Venture Capital Investments, Merger Activity, and Competition Laws around the World*

Gordon M. Phillips† Alexei Zhdanov‡

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Abstract

We examine the relation between venture capital (VC) investments, M&A activity, and merger competition laws in 45 countries around the world. We find evidence of a strong positive association between VC investments and lagged M&A activity, consistent with an active M&A market providing viable exit opportunities for VC companies and therefore incentives for venture capitalists to invest. We also explore the effects of country-level merger competition laws and pro-takeover legislation passed internationally on VC activity. We find significant reductions in VC activity in countries with stricter competition laws and find that VC activity intensifies after enactment of country-level takeover-friendly legislation.

Keywords: Venture Capital, Mergers and Acquisitions, Merger Waves, Takeover Laws.

JEL Classification Numbers: G15, G24, G33

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†Dartmouth College, Tuck School of Business and NBER,
e-mail: Gordon.M.Phillips@Tuck.Dartmouth.edu.

‡Penn State University, Smeal College of Business. E-mail: auz15@psu.edu.

1. Introduction

Venture capital funding is important for many small innovative firms, allowing them to survive and prosper. In this paper, we study the interaction of the merger market with venture capital in a sample of 45 countries around the world. We thus extend Megginson (2004), who discusses the globalization of the venture capital markets, as we examine the interaction of the M&A market with venture capital around the world. The impact of mergers on innovation overall is a large topic of debate. Many government agencies and academic scholars worry that the M&A market may hinder the incentives for innovation.[1] In particular, the Department of Justice and the Federal Trade Commission have challenged many mergers based on the concern that mergers destroy the incentives to innovate. In a recent paper, Gilbert and Green (2015) show that between 2004 and 2014, 33.2% of mergers were challenged due to alleged harm to innovation. Furthermore, starting in 2010, the DOJ and FTC formally and explicitly addressed innovation in their merger guidelines.[2] Waller and Sag (2015) also emphasize the importance of considering post-merger incentives for future innovation, but argue that a merger can decrease incentives to innovate by removing the threat of outside disruption.

We examine the relation between venture capital (VC) investments, M&A activity, and merger competition laws in 45 countries around the world. We examine the proposition that active M&A markets and laws that reduce the costs of undertaking mergers may increase incentives for innovation investments by making it easier for venture capitalists to monetize their investment by selling their portfolio companies to potential acquirers. We examine VC investments following M&A activity and also VC investments subsequent to passage of pro-takeover legislation and in countries with stricter anti-takeover legislation. While mergers of firms that are horizontally competing may indeed reduce innovation, general policies where a large firm is prevented from buying a smaller firm may have deleterious effects on the *ex ante* incentives to conduct R&D by the smaller firm, as has been emphasized by Phillips and Zhdanov (2013).

[1] See Schulz (2007) for a literature review on mergers and innovation.

[2] These challenges existed in previous periods as well. Gilbert (2007) gives summary statistics that show that between 2000-2003, 38% of the mergers challenged in the U.S. were challenged due to alleged harm to innovation.

This argument is further supported by Bena and Li (2014), who show that large companies with low R&D expenditures are more likely to be acquirers, and argue that synergies obtained from combining innovation capabilities are important drivers of acquisitions.

We begin our analysis by examining how VC investments in 45 countries during the period of 1985 to 2018 respond to changes in M&A activity, while controlling for other potential determinants of VC activity. Our results confirm that there exists a strong positive association between activity in M&A markets and subsequent investments by VC firms. Thus, we follow Robinson and Sensoy (2016) who examine the cyclicality of cash flows and performance in private equity and VC markets, and Balck and Gilson (1998) who examine the link between stock markets and VC markets. We then look deeper into the dynamics of VC and M&A activity and perform additional tests to understand the relation between VC and M&A activity. To begin, we follow Harford (2005) and construct merger wave indicators for both VC and M&A markets. We then examine the joint timing of VC and M&A waves and find that a M&A wave is a strong predictor of a future VC wave within an industry in a country.

While there is a strong correlation between VC activity and lagged M&A activity, it is important to recognize that both VC investments and M&A activity are likely to be driven by common demand shocks and technological changes. We wish to examine if part of venture activity also arises from the venture capitalists investing in markets where they anticipate future positive exits through M&A. We thus examine several different proxies for anticipated exit and changes to the ability to exit that may be at least partially separate from demand and technology changes.

First, we derive proxies for anticipated exits by using past three-year M&A activity and also instrumented M&A activity from acquirers outside of the country. We instrument cross-border M&A activity with local currency depreciations and local treasury rates. Following Erel, Liao, and Weisbach (2012), we argue that a weaker currency makes local companies potentially cheaper acquisition targets for foreign investors, and hence is likely to have a positive effect on cross-border M&A activity, even when excluding industries that produce

tradeable goods. On the other hand, domestic VC investments may not be affected by the strength of local currency if a currency depreciation is a sign of weakened economic activity. We therefore use local currency depreciation as an instrument for cross-border M&A activity. We also use changes in local borrowing rates as an additional instrument for M&A. Harford (2005) has shown that borrowing rates impact M&A activity, however these should have a less direct effect on domestic VC activity as venture capital investments are mainly equity financed. Our results show that instrumented cross-border M&A intensity is a strong predictor of future domestic VC deals consistent with an active M&A market translating into more potential exit opportunities for VC investors.

Second, we use a competition law index that has been developed recently by Bradford and Chilton (2018) for over 100 countries.[3] Bradford and Chilton use a team of 70 law students and legal scholars to develop a competition law index (CLI) that measures the severity of merger competition laws across countries. The index measures the stringency of competition regulation around the world from 1889 to 2010. The CLI quantifies the key elements of the laws and regulation that each country has to regulate competition in each year. The index has five elements that they combine into an overall index that can be used to measure the intensity of competition regulation that firms face in each country.

