(3), 451-475.

Bayar, O., Chemmanur, T. J., & Tian, X. (2019). Peer monitoring, syndication, and the dynamics of venture capital interactions: Theory and evidence. *Journal of Financial and Quantitative Analysis*, In Press.

Bebchuk, L. A., Cremers, K. M., & Peyer, U. C. (2011). The CEO pay slice. *Journal of Financial Economics, 102*(1), 199-221.

Blau, P. M., & Schwartz, J. E. (1984). *Crossing social circles*. Orlando, Fla.: Academic Press.

Brander, J. A., Amit, R., & Antweiler, W. (2002). Venture-capital syndication: Improved venture selection vs. the value-added hypothesis. *Journal of Economics & Management Strategy, 11*(3), 422-451.

Brickley, J. A., Coles, J. L., & Terry, R. L. (1994). Outside directors and the adoption of poison pills. *Journal of Financial Economics, 35*(3), 371-390.

Brooks, C., Chen, Z., & Zeng, Y. (2018). Institutional cross-ownership and corporate strategy: The case of mergers and acquisitions. *Journal of Corporate Finance, 48*, 187-216.

Bubna, A., Das, S. R., & Prabhala, N. (2020). Venture capital communities. *Journal of Financial and Quantitative Analysis*, 55(2), 621-651.

Burchardt, J., Hommel, U., Kamuriwo, D. S., & Billitteri, C. (2016). Venture capital contracting in theory and oractice: Implications for entrepreneurship Research. *Entrepreneurship Theory and Practice, 40*(1), 25-48.

Cao, X., Cumming, D., Goh, J., & Wang, X. (2019). The impact of investor protection law on global takeovers: LBO vs. non-LBO transactions. *Journal of International Financial Markets, Institutions and Money, 59*, 1-18.

Carhart, M. M. (1997). On persistence in mutual fund performance. *Journal of Finance, 52*(1), 57-82.

Casamatta, C., & Haritchabalet, C. (2007). Experience, screening and syndication in venture capital investments. *Journal of Financial Intermediation, 16*(3), 368-398.

Chemmanur, T. J., Hull, T. J., & Krishnan, K. (2016). Do local and international venture capitalists play well together? The complementarity of local and international venture capitalists. *Journal of Business Venturing, 31*(5), 573-594.

Chemmanur, T. J., Krishnan, K., & Nandy, D. K. (2011). How does venture capital financing improve efficiency in private firms? A look beneath the surface. *Review of Financial Studies, 24*(12), 4037-4090.

Chou, T. K., Cheng, J. C., & Chien, C. C. (2013). How useful is venture capital prestige? Evidence from IPO survivability. *Small Business Economics, 40*(4), 843-863.

Cornaggia, J., & Li, J. Y. (2019). The value of access to finance: Evidence from M&As. *Journal of Financial Economics, 131*(1), 232-250.

Cremers, K. M., Litov, L. P., & Sepe, S. M. (2017). Staggered boards and long-term firm value, revisited. *Journal of Financial Economics, 126*(2), 422-444.

Cumming, D. (2010). *Venture capital: Investment strategies, structures, and policies*: Wiley.

Cumming, D., Chahine, S., Filatotchev, I., Hoskisson, R. E., & Arthurs, J. D. (2019). The dark side of venture capital syndication and IPO firm performance. In Cumming (Ed.), *The Oxford Handbook of IPOs* (pp. 429-459): Oxford University Press.

Cumming, D. J., Grilli, L., & Murtinu, S. (2017). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. *Journal of Corporate Finance, 42*, 439-459.

Da Rin, M., Hellmann, T., & Puri, M. (2013). A survey of venture capital research. In *Handbook of the Economics of Finance* (Vol. 2, pp. 573-648): Elsevier.

Daily, C. M., & Dalton, D. R. (1992). The relationship between governance structure and corporate performance in entrepreneurial firms. *Journal of Business Venturing, 7*(5), 375-386.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal, 42*(6), 674-686.

Das, S. R., Jo, H., & Kim, Y. (2011). Polishing diamonds in the rough: The sources of syndicated venture performance. *Journal of Financial Intermediation,*

Deckop, J. R., Merriman, K. K., & Gupta, S. (2006). The effects of CEO pay structure on corporate social performance. *Journal of Management, 32*(3), 329-342.

Deng, X., Kang, J. K., Low, B. S. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of Financial Economics,* 110(1), 87-109.

Di Giuli, A. (2013). The effect of stock misvaluation and investment opportunities on the method of payment in mergers. *Journal of Corporate Finance, 21*, 196-215.

Du, Q. (2016). Birds of a feather or celebrating differences? The formation and impacts of venture capital syndication. *Journal of Empirical Finance, 39*, 1-14.

Elnahas, A. M., & Kim, D. (2017). CEO political ideology and mergers and acquisitions decisions. *Journal of Corporate Finance, 45*, 162-175.

Faccio, M., & Masulis, R. W. (2005). The choice of payment method in European mergers and acquisitions. *Journal of Finance, 60*(3), 1345-1388.

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics,* 33, 3–56.

Fama, E. F., & French, K. R. (2015). A five-factor asset pricing model. *Journal of Financial Economics, 116*(1), 1-22.

Fich, E. M., & Nguyen, T. (2020). The value of CEOs' supply chain experience: Evidence from mergers and acquisitions. *Journal of Corporate Finance, 60*, 101525.

Filatotchev, I., Wright, M., & Arberk, M. (2006). Venture capitalists, syndication and governance in Initial Public Offerings. *Small Business Economics, 26*(4), 337-350.

Fried, V. H., Bruton, G. D., & Hisrich, R. D. (1998). Strategy and the board of directors in venture capital-backed firms. *Journal of Business Venturing, 13*(6), 493-503.
Gabrielsson, J., & Huse, M. (2002). The venture capitalist and the board of directors in SMEs: Roles and processes. *Venture Capital, 4*(2), 125-146.
Golubov, A., Petmezas, D., & Travlos, N. G. (2012). When it pays to pay your investment banker: New evidence on the role of financial advisors in M&As. *Journal of Finance, 67*(1), 271-311.
Gompers, P. (1997). Ownership and control in entrepreneurial firms: An examination of convertible securities in venture capital investments, *Working paper, Havard Business School*.
Gompers, P., Kovner, A., & Lerner, J. (2009). Specialization and success: Evidence from venture capital. *Journal of Economics & Management Strategy, 18*(3), 817-844.
Gompers, P. A., & Xuan, Y. (2009). Bridge building in venture capital-backed acquisitions, *Working paper*. Retrieved from http://www.ssrn.com/abstract=1102504
Greene, D. (2017). Valuations in corporate takeovers and financial constraints on private targets. *Journal of Financial and Quantitative Analysis, 52*(4), 1343-1373.
Grinstein, Y., & Hribar, P. (2004). CEO compensation and incentives: Evidence from M&A bonuses. *Journal of Financial Economics*, 73(1), 119-143.
Hart, O. (1995). Corporate governance: Some theory and implications. *The Economic Journal, 105*(430), 678-689.
Heckman, J. J. (1979). Sample selection bias as a specification error. *Econometrica, 47*(1), 153-161.
Heckman, J. J., Ichimura, H., & Todd, P. E. (1998). Matching as an econometric evaluation estimator. *Review of Economic Studies, 65*(2), 261-294.
Heckman, J. J., Ichimura, H., & Todd, P. E. (1997). Matching as an econometric evaluation estimator: Evidence from evaluating a job training programme. *Review of Economic Studies, 64*(4), 605-654.
Hege, U., Lovo, S., Slovin, M. B., & Sushka, M. E. (2009). Equity and cash in intercorporate asset sales: Theory and evidence. *Review of Financial Studies, 22*(2), 681-714.
Hellmann, T. (1998). The allocation of control rights in venture capital contracts. *RAND Journal of Economics, 29*(1), 57-57.
Hochberg, Y. V. (2012). Venture capital and corporate governance in the newly public firm. *Review of Finance, 16*(2), 429-480.
Hochberg, Y. V., Ljungqvist, A., & Lu, Y. (2007). Whom you know matters: Venture capital networks and investment performance. *Journal of Finance, 62*(1), 251-301.
Irwin, J. R., & McClelland, G. H. (2003). Negative consequences of dichotomizing continuous predictor variables. *Journal of Marketing Research, 40*(3), 366-371.
Ivanov, V. I., & Xie, F. (2010). Do corporate venture capitalists add value to start-up firms? Evidence from IPOs and acquisitions of Vc-backed companies. *Financial Management, 39*(1), 129-152.
Jain, B. A. (2001). Predictors of performance of venture capitalist-backed organizations. *Journal of Business Research, 52*(3), 223-233.
Kaplan, S. N., & Stromberg, P. (2003). Financial contracting theory meets the real World: An empirical analysis of venture capital contracts. *Review of Economic Studies, 70*(2), 281-315.
Kogut, B., Urso, P., & Walker, G. (2007). Emergent properties of a new financial market: American venture capital syndication, 1960–2005. *Management Science, 53*(7), 1181-1198.

Krishnan, C. N. V., Ivanov, V. I., Masulis, R. W., & Singh, A. K. (2011). Venture capital reputation, post-IPO performance, and corporate governance. *Journal of Financial and Quantitative Analysis, 46*(5), 1295-1333.

Lehmann, E. E. (2006). Does venture capital syndication spur employment growth and shareholder value? Evidence from German IPO data. *Small Business Economics, 26*(5), 455-464.

Lerner, J. (1994). The syndication of venture capital investments. *Financial Management, 23*(3), 16-27.

Li, K., Qiu, B., & Shen, R. (2018). Organization capital and mergers and acquisitions. *Journal of Financial and Quantitative Analysis, 53*(4), 1871-1909.

Ma, Q., Whidbee, D. A., & Zhang, W. (2019). Acquirer reference prices and acquisition performance. *Journal of Financial Economics, 132*(1), 175-199.

Masulis, R. W., & Nahata, R. (2011). Venture capital conflicts of interest: Evidence from acquisitions of venture-backed firms. *Journal of Financial and Quantitative Analysis, 46*(02), 395-430.

Masulis, R. W., & Simsir, S. A. (2018). Deal initiation in mergers and acquisitions. *Journal of Financial and Quantitative Analysis, 53*(6), 2389-2430.

Masulis, R. W., Wang, C., & Xie, F. (2019). Employee-manager alliances and shareholder returns from acquisitions. *Journal of Financial and Quantitative Analysis*, 55(2), 473-516å.

Maxwell, S. E., & Delaney, H. D. (1993). Bivariate median splits and spurious statistical significance. *Psychological bulletin, 113*(1), 181-190.

Megginson, W. L., Meles, A., Sampagnaro, G., & Verdoliva, V. (2019). Financial distress risk in initial public offerings: How much do venture capitalists matter? *Journal of Corporate Finance, 59*, 10-30.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics, 73*(2), 201-228.

Nahata, R. (2008). Venture capital reputation and investment performance. *Journal of Financial Economics, 90*(2), 127-151.