We thus regress VC activity on these country-level competition laws. We find that VC activity is sharply and significantly lower in countries that have higher anti-trust competition laws. This result is robust to controls for industry attractiveness as measured by country-industry market-to-book ratios. We also control for time-varying economic conditions that have a potential effect on VC investments by year fixed effects. Our evidence shows decreases in VC activity when countries have stricter anti-trust laws. This evidence provides support for our hypothesis that M&A and VC markets are connected, and stricter M&A competition laws spill over to VC markets by reducing viable exit opportunities for VC firms. We believe that this evidence is our strongest evidence in support of exit being important for venture capital investors.

[3]The competition law index is available for download at www.comparativecompetitionlaw.org.

Third, we follow Lel and Miller (2015) in the examination of the effects of pro-takeover international legislation on firm policies.[4] They focus on managerial discipline and find that following the enactment of country pro-takeover laws, poorly performing firms experience more frequent takeovers and have an increased propensity to replace underperforming CEOs.[5] They also verify that country takeover-friendly laws indeed spur more M&A activity in the country. Our focus is the effect of pro-takeover laws on VC markets. Country-level pro-takeover legislation was passed in various countries in our sample in different years with the intention to make M&A markets more attractive. The laws were not passed with the intent of impacting venture capital activity. These law changes thus serve as a natural ground to study the effect of positive shocks to M&A markets on subsequent activity by VC firms.

Our analysis compares VC investments in countries that are subject to change in takeover legislation with VC activity in countries that have no such change. Using a difference-in-difference approach at the country-industry level, we investigate the impact of takeover-friendly legislation on subsequent VC investments. Time-varying economic conditions that have a potential effect on VC investments are controlled for by year fixed effects. Our evidence shows increases in VC activity after pro-takeover laws. VC activity grows by about 30-35% more from pre-law periods to post-law periods in countries that enact pro-takeover laws versus those that do not. This evidence provides support for our hypothesis that M&A and VC markets are connected and improvements in M&A legislation spill over to VC markets by creating more viable exit opportunities for VC firms. In robustness, we take advantage of changes to M&A anti-takeover laws at the state level in the United States. U.S. based state-level antitakeover business combination laws provide an opportunity to study the effect

[4]The passage of pro-takeover and antitakeover legislation can also impact the business environment, which then can impact venture capital through the takeover market. For example, after the passage of pro-takeover legislations, it is possible that the market for corporate control becomes more active, leading to less agency problems, lower managerial entrenchment and better corporate governance. All these changes may spur more entrepreneurial activity and attract more VC funding to a country as a result. Thus the laws impacting M&A directly can have an impact through entrepreneurs and subsequent VC funding.

[5]See also Bhattacharya and Daouk (2002) on the effect of insider trading laws and their enforcement around the world, Iliev et al (2015) on the effect of international laws (including M&A laws) on shareholder voting and corporate governance, and Lins, Servaes, and Tufano (2010) for an international study of the use of lines of credit versus cash.

of negative shocks to the feasibility of takeovers.

Overall, our results emphasize the importance of M&A markets for the investment activities of VC firms. As many start-ups rely on VC funding and venture capitalists rely more on exits through acquisitions versus IPOs, our results suggest that active M&A markets have important ex ante incentive effects for generating entrepreneurship and growth. We focus on the ex ante incentive effects, as actual exits via mergers and trade sales represent almost 6x the incidence of IPOs and we show M&A activity is highly persistent.[6] Our results are consistent with an active M&A market providing incentives for venture capitalists to engage in more deals.

Our paper is related to both the merger literature and the VC literature. To the best of our knowledge, this is the first paper that studies the joint dynamics of both M&A and VC transactions. We go beyond just U.S.-based evidence to provide international evidence on time varying VC and M&A markets. Gompers and Lerner (2004) provide extensive evidence of time-variability of VC investments as well as fund flows to VC firms. Gompers, Kovner, Lerner and Scharfstein (2008) examine the relation between changes in public market signals and VC activity and document wave-like patterns of VC activity in the U.S.. These papers focus solely on the U.S. and do not examine the link between VC activity and acquisition activity. Ewens, Nanda, and Rhodes-Kropf (2018) document the evolution of venture capital practices of funding different types of innovation. Armour and Cumming (2006) and Jeng and Wells (2000) compare economic and legal determinants of venture capital investments in different countries. Lerner and Schoar (2005) study the effect of legal enforcement on private equity investments. Lerner, Schoar, Sokolinksi, and Wilson (2016) study the activity of angel investors in 21 countries. Our analysis extends the literature by moving beyond U.S. data to examine a sample of 45 different countries around the world. Furthermore, we take advantage of the natural shocks to M&A markets, both positive (country takeover laws) and negative (U.S. state business combination laws), and study what happens to subsequent VC activity.

[6]Using Prequin data which has data on exits, we find that mergers and trade sales represent 76.61% of exits versus 13.74% via IPOs. The balance of actual exits were through sales to other GPs or management, private placements and recapitalizations.

The remainder of the paper is organized as follows. Section 2 describes our data sources and the main variables that we use in our analysis. In Section 3, we develop our main hypotheses. Section 4 examines the link between M&A and VC markets in a regression framework, and also by using an instrumental variable approach, instrumenting cross-border M&A activity. We also analyze the joint dynamics of VC and M&A waves. In Section 5, we study the effects of country competition laws and takeover law initiations on subsequent investments by VC firms. We conduct additional robustness checks in Section 6. Section 7 concludes.

2. Data and Variables

We combine data from four major sources. We obtain data on venture capital transactions from Thomson Reuters Venture Expert. VC data is very limited before the mid 1980s, and we therefore start our sample in 1985. To ensure that we have a reasonable number of firms in a country for our cross-sectional country-level tests, we drop countries with less than 100 total VC deals recorded in Venture Expert. We follow Gompers, Kovner, Lerner and Scharfstein (2008) and define VC deals at the VC firm - portfolio company level.

We restrict our sample to Venture Capital Deals, defined by Venture Expert as "Venture capital investments that include startup/seed, early, expansion, and later stage deals" made by venture focused firms. M&A transaction data come from the Security Data Corporation's (SDC) Mergers and Corporate Transaction database and includes all deals (domestic and cross-border) announced and completed between 1985 and 2018. Similarly to Erel, Liao, and Weisbach (2012) we exclude LBOs, spinoffs, re-capitalizations, self-tender offers, exchange offers, repurchases, partial equity stakes, acquisitions of remaining interest, privatizations, as well as deals in which the target or the acquirer is a government agency.

In our main tests we consider investments in a single portfolio company on the same date as a single VC deal, even if there are multiple VC firms involved. Our results hold if we treat these investments by multiple VC firms as multiple deals (see Table A.4 in the

appendix). Because we use IPO activity as a control variable in some of our tests, as IPOs are an additional potential exit route for VC investments, we obtain IPO data also from Security Data Corporation. Table 1 presents the distribution of M&A and VC deals by country.

Insert Table 1 Here

Following Gompers et al. (2008), we also consider unique VC deals by excluding any follow-up financing rounds so every venture capital firm - portfolio company pair appears only once in the sample of unique deals. Note that based on this definition the number of unique deals can be both higher and lower than the number of deals (depending on how many VC firms participate in a single deal and also on the number of financing rounds.) As follows from Table 1, while the majority of VC deals involves financing of U.S.-based companies (about 60% in our sample of unique deals), there is still substantial VC activity outside of the U.S., in particular in Canada, developed European countries (UK, France, Germany) as well as some emerging Asian markets (China, South Korea). Our resulting dataset contains 216,753 venture capital deals, 260,206 unique VC deals (one deal per venture capital firm - portfolio company pair) and 455,703 takeover transactions. On the M&A side, the U.S. again has the largest number of deals in our dataset (in excess of 215,000 deals or 47.3% of all deals), followed by the UK (12.8%), Canada (6.7%), France (4.9%), and Germany (4.4%).

We collect accounting data for international (U.S.) companies from Worldscope (Compustat) and return data from Datastream (CRSP). While our main variables of interest are related to the dynamics of VC investments, we use these accounting data to construct various control variables that are known to potentially affect M&A and VC activities. We also use the number of public firms in the Worldscope database as a scaling factor in some measures of M&A and VC intensities that we use.

Our joint public firm dataset spans 66,213 firms across 45 countries. Of these firms, 24,466 firms are in the U.S., followed by 5,100 firms in Japan and 4,333 firms in the UK. While COMPUSTAT offers comprehensive coverage of public firms throughout our sample,

consistent Worldscope coverage for developed countries starts in 1990s and does not start until the early 2000s for many emerging countries (e.g. China).

Figure 1 plots the aggregate numbers of VC and M&A deals in the U.S. and in the rest of the world, by year. In addition to total VC deals we also present unique VC deals, constructed as described above.

Insert Figure 1 Here

As follows from Figure 1, VC activity (as measured by the numbers of both total and unique deals) exhibits similar time patterns in the U.S. and internationally, with a clear peak around the 2000 dotcom bubble and subsequent flattening out with an additional peak in the pre-crisis period and a decline corresponding to the 2008 financial crisis.

We use SIC 2 digit level codes to group firms into industries, resulting in 77 industries. We use this level of aggregation as many countries do not have finer levels of disaggregation. There is still, however, substantial variation in the number of deals within an industry across different countries. To further reduce noise in our estimation, we exclude country-industry-years with less than three VC deals in our dataset (in appendix Table A.6, we examine all industry-year observations including those industry-year observations with no deals). As expected, some industries have higher populations of entrepreneurial firms and attract more attention from VC firms than others, so the resulting distribution of deals by industries is skewed. The industries with the highest numbers of deals in our sample are "Business Services," "Electronic and Other Electric Equipment," and "Chemical & Allied Products" (including pharmaceutical products). The industries with the least VC deals are public administration and utilities industries as well as "Tobacco Products" and "Museums, Botanical, Zoological Gardens." There is also variation in VC activity within industries over time. For example, the number of unique deals in the U.S. "Business Services" industry (sic code 73) grows from 1,123 in 1996 to 3,599 in 2000 (the year when the dot-com bubble burst) and then goes down to 1,477 in 2003. We formally analyze the presence of waves in VC and M&A markets and

their joint dynamics in section 4.2 below.

Given transaction values are very often missing in Venture Expert, we therefore follow Gompers (2008) and use the number of deals to measure M&A and VC intensities. In particular, we use two alternative measures of VC and M&A activity. Our first measure captures the level of those activities and is defined as the total number of deals in a country (or country-industry) scaled by the total number of public firms in that country (country-industry):

$$DEALS\_level_{i.j,t} = N(\text{Deals}_{i,j,t})/N(\text{Public Firms}_{i,j,t}). \tag{1}$$

In equation (1) $\text{Deals}_{i,j,t}$ is the number of VC (M&A) deals in country i, industry j in year t while $\text{Public Firms}_{i,j,t}$ is the number of public firms available in Worldscope (for international data) or CRSP (for U.S. data) in the same country-industry-year. In addition to the measures expressed in levels, we also use the growth in numbers of VC and M&A deals defined as the percentage change in the number of deals from one year to the next in the same country-industry:

$$DEALS\_change_{i,j,t} = \frac{N(\text{Deals}_{i,j,t})}{N(\text{Deals}_{i,j,t-1})} - 1. \tag{2}$$

In our empirical analysis below we apply these measures to total VC deals, unique VC deals, and M&A transactions.

3. Interaction of M&A and VC Activity

In this section we describe the main hypotheses we test in this paper. Our main objective in this paper is to shed light on the interaction between VC and M&A markets. We argue that exit through an acquisition provides a viable means for VC firms to monetize their investments in portfolio companies. We focus on the ex ante incentive effects. We use actual exits over the past three years as a forecast of expected exits in the first analysis we undertake, given actual

exits for venture capital investments (not including firms that failed or which no exit data can be found) via mergers and trade sales represent almost six times the incidence of IPOs. Using Prequin data which has data on exits, we find that mergers and trade sales represent 76.61% of exits versus 13.74% via IPOs. The balance of actual exits was through sales to other GPs or management, private placements and recapitalizations.