Nanda, R., Samila, S., & Sorenson, O. (2020). The persistent effect of initial success: Evidence from venture capital. *Journal of Financial Economics*, 137(1), 231-248.

Nguyen, N. H., & Phan, H. V. (2017). Policy uncertainty and mergers and acquisitions. *Journal of Financial and Quantitative Analysis, 52*(2), 613-644.

Officer, M. S., Ozbas, O., & Sensoy, B. A. (2010). Club deals in leveraged buyouts. *Journal of Financial Economics, 98*(2), 214-240.

Peyer, U., & Vermaelen, T. (2009). The nature and persistence of buyback anomalies. *Review of Financial Studies, 22*(4), 1693-1745.

Pástor, Ľ., & Stambaugh, R. F. (2003). Liquidity risk and expected stock returns. *Journal of Political Economy, 111*(3), 642-685.

Rosenstein, J., Bruno, A. V., Bygrave, W. D., & Taylor, N. T. (1993). The CEO, venture capitalists, and the board. *Journal of Business Venturing, 8*(2), 99-113.

Sah, R. K., & Stiglitz, J. E. (1986). The architecture of economic systems. In (Vol. 76, pp. 716-727): American Economic Association.

Schmidt, B. (2015). Costs and benefits of friendly boards during mergers and acquisitions. *Journal of Financial Economics, 117*(2), 424-447.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance, 52*(2), 737-783.

Slovin, M. B., Sushka, M. E., & Polonchek, J. A. (2005). Methods of payment in asset sales: Contracting with equity versus cash. *Journal of Finance, 60*(5), 2385-2407.

Sorenson, O., & Stuart, Toby E. (2001). Syndication networks and the spatial distribution of venture capital investments. *American Journal of Sociology, 106*(6), 1546-1588.
Stanfield, J. (2019). Skill, syndication, and performance: Evidence from leveraged buyouts. *Journal of Corporate Finance*, In Press.
Suchard, J. A. (2009). The impact of venture capital backing on the corporate governance of Australian initial public offerings. *Journal of Banking & Finance, 33*(4), 765-774.
Tian, X. (2012). The role of venture capital syndication in value creation for entrepreneurial firms. *Review of Finance, 16*(1), 245-283.
Tian, X., Udell, G. F., & Yu, X. (2016). Disciplining delegated monitors: When venture capitalists fail to prevent fraud by their IPO firms. *Journal of Accounting and Economics, 61*(2-3), 526-544.
Tykvová, T. (2007). What do economists tell us about venture capital contracts? *Journal of Economic Surveys, 21*(1), 65-89.
Wilson, R. (1968). The theory of syndicates. *Econometrica, 36*(1), 119-132.

Appendix 1: Definition of Variables

Variables	Definition	Source
SYNDICATION	A dummy variable equals one if there is more than one VC firm invested in the target, and zero otherwise.	SDC VentureXpert
PREMIUM	The ratio of the transaction value to the target's sales.	SDC M&A
ADJ_PREMIUM	The difference between the target's sales multiple and the median of sales multiples of similar transactions. Similar transactions are identified as follows. For each VC-backed transaction, we search for all listed transactions that are announced two years before and after, have the value ranged between 50% and 150% its value, and share the same target industry (defined by the first 2 digits of the target's SIC code).	SDC M&A
TIME	A dummy variable equals one if the effective date is the same as the announcement date, and zero otherwise.	SDC M&A
LN(TIME)	The natural logarithm of one plus the number of days between the announcement date and the completion date.	SDC M&A
CAR(-2, 2)	The acquirer's cumulative abnormal returns between date -2 and 2, given 0 is the announcement date. Abnormal returns are generated from the market model for which parameters are estimated over the period of one year and CRSP value-weighted returns served as the market benchmark.	CRSP (US)
CAR(-5, 5)	The acquirer's cumulative abnormal returns between date -5 and 5, given 0 is the announcement date.	CRSP (US)
ΔROA	The difference of return on total assets between year -1 and year +2, given time 0 is the fiscal year of the announcement date.	Compustat
ΔADJ_ROA	The difference of adjusted return on total assets between year -1 and year +2. Adjusted return on total assets is the difference between the acquirer's ROA and the average ROA of firms that share the same industry and have the size of total assets ranging from +50% to +150% the size of the acquirer.	Compustat
Transaction & lead VC's characteristics		
STOCK	A dummy variable equals one if the deal is financed by stock 100%, and zero otherwise.	SDC M&A
STOCK_RATIO	The fraction of stock as the method of payment.	SDC M&A
ACQ_STAGE	A dummy variable equals one if the target receives an investment at the acquisition or buyout stage, and zero otherwise.	SDC VentureXpert
LATER_STAGE	A dummy variable equals one if the target receives a VC investment at the later stage, and zero otherwise.	SDC VentureXpert
DEAL_SIZE	The natural logarithm of the transaction value.	SDC VentureXpert
RELATEDNESS	A dummy variable equals one if the first three digits of the target's SIC code are the same as the first three digits of the acquirer's SIC code, and zero otherwise.	SDC M&A
LEAD_VC_AGE	The natural logarithm of the age of lead VC. The lead VC is defined as the VC with the largest investment in syndicate-backed targets or a venture capitalist in individual-backed targets.	SDC VentureXpert
LN(VC)	The natural logarithm of the number of VCs invested in the target.	SDC VentureXpert
REP_NAH	The lead VC's cumulative market capitalization of IPOs (Nahata, 2008). We aggregate the IPO proceeds for each VC from 1980 to the year of acquisition in question and divided it to the cumulative IPO proceeds of all VCs.	SDC VentureXpert SDC VentureXpert