We argue that venture capitalists are more likely to initiate new investments when the M&A market heats up and there are more M&A deals. Active M&A markets transpire into more viable exit opportunities. The challenge is that we recognize that for demand and technological reasons, these two markets may be very related and thus VC investments may respond to these demand and technological changes. We are attempting to ascertain whether, in addition to demand and technological shocks, VC investors also look at the potential for exit from the M&A market and in particular from related strategic buyers. The first hypothesis we examine does not attempt to discern why these markets may be related. The second and third hypotheses and associated tests attempt to identify whether the M&A exit channel has an additional incentive effect as a potential motivation for VC investors.

HYPOTHESIS 1: *There is a positive association between VC investments and lagged M&A activity.*

While it is useful to establish a relation between M&A and VC markets, a potential concern is that these two types of activity are driven by common economic shocks - both demand and technological. Thus, rather than VC deals responding to improvements in M&A markets, both types of activity might be responding to changes in the underlying economic environment. Our goal is to examine if at least part of venture activity arises from the venture capitalists investing where they anticipate future positive exits through M&A. We are not trying to get rid of all endogeneity concerns but rather are attempting to test if changes to anticipated exits in the M&A market impact venture investments.

We address this issue by using lags in our regression specifications and including time and country fixed effects in our regressions. We also show in our tests that M&A activity at the

country-industry level is highly persistent even over a five-year window. Thus for venture investors to use past activity to, at least partially, build a forecast of future exit likelihood is very plausible.

We also perform three additional types of tests. First, we identify waves in both M&A and VC markets as periods of abnormally high activity in those markets and study the relation between those two types of waves. The details on this procedure are presented in section 4.2 below. Second, we use an instrumental variable approach and instrument cross-border M&A activity with changes in local currency depreciation and local borrowing rates. In the second stage, we examine the relation between domestic VC activity and instrumented cross-border M&A activity.

The justification for these instruments follows Erel, Liao, and Weisbach (2012). We argue that a weaker currency makes local companies potentially cheaper acquisition targets for foreign investors and hence is likely to have a positive effect on cross-border M&A activity. On the other hand, domestic VC investments may not be affected by the strength of local currency if a currency depreciation is a sign of weakened economic activity. We therefore use local currency depreciation as an instrument for cross-border M&A activity. In further tests, we also exclude industries that produce more tradeable goods. We also use changes in local borrowing rates as an additional instrument for M&A. Harford (2005) has shown that borrowing rates impact M&A activity, however these should have a less direct effect on domestic VC activity as venture capital investments are mainly equity financed.

Third, to further isolate the M&A exit channel, we also exploit legislative changes impacting M&A markets. We take advantage of both positive and negative takeover legislation. We focus on competition law in each country using two different ways of measuring the intensity of competition law in the country. We use an index that has been developed recently by Bradford and Chilton (2018). Bradford and Chilton use a team of 70 law students and legal scholars to develop a competition law index (CLI) of the severity of merger competition laws that is comparable across countries. The index measures the stringency of competition

regulation around the world for over a century from 1889 to 2010. The CLI is constructed to quantify the key elements of the competition-related laws and regulations that each country has in each year. The index has five elements that are further combined into an overall index that can be used to measure the intensity of competition regulation in each country in each year. We focus on the most relevant component of the CLI index for the purpose of our study, the "merger control" subindex. This subindex incorporates the effects of the mandatory or voluntary merger notification systems, the degree of powers that the law grants to the authority in reviewing the mergers, as well as the presence of various defenses in the competition statute.

We also use the staggered enactment of country-level pro-takeover laws. Such laws are intended to simplify the takeover process and make country legislation more takeover friendly and therefore induce more M&A activity in the future. As Lel and Miller (2015) argue, legal changes associated with country M&A laws are significant, because they are passed to foster takeover activity by reducing barriers to M&A transactions and the legal framework applicable to such transactions. However, there is no obvious direct relation between enactment of takeover laws and VC activity. Still, we expect that such laws would have an indirect positive effect on VC investments, as venture capitalists rationally expect the takeover market to heat up following the passage of takeover laws and provide them with more exit opportunities. This conjecture is summarized in Hypothesis 2.

HYPOTHESIS 2: *VC activity is impacted negatively by stricter competition laws and positively following the passage of country pro-takeover laws.*

4. VC investments and M&A activity

4.1. Regressions of VC activity

Before examining the merger competition laws, we first look at the joint dynamics of M&A and VC markets by computing contemporaneous and lagged correlations between measures

of M&A and VC activity, as well as IPO activity. Because IPOs represent an alternative exit channel for VC investors, we also include measures of IPO activity in our analysis. We use the measures of M&A, VC, and IPO intensities expressed in both levels and changes, as specified by equations (1) and (2). Following Gompers et al (2008), we construct a measure of unique VC deals (by excluding any follow-up financing rounds from the same VC firm in the same portfolio company). Table 2 reports correlations at the country-industry level. Panel A presents results for percentage changes in the numbers of deals, while Panel B reports correlations between VC, M&A, and IPO transactions scaled by the number of public firms in the country-industry.

Insert Table 2 Here

The results in Table 2 show that there is a strong positive and statistically significant correlation between VC activity and both contemporaneous and lagged M&A activity. Correlations are positive and significant for measures expressed in levels as well as in changes. For example, contemporaneous (lagged) correlations between percentage growth in VC and M&A deals are 0.099 and 0.050, while similar correlations between the numbers of deals are 0.788 and 0.298, respectively. Negative correlations between contemporaneous and lagged changes in the number of deals (-0.187 for VC deals and -0.145 for M&A transactions) are mechanically driven by scaling our growth measures by the lagged number of deals. Thus, preliminary correlation-based evidence strongly suggests that M&A and VC markets are not independent and there is a strong association between the two markets. Note also, that correlations between current VC and lagged M&A activities are higher than those between current M&A and lagged VC activities, suggesting that in general M&A markets tend to lead. Furthermore, coefficients on lagged M&A measures are higher than those on lagged IPO measures (in addition, the correlation between VC deal growth and lagged IPO growth is insignificant).