REP_KRIS	The lead VC's IPO market share in the last three years before the acquisition (Krishnan et al., 2011).	SDC VentureXpert
LEAD_VC_CAP	The natural logarithm of the lead VC's capital under management (Tian et al., 2016).	SDC VentureXpert
DEGREE	The number of ties each VC (node) in the network has.	SDC VentureXpert
BETWEENESS	The betweenness represents how a node may act as an intermediary which connects nodes that lack a direct relationship between them.	SDC VentureXpert
CLOSENESS	The closeness measures the extent to which a node is close to all other nodes.	SDC VentureXpert
LN(CLUSTER_VC)	The natural logarithm of the number of VC firms having investments in the same state and industry as classified in VentureXpert as the target within three years prior to the announcement date.	SDC VentureXpert
Acquirer characteristics		
SIZE	The natural logarithm of the acquirer's total assets.	Compustat
LEVERAGE	The ratio of the acquirer's total debts to the total assets.	Compustat
Q	The market value of assets divided by the book value of assets.	Compustat
ΔROA	The difference of ROA between year -1 and year +2, given 0 is the fiscal year of the announcement date.	Compustat
ΔADJ_ROA	The difference of adjusted ROA between year -1 and year +2.	Compustat
CEO_EQP3(CEO_EQP5)	The sum of CEO's restricted stock grants and stock option grants scaled by CEO's total compensation measured three (five) years after the announcement date.	Compustat
CEO_VAR3(CEO_VAR5)	The difference between CEO's total compensation and salary scaled by CEO's total compensation measured three (five) years after the announcement date.	Compustat
Target's board of directors		
BDSIZE	The natural logarithm of one plus the number of directors on the target's board.	SDC VentureXpert
INDSIZE	The natural logarithm of one plus the number of independent directors.	SDC VentureXpert
IND	The ratio between the number of independent directors and the total number of directors.	SDC VentureXpert
IND_D	The ratio between the number of independent directors and the number of dependent directors.	SDC VentureXpert

Table 1: Distribution of VC-backed M&As between 1990-2017 by Year and Industry
This table reports the annual and industry distribution of VC-backed mergers and acquisitions announced between 1990 and 2017. Industries are defined based on 2-digit SIC code.

Panel A: The distribution of VC-backed and syndicate-backed M&As by year			
Year	No. of VC-backed transactions	No. of syndicate-backed transactions	% of VC syndication
1990	6	4	66.7%
1991	4	1	25.0%
1992	35	25	71.4%
1993	36	33	91.7%
1994	30	24	80.0%
1995	50	33	66.0%
1996	75	49	65.3%
1997	84	53	63.1%
1998	93	69	74.2%
1999	157	122	77.7%
2000	179	141	78.8%
2001	113	82	72.6%
2002	106	81	76.4%
2003	120	89	74.2%
2004	158	135	85.4%
2005	156	119	76.3%
2006	166	125	75.3%
2007	162	119	73.5%
2008	80	55	68.8%
2009	77	62	80.5%
2010	114	79	69.3%
2011	138	101	73.2%
2012	97	68	70.1%
2013	79	59	74.7%
2014	115	90	78.3%
2015	68	53	77.9%
2016	53	34	64.2%
2017	63	49	77.8%
Total	2,614	1,954	74.8%

Panel B: The distribution of VC-backed and syndicated-backed M&As by target's industry

Industry	2-digit SIC code	No. of VC-backed transactions	No. of syndicate-backed transactions	% of VC syndication
Business Services	73	1,193	958	79.9%
Industrial Machinery & Equipment	36	242	206	84.8%
Chemical & Allied Products	28	193	146	75.3%
Instruments & Related Products	38	178	132	74.4%
Communications	48	130	91	69.5%
Engineering & Management Services	87	109	78	71.8%
Industrial Machinery & Equipment	35	95	72	75.3%
Health Services	80	91	67	73.9%
Wholesale Trade – Durable Goods	50	40	23	57.5%
Miscellaneous Retail	59	36	24	67.6%
Oil & Gas Extraction	13	27	11	39.3%
Printing & Publishing	27	25	15	57.7%
Fabricated Metal Products	34	21	6	27.3%
Food & Kindred Products	20	19	11	57.9%
Nondurable Goods	51	16	5	23.5%
Rubber & Miscellaneous Plastics Products	30	16	4	31.3%
Eating & Drinking Places	58	11	9	83.3%
Miscellaneous Manufacturing Industries	39	10	7	45.5%
Primary Metal Industries	33	10	4	40.0%
Transportation Equipment	37	10	4	70.0%
Other		145	83	56.4%
Total		2,614	1,954	74.8%

Table 2: Descriptive Statistics

This table presents descriptive statistics of the full sample, and the subsamples of individual-backed and syndicated-backed transactions, respectively. A detailed description of all variables is presented in Appendix 1. All continuous variables are winsorized at the 1% and 99% percentiles.

	All transactions (2,614 Obs.)			Syndicate-backed (1,954 Obs.) SYNDICATION=1			Individual-backed (660 Obs.) SYNDICATION=0			Mean differences
	Mean	SD	p50	Mean	SD	p50	Mean	SD	p50	Column 4-7
	1	2	3	4	5	6	7	8	9	10
PREMIUM	24.36	67.83	3.13	29.43	75.04	3.78	10.67	39.80	1.97	18.76***
ADJ_PREMIUM	27.09	74.00	2.05	31.40	79.51	2.52	12.40	48.35	1.02	19.00***
TIME	0.74	0.44	1.00	0.76	0.43	1.00	0.68	0.47	1.00	-0.08***
LN(TIME)	2.68	1.79	3.33	2.74	1.75	3.37	2.50	1.88	3.13	-0.245***
CAR(-2, 2)	0.02	0.12	0.01	0.01	0.13	0.01	0.03	0.12	0.02	-0.02**
CAR(-5, 5)	0.02	0.10	0.01	0.01	0.10	0.00	0.03	0.10	0.02	-0.01***
ΔROA	-0.05	0.21	-0.02	-0.05	0.21	-0.02	-0.06	0.19	-0.02	0.01
ΔADJ_ROA	-0.02	0.22	-0.01	-0.01	0.23	0.00	-0.04	0.20	-0.01	0.02*
STOCK_RATIO	0.29	0.41	0.00	0.31	0.42	0.00	0.23	0.38	0.00	0.08***
ACQ_STAGE	0.21	0.41	0.00	0.15	0.35	0.00	0.39	0.49	0.00	-0.25***
LATER_STAGE	0.22	0.41	0.00	0.27	0.44	0.00	0.08	0.28	0.00	0.18***
DEAL_SIZE	4.25	1.58	4.32	4.24	1.55	4.32	4.26	1.67	4.32	-0.02
RELATEDNESS	0.51	0.50	1.00	0.53	0.50	1.00	0.47	0.50	0.00	0.07***
LEAD_VC_AGE	2.75	0.70	2.81	2.79	0.69	2.87	2.65	0.72	2.68	0.14***
SIZE	6.26	1.80	6.12	6.27	1.80	6.13	6.21	1.79	6.08	0.06
LEVERAGE	0.13	0.18	0.05	0.12	0.17	0.03	0.18	0.20	0.11	-0.05***
Q	4.04	5.13	2.42	4.26	5.42	2.51	3.34	4.02	2.13	0.93***

Table 3: The Effect of VC Syndication on Target Acquisition Premiums

This table reports linear regressions of target premiums on VC syndication. The main dependent variable, PREMIUM, is the ratio between the transaction value and the target's sales. ADJ_PREMIUM is the difference between the target's sales multiple and the median of sales multiples of similar transactions. The main independent variable, SYNDICATION, equals one if there is more than one VC firm invested in the target and zero otherwise. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	PREMIUM	PREMIUM	ADJ_PREMIUM	ADJ_PREMIUM
	1	2	3	4
SYNDICATION	13.620***	15.298**	17.026***	15.046**
	(4.567)	(6.329)	(6.072)	(7.684)
STOCK_RATIO	36.927***	26.651**	36.804***	31.064**
	(7.664)	(11.115)	(8.701)	(12.179)
ACQ_STAGE	-25.537***	-24.849***	-30.275***	-27.156***
	(5.780)	(7.281)	(7.432)	(8.804)
LATER_STAGE	-8.722	-16.925**	-12.672*	-19.360**
	(6.087)	(7.523)	(6.962)	(8.456)
DEAL_SIZE	11.913***	11.526***	13.873***	12.009**
	(2.300)	(3.879)	(3.018)	(4.652)
RELATEDNESS	10.549**	11.217*	11.068**	12.530**
	(4.666)	(5.842)	(5.389)	(6.281)
LEAD_VC_AGE	-2.549	-2.075	-2.406	-1.801
	(4.321)	(5.086)	(4.963)	(5.243)
SIZE		-1.317		0.206
		(3.579)		(4.214)
LEVERAGE		7.151		4.004
		(24.349)		(31.634)
Q		6.325***		6.476***
		(1.817)		(1.897)
Intercept	-71.408***	-86.668***	-93.671***	-98.457***
	(19.078)	(25.691)	(26.139)	(34.002)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	809	523	609	421
R^2	0.21	0.29	0.21	0.29

Table 4: The Effect of VC Syndication on the Time to Completion

This table reports regressions of the time to complete an M&A on VC syndication. TIME is a dummy variable equals one if the effective date is different from the announcement date, and zero otherwise. LN(TIME) is the natural logarithm of one plus the number of days between the announcement date and the completion date. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	TIME	TIME	LN(TIME)	LN(TIME)
	1	2	3	4
SYNDICATION	0.046**	0.083***	0.227**	0.378***
	(0.021)	(0.026)	(0.108)	(0.126)
STOCK_RATIO	0.155***	0.065**	1.167***	0.664***
	(0.023)	(0.027)	(0.120)	(0.132)
ACQ_STAGE	-0.017	0.025	0.076	0.251*
	(0.023)	(0.028)	(0.117)	(0.136)
LATER_STAGE	0.041**	0.028	0.286***	0.201*
	(0.020)	(0.023)	(0.101)	(0.108)
DEAL_SIZE	0.113***	0.127***	0.657***	0.750***
	(0.005)	(0.010)	(0.030)	(0.048)
RELATEDNESS	0.011	-0.025	-0.004	-0.155*
	(0.016)	(0.020)	(0.084)	(0.095)
LEAD_VC_AGE	0.006	-0.006	0.062	-0.009
	(0.012)	(0.014)	(0.062)	(0.066)
SIZE		-0.029***		-0.197***
		(0.007)		(0.034)
LEVERAGE		0.014		0.211
		(0.057)		(0.273)
Q		-0.007***		-0.056***
		(0.002)		(0.011)
Intercept	0.075	0.481**	-1.031	0.987
	(0.341)	(0.236)	(1.774)	(1.489)
Sigma-Intercept			Yes	Yes
			Yes	Yes
Industry FE	Yes	Yes	2,614	1,568
Year FE	Yes	Yes	-4,681	-2,769
Obs.	2,614	1,568	0.227**	0.378***
R^2/Log likelihood	0.22	0.21	(0.108)	(0.126)