Before examining the relation between VC investments and lagged M&A activity, we first run some preliminary regressions to explore how persistent M&A activity is at the country-

industry level over time. The idea is to examine whether M&A activity at the country-industry level is highly persistent over multiple year horizons - including over a five year window. We find that M&A activity is highly persistent. Thus, for venture investors to use past activity to, at least partially, build a forecast of future exit is plausible. We thus regress current M&A activity on lagged M&A activity over one-year to five-year windows. We include country and year fixed effects in each specification.

Insert Table 3 Here

The results in Table 3 show that there is a strong positive and statistically significant correlation between current M&A activity and lagged M&A activity for all lagged years, including the five year lag. Coefficients range from .51 for a one-year lag to .29 for a five-year lag. Thus, we conclude that using lagged M&A activity to help forecast future exit opportunities is highly plausible.

We now turn our analysis to multivariate tests of the determinants of VC activity. In particular, we adopt the following empirical specification:

$$VC_{i,j,t} = \alpha + \beta MA_{i,j,t-1} + \delta X_{i,j,t-1} + v_t + \varepsilon_{i,j,t}, \tag{3}$$

where $VC_{i,j,t}$ is a measure of VC activity in country i and industry j in year t, $MA_{i,j,t-1}$ is a measure of M&A activity in country i and industry j in year $t-1$, and $X_{i,j,t-1}$ is a vector of control variables. Year fixed effects are included to absorb the potential impact of global time-varying economic conditions. To control for serial correlation, we cluster the standard errors at the country-industry level.

Following Gompers et al (2008), we use country-industry lagged capital expenditures (CAPEX) scaled by total assets (from all public firms with data available in Worldscope /Compustat) and lagged industry median market-to-book ratio as control variables. As they

argue, both public market valuations as well as perceived investment opportunities as measured by the market-to-book ratio might trigger response from venture capitalists. Because IPO markets provide an alternative exit channel for VC investors, we also include lagged measures of IPO activity as additional controls.

Table 4 displays results from these VC regressions. In Panel A the dependent variable is based on the level of VC activity as defined in (1). In Panel B we use the growth-based measure of VC activity defined in (2) as the dependent variable. Our main independent variable of interest, lagged M&A activity, is constructed accordingly in terms of changes in Panel B and in terms of levels in Panel A. In both panels, specifications (1) to (4) are based on all VC deals, while specifications (5) to (8) include unique VC deals only. Because there are potentially large variations in lagged M&A growth, we average M&A growth over the last three years and use it as a dependent variable in Panel C.

Insert Table 4 Here

Results in Table 4 clearly indicate a positive association between various measures of VC intensity and lagged M&A activity, consistent with our main hypothesis that an active takeover market provides more viable exit opportunities for venture capitalists and induces more investment by VC firms. Coefficients on lagged M&A activity are positive and highly statistically significant in all but the last specification in column (8). Columns (4) and (8) have fewer observations as these specifications include the change in IPOs and some countries have had no IPOs and we thus exclude these countries. Coefficients in regressions that include all deals have similar magnitude as those in regressions with only unique deals, suggesting that improvements in the M&A market not only result in more funding of new projects by VC firms, but also induce more follow-up investments by VC firms in their existing portfolio companies. Consistent with Gompers et al (2008), who interpret market-to-book ratio as a public signal about an industry's investment opportunities, we find a positive association between lagged industry market-to-book ratios and VC activity. Coefficients on industry market-to-book are

positive and significant for level-based measures of VC intensity in Panel B and also significant in some specifications in Panel C that uses three-year M&A growth as a regressor. Note that unlike lagged M&A intensity, lagged IPO intensity, while positive, is statistically insignificant in all specifications.

In the appendix (Table A.1) we replicate results in Table 4 while excluding U.S. deals. Table A.1 shows that the results in Table 4 are not driven solely by U.S. firms, but similar relations between VC and M&A intensities are found in foreign countries as well. While coefficients on lagged growth in M&A deals in Panel A slightly decline in magnitude and lose significance in some specifications when excluding U.S. data, the corresponding coefficients for level-based measures are highly significant in regressions on international data.

We also conduct additional robustness tests regarding the relation between M&A and VC investments. We show in the appendix in Table A.4 that our results still hold if we treat investments by multiple VC firms as multiple deals. In Table A.4, we also consider whether our results are driven by M&A exits providing capital to new VC funds, and exclude first time funds as these VC firms may potentially be funded by M&A exits. The positive relation between M&A deals and VC investments still remains.

Overall, the results in Table 4 provide further evidence that M&A and VC markets are interrelated and there is a positive association between VC activity and lagged M&A intensity, consistent with Hypothesis 1.

4.2. Analysis of VC and M&A waves

There is a large literature that argues that many corporate activities are spread unevenly over time in wave-like patterns.[7] There is also research that focuses on the relation between various corporate event waves. In particular, Dittmar and Dittmar (2008) study repurchases, equity issuance, and mergers and their response to GDP growth. Rau and Stouraitis (2011)

[7]See, for example, Gompers et al (2008) for cyclicality of VC investments and Harford (2005) for analysis of merger waves in the U.S., Pastor and Veronesi (2005) for analysis of IPO waves, Harford (2005) and Maksimovic, Phillips and Yang (2013) for private and public merger waves.

examine the timing patterns of IPOs, SEOs, cash and stock financed acquisitions, as well as stock repurchases. Lyandres, Zhdanov, and Hsieh (2013) present a theory and evidence of the joint dynamics of IPO and M&A activities. Celikyurt, Sevilir, and Shivdasani (2010) and Hovakimian and Hutton (2010) examine various motives for potential relation between M&A and IPO waves.

In this section we follow this literature and complement our results in section 4.1 by identifying waves in both VC and M&A markets and studying their joint patterns. For the sake of completeness, we construct IPO waves as well. In doing so we follow Harford (2005) and construct wave indicators for VC, M&A, and IPO intensities in the following way. We first take the total number of deals in a country-industry and simulate 1,000 deal distributions by randomly assigning deals over time. We then calculate the highest two-year transaction concentration from each of the 1,000 draws and compare it to the actual concentration in the data. If the actual number of transactions in a two year period exceeds the 95th percentile from these simulated distributions, that period is identified as a wave. To make this analysis meaningful, we remove country-industries with less than 50 total deals and also remove those with time span between the first and last deal of less than 10 years in our data.

This procedure results in a sample of 8,611 country-industry years of VC activity, of which 1,178 years are identified as belonging to a wave, and 7,433 being outside of a wave. Activity in M&A markets implies 2,468 country-industry years identified as wave years out of 14,959 country-industry years in total. The wave-like pattern of VC activities appears to materialize in most countries in our sample, however with some variation. Among countries with at least 200 industry-years in our dataset, the ones with the highest percentage of waves are Sweden, South Korea, China, and the United States (with overall percentage of wave years between 19.2% and 20.5%) while the countries with the most stable VC market as measured by the presence of waves are Italy, Netherlands, and Japan (percentage of wave years between 9.2% and 10.9%). There is also considerable variation in the formation of waves in different industries (aggregated across countries). Business Services, Oil and Gas Extraction, and Electronic Equipment Industries have the most variability of VC activity as measured by

the percentage of wave years, while Hotels, Furniture and Fixtures, and Home Furniture, Furnishings, and Equipment Stores have the least variability (among industries with at least 100 country-years).

To examine the relation between M&A and VC waves, we use a logistic regression specification akin to that in (3) whereby the dependent variable is a dummy for a VC wave in a country-industry in a given year, and the main explanatory variable is a lagged M&A wave dummy in the same country-industry. As before, we include year fixed effects and cluster standard errors by country-industry. We also include an industry's lagged median market-to-book ratio, lagged median CAPEX scaled by total assets, and lagged IPO wave dummy as control variables. Because we identify VC waves as periods of abnormally high two-year VC activity, there is a positive serial correlation in VC wave dummies, and we therefore also include the lagged VC wave dummy as an additional control variable.

Insert Table 5 Here

The results from these tests are presented in Table 5. The table shows that there is a strong positive association between contemporaneous and lagged VC waves. These results persist when including the lagged IPO wave variable. More importantly, coefficients on the lagged M&A wave dummy are also positive and highly significantly related to the probability of a VC wave. Unconditionally, an M&A wave in the previous year implies a probability of about 45% of having a VC wave in the next year. Conditional on observing a VC wave in the previous year, the existence of an M&A wave in that year increases the probability of having a VC wave in the current year as well by about 19%. Note that the predictive ability of lagged IPO waves is much weaker. The coefficients on the lagged IPO wave dummy are lower and statistically only marginally insignificant. In the appendix, we replicate this analysis while excluding U.S. deals and find very similar results (see Table A.3).

This evidence suggests that while there is clustering across time in both VC and M&A markets, VC and M&A waves (as well as IPO waves) tend to occur around the same time.

Past M&A waves are a much stronger predictor of future VC waves than are IPO waves. This result yields additional support for Hypothesis 1 and further highlights the connectedness of M&A and VC markets.

4.3. Instrumenting cross-border M&A activity

While results in sections 4.1 and 4.2 strongly suggest that more active M&A markets lead to intensified VC activity in the future, a potential concern is that both types of activity might be simultaneously driven by an exogenous economic shock and that venture investors do not incorporate anticipated M&A exits when making investments. We partially alleviated this concern by including time fixed effects in our regressions and also lagging M&A activity.

In this section, we derive a proxy for anticipated exits through M&A by using past instrumented cross-border M&A activity as a measure of predicted M&A activity and relate this to domestic within-country VC activity. We use two instruments motivated by previous literature.[8] Our first instrument is the lagged three-year change in local currency exchange rates. Erel, Liao, and Weisbach (2012) examine the determinants of cross-border mergers and find, among other things, that the change in the exchange rate between the acquirer and target countries' currencies prior to the merger is positively related to the probability of a merger. When the local currency in the target nation depreciates relative to that of the acquirer's nation, an acquisition becomes a more attractive deal from the valuation perspective. We therefore argue that a weaker currency makes local companies potentially cheaper acquisition targets for foreign acquirers and hence is likely to have a positive effect on cross-border M&A activity. On the other hand, domestic VC investments are unlikely to be directly affected by the strength of local currency, because when local currency depreciates, local VC companies become subject to the same valuation shock. Harford (2005) has shown that local currency borrowing rates are a good predictor of M&A and we argue that, since venture investments are largely financed with equity, VC investors do not use borrowing rates to evaluate venture investments.

[8] In unreported tests, we estimate the regressions with each instrument separately and obtain consistent results, so the tests are not reliant on using both instruments together or one specific instrument.

We obtain local currency rates and local short-term treasury rates for the 45 countries in our dataset from Thompson Reuters Datastream. In our tests, we include year fixed effects to account for potential exogenous shocks that might affect both VC investments and M&A deals. We also cluster standard errors at the country level to control for potential serial correlation in residuals. Because cross-border M&A activity might be sensitive to the GDP growth in the target country, we include it as a control variable. As in (3) we include lagged median market-to-book ratio and lagged median investment in the target country as additional controls. In this exercise we do not focus on a particular acquirer country but argue that local currency depreciation is likely to attract more transactions from foreign acquirers in general. We therefore proxy for the local currency weakness by its depreciation relative to the United States dollar in the previous three years. As before, we examine the effect of instrumented cross-border M&A activity on measures of VC intensity based on both total and unique VC deals. The results from this approach are presented in Table 6.

Insert Table 6 Here

Table 6 presents results for both for all VC deals and also for unique VC deals. We estimate the equations with both two-stage OLS and also using GMM. For all specifications, the instrumented cross-border M&A activity is positive and significant when used to predict the total volume of domestic VC deals (Columns 1 and 3) in the target country as well as the volume of unique VC deals (Columns 2 and 4).