Table 5: The Effect of VC Syndication on Acquirers' Announcement Returns
This table reports linear regressions of acquirer returns on venture capital syndication. The main dependent variables, CAR(-2, 2) and CAR(-5, 5), are the acquirer's cumulative abnormal returns during the five- and eleven-window period, respectively. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	CAR(-2, 2)	CAR(-5, 5)
	1	2
SYNDICATION	-0.012*	-0.015**
	(0.006)	(0.008)
STOCK_RATIO	-0.001	0.009
	(0.008)	(0.010)
ACQ_STAGE	0.006	0.003
	(0.008)	(0.009)
LATER_STAGE	0.004	-0.001
	(0.006)	(0.008)
DEAL_SIZE	0.006**	0.007*
	(0.003)	(0.004)
RELATEDNESS	0.003	0.005
	(0.006)	(0.007)
LEAD_VC_AGE	-0.004	-0.007
	(0.004)	(0.005)
SIZE	-0.009***	-0.009***
	(0.002)	(0.003)
LEVERAGE	0.027	0.041**
	(0.017)	(0.019)
Q	0.001	0.001
	(0.001)	(0.001)
Intercept	0.009	0.077*
	(0.035)	(0.040)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Obs.	1,481	1,481
R^2	0.09	0.08

Table 6: The Effect of VC Syndication on Acquirers' Operating Efficiency

This table reports linear regressions of the acquirer's operating efficiency on VC syndication. The main dependent variables, ΔROA, is the difference of ROA between year -1 and year +2, given 0 is the fiscal year of the announcement date. ΔADJ_ROA is the difference of adjusted ROA between year -1 and year +2. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	ΔROA	ΔADJ_ROA
	1	2
SYNDICATION	0.039***	0.048***
	(0.014)	(0.016)
STOCK_RATIO	0.007	0.008
	(0.019)	(0.020)
ACQ_STAGE	0.024*	0.028*
	(0.014)	(0.015)
LATER_STAGE	0.004	0.009
	(0.014)	(0.016)
DEAL_SIZE	-0.002	0.003
	(0.007)	(0.008)
RELATEDNESS	0.012	0.003
	(0.012)	(0.013)
LEAD_VC_AGE	0.01	0.008
	(0.009)	(0.010)
SIZE	-0.004	-0.029***
	(0.006)	(0.007)
LEVERAGE	0.165***	0.182***
	(0.041)	(0.046)
Q	-0.003	-0.002
	(0.002)	(0.003)
Intercept	-0.065	0.002
	(0.054)	(0.060)
Industry FE	Yes	Yes
Year FE	Yes	Yes
Obs.	1,216	1,168
R^2	0.18	0.14

Table 7: The Effect of VC Syndication on Acquirers' Long-term Stock Performance
This table presents the long-term stock performance of the acquirers of syndicate-backed targets (individual-backed targets) in Panel A (Panel B). We assign each acquirer into a portfolio of either syndicate-backed targets or individual-backed targets. We estimate monthly abnormal returns using three-factor model (Fama & French, 1993), five-factor model (Fama & French, 2015), six-factor model (Carhart, 1997), and seven-factor model (Pástor & Stambaugh, 2003). A detailed description of all variables is presented in Appendix 1. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Three-factor	Five-factor	Six-factor	Seven-factor
	1	2	3	4
Panel A: Syndicate-backed Acquisitions				
ALPHA	0.000	0.007**	0.008***	0.010***
	(0.003)	(0.003)	(0.002)	(0.003s
MKF	1.601***	1.267***	1.131***	1.114***
	(0.087)	(0.080)	(0.060)	(0.062)
SMB	0.875***	0.529***	0.654***	0.657***
	(0.104)	(0.136)	(0.099)	(0.097)
HML	-0.985***	-0.473***	-0.733***	-0.750***
	(0.103)	(0.149)	(0.145)	(0.143)
RMW		-1.075***	-0.937***	-0.930***
		(0.246)	(0.170)	(0.170)
CMA		-0.266	-0.08	-0.066
		(0.337)	(0.253)	(0.252)
MOM			-0.427***	-0.432***
			(0.081)	(0.081)
LIQ				4.891*
				(2.775)
Obs.	340	340	340	340
R^2	0.82	0.86	0.90	0.90
Panel B: Individual-backed Acquisitions				
ALPHA	-0.005**	-0.001	0.001	0.002
	(0.003)	(0.003)	(0.002)	(0.003)
MKF	1.436***	1.210***	1.092***	1.086***
	(0.063)	(0.076)	(0.064)	(0.063)
SMB	0.934***	0.687***	0.784***	0.785***
	(0.110)	(0.117)	(0.090)	(0.090)
HML	-0.566***	-0.224*	-0.465***	-0.471***
	(0.098)	(0.122)	(0.112)	(0.113)
RMW		-0.772***	-0.645***	-0.642***
		(0.178)	(0.124)	(0.124)
CMA		-0.187	-0.043	-0.038
		(0.263)	(0.160)	(0.162)
MOM			-0.401***	-0.403***
			(0.078)	(0.079)
LIQ				2.069
				(3.522)
Obs.	332	332	332	332
R^2	0.79	0.82	0.86	0.86

Table 8: The Role of VC Syndication on Target's Board of Directors

This table reports the impact of VC syndication on the target's board of directors. BDSIZE is the natural logarithm of one plus the number of directors on the target's board. INDSIZE is the natural logarithm of one plus the number of independent directors. IND is the ratio between the number of independent directors and the total number of directors. IND_D is the ratio between the number of independent directors and the number of dependent directors. A detailed description of other variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	BDSIZE	INDSIZE	IND	IND_D
	1	2	3	4
SYNDICATION	0.326***	0.329***	0.070**	0.933***
	(0.054)	(0.051)	(0.033)	(0.307)
STOCK_RATIO	0.054	0.074	0.020	0.246
	(0.058)	(0.056)	(0.028)	(0.260)
ACQ_STAGE	-0.211***	-0.188***	-0.037	-0.084
	(0.067)	(0.063)	(0.039)	(0.359)
LATER_STAGE	0.128***	0.084*	-0.043**	-0.035
	(0.044)	(0.044)	(0.021)	(0.206)
DEAL_SIZE	0.035*	0.014	-0.028***	-0.100
	(0.020)	(0.019)	(0.010)	(0.109)
RELATEDNESS	0.000	-0.001	-0.003	0.044
	(0.041)	(0.039)	(0.020)	(0.203)
LEAD_VC_AGE	0.055*	0.057**	0.016	0.291*
	(0.029)	(0.029)	(0.015)	(0.169)
SIZE	0.002	0.011	0.018**	0.115
	(0.016)	(0.015)	(0.007)	(0.073)
LEVERAGE	-0.083	-0.041	0.077	0.931
	(0.121)	(0.118)	(0.052)	(0.582)
Q	-0.001	0.002	0.005***	0.001
	(0.005)	(0.005)	(0.002)	(0.038)
Intercept	-0.834***	-0.774***	-0.084	1.023
	(0.206)	(0.199)	(0.185)	(1.133)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	1,315	1,315	950	506
R^2	0.29	0.34	0.42	0.38

Table 9: The Effect of VC Syndication on the Acquirers' CEO Pay

This table reports regressions of CEO equity and variable pay on VC syndication. CEO_EQP3 (CEO_EQP5) is the sum of CEO's restricted stock grants and stock option grants scaled by CEO's total compensation measured three (five) years after the announcement date. CEO_VAR3 (CEO_VAR5) is measured as the difference between CEO's total compensation and salary scaled by CEO's total compensation measured three (five) years after the announcement date. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	CEO_EQP3	CEO_VAR3	CEO_EQP5	CEO_VAR5
	1	2	3	4
SYNDICATION	0.128**	0.049**	0.131**	0.072***
	(0.054)	(0.023)	(0.057)	(0.028)
STOCK_RATIO	0.111**	0.044	0.106**	0.041
	(0.051)	(0.027)	(0.053)	(0.029)
ACQ_STAGE	-0.051	-0.031	-0.094	-0.052*
	(0.069)	(0.025)	(0.078)	(0.028)
LATER_STAGE	-0.115**	-0.026	-0.100*	-0.018
	(0.054)	(0.020)	(0.053)	(0.021)
DEAL_SIZE	-0.005	0.001	0.005	0.003
	(0.025)	(0.010)	(0.026)	(0.011)
RELATEDNESS	0.064	0.030*	0.066	0.035*
	(0.042)	(0.018)	(0.042)	(0.019)
LEAD_VC_AGE	0.051*	0.013	0.059*	0.019
	(0.030)	(0.014)	(0.034)	(0.016)
SIZE	0.069***	0.050***	0.068***	0.055***
	(0.016)	(0.008)	(0.017)	(0.008)
LEVERAGE	-0.443**	-0.112*	-0.255	-0.086
	(0.180)	(0.062)	(0.171)	(0.069)
Q	-0.011*	-0.008*	-0.01	-0.007
	(0.006)	(0.005)	(0.006)	(0.005)
Intercept	0.057	0.581***	-0.083	0.520***
	(0.258)	(0.089)	(0.236)	(0.103)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	225	536	195	415
R^2	0.39	0.27	0.44	0.34

Table 10: The Effect of VC Syndication on the Choice of Payment

This table reports regressions of the method of payment on venture capital syndication. The main dependent, STOCK, is a dummy variable equals one if the deal is financed by stock 100%, and zero otherwise. STOCK_RATIO is the fraction of stock as the method of payment. A detailed description of other variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	STOCK	STOCK	STOCK_RATIO	STOCK_RATIO
	1	2	3	4
SYNDICATION	0.033**	0.048**	0.143***	0.106***
	(0.016)	(0.022)	(0.022)	(0.025)
ACQ_STAGE	-0.118***	-0.099***	-0.771***	-0.418***
	(0.017)	(0.025)	(0.019)	(0.022)
LATER_STAGE	-0.032*	-0.031	-0.139***	-0.149***
	(0.017)	(0.021)	(0.017)	(0.020)
DEAL_SIZE	0.013**	0.038***	0.062***	0.326***
	(0.005)	(0.010)	(0.005)	(0.006)
RELATEDNESS	-0.011	-0.022	0.072***	-0.103***
	(0.014)	(0.019)	(0.019)	(0.022)
LEAD_VC_AGE	-0.003	0.007	-0.080***	-0.01
	(0.011)	(0.014)	(0.008)	(0.009)
SIZE		-0.023***		-0.321***
		(0.008)		(0.004)
LEVERAGE		-0.003		-0.073
		(0.061)		(0.056)
Q		0.013***		0.048***
		(0.002)		(0.003)
Intercept	0.119	-0.221**	-7.518***	-6.567***
	(0.181)	(0.089)	(0.024)	(0.028)
Sigma-Intercept			1.330***	1.127***
			(0.011)	(0.009)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Obs.	2,614	1,568	2,614	1,568
R^2/Log likelihood	0.30	0.40	-1,936	-1,147