It is possible that some exporters might naturally benefit from local currency depreciation. Exporters benefit because their costs decrease if measured in foreign currencies, while the output price in foreign markets is likely unaffected by domestic currency fluctuations. For this reason, we repeat our tests while excluding firms in natural resource extraction and manufacturing industries (SIC codes 1000-3999). Results remain significant and similar, demonstrating the robustness of our instrumental variable approach to excluding portfolio companies from industries that are more tradeable.

5. Merger Competition Laws and VC activity

To further examine the effect of M&A markets on the incentives of venture capitalists to engage in new deals and to further alleviate potential endogeneity concerns, we take advantage of the natural variation in merger competition laws that change M&A markets in different countries. We do this using two different ways to measure the severity of the competition laws around the world - using both an index of merger competition laws and passage of pro-merger takeover laws in specific countries.

We focus on the role of takeover laws in having a secondary impact on VC activity. As M&A conditions improve following enactment of those laws in different countries, we expect more investment by VC firms in those countries as they anticipate more viable exit opportunities through a takeover.

The passage of competition and antitakeover laws can also impact the business environment but this channel would operate through the takeover market. For example, after the passage of pro-takeover legislation, it is possible that the market for corporate control becomes more active, leading to less agency problems, lower managerial entrenchment and better corporate governance. All these changes may spur more entrepreneurial activity and attract more VC funding to a country as a result. Thus, the laws impacting M&A directly can have an impact through entrepreneurs and subsequent VC funding.

5.1. Merger Competition Laws Over Time

We begin by using a competition law index (CLI) that has been developed recently by Bradford and Chilton (2018) for over 100 countries. The index measures the stringency of competition regulation around the world from 1889 to 2010. The CLI quantifies the key elements of the competition laws and regulations that are in force in each country in each year. These elements are aggregated into an overall index that can be used to measure the intensity of competition. Out of the five elements included in the index the one most closely

related to mergers (and therefore to our study) is the "merger control" sub-index. This subindex incorporates the effects of the mandatory or voluntary merger notification systems, the degree of powers that the law grants to the authority in reviewing the mergers, as well as the presence of various defenses in the competition statute. In particular, the CLI merger index is increased if there is mandatory merger control and if the firms are obligated to notify the authority pre-merger (as opposed to post-merger). The CLI merger index is further increased in jurisdictions that restrict mergers on grounds that they lessen competition or create or strengthen dominance and in jurisdictions that additionally restrict mergers on grounds of some "public interest." The index is reduced if "efficiency defense" is present and the merging parties can escape prohibition by showing that the efficiencies that the merger generates outweigh the potential anti-competitive effect. Likewise, the "failing firm" defense (that allows a firm on a verge of bankruptcy to be acquired) and the "public interest" defense (that allows a merger if it results in certain public benefits) further reduce the CLI merger index.

We then regress our measure of VC activity - both the scaled numbers of VC deals and the changes in the numbers of VC deals - on the country-level merger index of competition laws. We run our regressions at the country-industry level to be able to control for industry characteristics. We include year fixed effects and also include controls for the country-industry capital intensity and market-to-book ratios to capture the capital needs in each industry and the investment attractiveness of each industry in each country.

Insert Table 7 Here

The results for the competition law regressions are presented in Table 7. Panel A presents results for the level-based measure of VC intensity, while Panel B provides results for the growth-based measure. Both panels display results for all VC deals (regression specifications 1-3) and unique VC deals (specifications 4-6). The regression coefficients on the CLI merger index are negative and highly statistically significant. Thus, VC investments are negatively

affected in countries with high regulatory impediments to takeover transactions as measured by the merger component of the competition law index. The effect of CLI on VC activity is also economically large - a one standard deviation increase in the CLI index results in a decline in VC intensity by 23-56% relative to its mean.

We postulate that the effect of competition laws on takeover markets is likely to be stronger in more concentrated industries, in which anti-competitive concerns are likely to be stronger. In these industries, the authorities are more inclined to prohibit a merger. Therefore, we examine the effect of the competition law index on VC investments separately in more concentrated and more competitive industries. To measure industry concentration we construct the sales-based industry Herfindahl-Hirschman index (HHI) and define concentrated (competitive) industries as those with the HHI above (below) the country-year median. The results from these tests are presented in Table 8.

Insert Table 8 Here

The evidence in Table 8 corroborates our conjecture. The effect of the competition laws on VC investments is indeed stronger in more concentrated industries. For example, for the level-based measures of VC intensity the regression coefficients on the CLI index in high HHI industries is nearly three times as high as in low HHI industries.

5.2. Specific Takeover Law Changes

Second, we exploit staggered enactment of country pro-takeover legislation. Takeover acts are laws passed specifically to foster takeover activity by reducing barriers to mergers and acquisition transactions. As Lel and Miller (2015) state, "They (country takeover laws) are aimed at reducing informational uncertainties regarding the legal framework applicable to M&A transactions, thus simplifying the application of various laws in connection with M&A transactions and streamlining M&A procedures."

The country-level takeover laws provide a natural way to further alleviate potential endogeneity concerns as long as they are passed by countries and are not driven by the VC industry. Lel and Miller (2015) study the effect of takeover laws on managerial discipline and CEO turnover. They find that following the passage of pro-takeover laws, poorly performing firms experience more frequent takeovers and the propensity to replace poorly performing CEOs increases. Importantly for our analysis, they also found that the merger intensity increased after initiation of pro-takeover M&A laws and particularly so for cross-border M&A transactions.

Table 9 reports the list of countries in our data that passed a pro-takeover law sometime during our sample. Unfortunately, many developed countries passed a takeover law before 1985 (when our VC dataset starts), rendering enactment of such laws inadequate for our analysis. Some other countries (e.g. France and China) have not yet passed a takeover law.

While different across countries, the takeover laws have provisions aimed at simplifying M&A transactions and fostering acquisition activity. For example, the 2002 Merger and Acquisition Act in Taiwan provided some general amendments to the Company Act to simplify the M&A process, while introducing more types of mergers including cash-out mergers and cross-border mergers, as well as providing some tax incentives to neutralize the transaction costs associated with M&A deals. The Merger Act passed in 2004 in Switzerland regulates the civil law aspects of mergers in a broad comprehensive framework, significantly facilitating acquisition deals, which used to be governed by Swiss corporate law and had to be carried out through a series of complicated transactions, often triggering unfavorable tax consequences and formal liquidation procedures. In the case of Germany, the 2002 Takeover Act introduced formal provisions governing acquisition of publicly traded companies. As Strelow and Wildberger (2002) argue, prior to the passage of the act, takeovers of public companies had not often been considered an option worth pursuing. Table A.9 provides additional details about the specific features of takeover laws in different countries.

Insert Table 9 Here

To capture the effect of pro-takeover laws on VC activity, we adopt a difference-in-difference methodology and define a POSTLAW dummy that indicates whether or not the country has a pro-takeover law by year t. We set the POSTLAW dummy to one in the years following the enactment of pro-takeover law in a country and set it to zero in the years before the enactment year and in all years in countries with no takeover law. Our empirical specification has the following form:

$$VC_{i,j,t} = \alpha + \beta POSTLAW_{i,t} + \delta X_{i,j,t-1} + \upsilon_t + \eta_i + \zeta_j + \varepsilon_{i,j,t}, \tag{4}$$

where $VC_{i,j,t}$ is a measure of VC activity in country i and industry j in year t as in 1, $POSTLAW_{i,t}$ indicates whether a takeover law had been passed in country i by year $t-1$, and $X_{i,j,t-1}$ is a vector of control variables. We include year fixed effects υ_t to absorb the potential impact of global time-varying economic conditions. We also include country η_i and industry ζ_j fixed effects to account for potential exogenous drivers of VC activity at the country and industry level. To control for potential serial correlation in residuals, we cluster the standard errors at the country-industry level. As in our tests in section 4 we include median industry market-to-book ratio and median industry investment as control variables.

It is also possible that VC investors find industries with a higher population of small firms potentially more attractive. Thus VC investment decisions may be sensitive to an industry's competitive structure. Thus, we also include median industry size and industry concentration as measured by the Herfindahl-Hirschman index constructed from sales. Lastly, we also include two time dummy variables that indicate years one and two prior to the enactment of takeover laws to see if there is any time pre-trends in VC activity in pre-takeover law years. Finding

such a trend would potentially undermine the causal relation between takeover laws and VC intensity.

The empirical specification in equation 4 allows us to gauge the incremental effect of takeover law adoption on VC activity in countries that passed a takeover law (treatment countries) relative to those that did not (control countries). Furthermore, because different countries pass takeover laws at different times, the same country can act as both a treatment (if it already passed a law) and a control (if it did not). Performing this analysis at the industry level allows us to control for industry-level variables potentially related to the level of VC activity. Furthermore, industry fixed effects control for industry-specific unobservable differences.

The results from these tests are presented in Table 10. Panel A presents results for the measure of VC activity based on the total number of deals, while in Panel B the dependent variable includes only unique VC deals.

Insert Table 10 Here

The results in Table 10 demonstrate that enactment of pro-takeover laws has a favorable effect on subsequent VC activity in the country. Coefficients on the $POSTLAW$ dummy are positive and significant in most specifications (and marginally significant in the others). This effect is common to the measures of VC activity based on both total and unique deals. Economically, the effect of $POSTLAW$ dummy on VC activity is high - depending on the specification, a passage of a takeover law in a country leads to a 30%-35% increase in the VC intensity relative to countries that have not passed a takeover law. Overall these results render strong support for Hypothesis 2.

Coefficients on the two $PRELAW$ dummies are insignificant, suggesting that there is no evidence of a trend in VC activity in the two years prior to enactment of takeover laws.

Overall, the results in Table 10 demonstrate a positive response of VC investments to a

positive shock to M&A markets in the form of pro-takeover law enactment and yield strong support for Hypothesis 2.

6. Robustness

We perform a battery of checks to confirm the robustness of our main results from Tables 2-6 of the paper. We discuss these results here but in the interest of space these results are reported in the appendix.

6.1. Excluding U.S. deals

A considerable number of VC deals are in the United States. In order to examine whether our results are not driven by the U.S. deals, we perform the same analysis as in Table 4 while excluding U.S. VC transactions. The results from these international tests are reported in Table A.1. These results are consistent with our main results reported in Table 4. Coefficients on lagged M&A activity are highly statistically significant in most specifications (marginally significant in some). The magnitude of coefficients is also similar (and slightly higher for non-U.S. data).

We also replicate our analysis of VC waves while excluding U.S. transactions. The results from these tests are presented in Table A.3 and are very similar to the main results reported in Table 5. Lagged M&A waves are still a strong and highly significant predictor of VC waves. In contrast, coefficients on the lagged IPO, while positive, are statistically insignificant.

6.2. VC experience

We examine if VC firms that do multiple deals rely more on lagged M&A investments when making investments. Table A.2 reports results from industry regressions of VC intensity on lagged M&A intensity. We split the VC firms into two groups by their number of investments.

Panel A presents results for more experienced VC firms (with the number of previous investments above the median). Panel B presents results for less experienced VC firms (with the number of previous investments below the median). Median number of previous investments varies by year with the time-series mean (median) of 12.1 (14).

The results show that lagged M&A activity only is significantly related to current VC investments for VC firms with the most experience where the number of investments by the VC firm is above the sample median. Results are consistent with more experienced VC firms using more information about potential exits in particular country-industries in deciding where to invest.

6.3. Alternative deal definition

In our main tests we consider investments by multiple VC firms in the same portfolio company on the same date as a single deal. To check the robustness of our results to this definition we replicate our main tests while treating investments by multiple VC firms as multiple deals (so we can see multiple deals for the same portfolio company on a single date). The results are presented in Table A.4 and show the robustness of our main