Table 11: Alternative Measure of VC Syndication

This table reports the reperformance of our baseline models using the alternative measure of VC syndication, LN(VC), defined as the natural logarithm of the number of VC firms invested in the target. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	PREMIUM	ADJ_PREMIUM	CAR(-2, 2)	CAR(-5, 5)	ΔROA	ΔADJ_ROA
	1	2	3	4	5	6
LN(VC)	7.917**	7.173**	-0.005	-0.012**	0.024***	0.028***
	(3.188)	(3.631)	(0.004)	(0.005)	(0.008)	(0.009)
STOCK_RATIO	26.084**	30.623**	-0.001	0.009	0.005	0.007
	(11.098)	(12.187)	(0.008)	(0.010)	(0.019)	(0.020)
ACQ_STAGE	-24.592***	-27.151***	0.006	0.002	0.024*	0.028*
	(7.319)	(8.810)	(0.008)	(0.009)	(0.014)	(0.016)
LATER_STAGE	-18.384**	-20.515**	0.005	0.002	-0.001	0.004
	(7.611)	(8.562)	(0.006)	(0.008)	(0.014)	(0.017)
DEAL_SIZE	11.977***	12.402***	0.006**	0.007*	-0.002	0.003
	(3.883)	(4.653)	(0.003)	(0.004)	(0.007)	(0.008)
RELATEDNESS	11.245*	12.387*	0.003	0.004	0.013	0.005
	(5.891)	(6.337)	(0.006)	(0.007)	(0.012)	(0.013)
LEAD_VC_AGE	-2.645	-2.011	-0.004	-0.006	0.009	0.006
	(5.125)	(5.293)	(0.004)	(0.005)	(0.009)	(0.010)
SIZE	-1.414	0.172	-0.009***	-0.009***	-0.004	-0.029***
	(3.566)	(4.206)	(0.002)	(0.003)	(0.006)	(0.007)
LEVERAGE	4.632	1.283	0.028	0.041**	0.164***	0.181***
	(24.486)	(31.746)	(0.017)	(0.019)	(0.041)	(0.046)
Q	6.293***	6.454***	0.001	0.001	-0.003	-0.002
	(1.760)	(1.841)	(0.001)	(0.001)	(0.002)	(0.003)
Intercept	-78.092***	-96.332***	0.012	0.083**	-0.079	-0.011
	(25.553)	(33.621)	(0.036)	(0.040)	(0.052)	(0.062)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	523	421	1,481	1,481	1,216	1,168
R^2	0.29	0.29	0.09	0.09	0.18	0.15

Table 12: VC Characteristics

This table provides further robust tests for the inclusion of VC characteristics. Panel A and B represents the results with VC reputation and VC network position, respectively. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: VC Reputation									
	PREMIUM	CAR(-2, 2)	ΔROA	PREMIUM	CAR(-2, 2)	ΔROA	PREMIUM	CAR(-2, 2)	ΔROA
	1	2	3	4	5	6	7	8	9
SYNDICATION	18.621**	-0.013*	0.036**	18.002**	-0.013*	0.037**	17.728**	-0.013*	0.037**
	(8.248)	(0.007)	(0.015)	(8.172)	(0.007)	(0.016)	(8.271)	(0.007)	(0.016)
REP_NAH	-0.819	0.002	0.005						
	(1.387)	(0.002)	(0.005)						
REP_KRIS				1.288	0.000	0.002			
				(2.039)	(0.002)	(0.004)			
LEAD_VC_CAP							-3.272	0.001	0.008**
							(2.461)	(0.002)	(0.004)
Obs.	404	1,103	906	404	1,103	906	404	1,103	906
R^2	0.30	0.11	0.17	0.30	0.11	0.17	0.30	0.11	0.17
Panel B: VC Network Position									
SYNDICATION	14.021**	-0.011*	0.040***	14.090**	-0.012*	0.039***	14.999**	-0.011*	0.039***
	(6.346)	(0.006)	(0.014)	(6.417)	(0.006)	(0.015)	(6.349)	(0.006)	(0.014)
DEGREE	135.701	-0.073	-0.127						
	(108.732)	(0.081)	(0.188)						
BETWEENESS				320.423	-0.004	-0.015			
				(210.956)	(0.107)	(0.214)			
CLOSENESS							13.047	-0.018	-0.034
							(20.345)	(0.015)	(0.034)
Obs.	523	1,481	1,216	523	1,481	1,216	523	1,481	1,216
R^2	0.29	0.09	0.18	0.29	0.09	0.18	0.29	0.09	0.18
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 13: Additional Robustness Tests

This table shows additional robustness tests. In Panel A, B and C, we show the results for our robustness tests using Heckman two-step selection model, propensity score matching and the subsample of non-VC-backed acquirers, respectively. A detailed description of all variables is presented in Appendix 1. Heteroscedasticity-robust standard errors are reported in parentheses. Symbols *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	PREMIUM	CAR(-2, 2)	ΔROA
	1	2	3
Panel A: Heckman Selection Model			
SYNDICATION	15.615**	-0.015**	0.035**
	(6.313)	(0.007)	(0.015)
IMR	-57.744**	-0.035	-0.014
	(28.058)	(0.026)	(0.063)
Obs.	488	1,405	1,161
R^2	0.27	0.07	0.18
Panel B: Propensity Score Matching			
SYNDICATION	11.652**	-0.014***	0.032***
	(5.030)	(0.004)	(0.009)
Obs.	778	2,268	1,858
R^2	0.37	0.14	0.22
Panel C: Non-VC-backed Acquirers			
SYNDICATION	14.496**	-0.013*	0.049***
	(7.359)	(0.007)	(0.016)
Obs.	425	1,203	1,006
R^2	0.29	0.10	0.20
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes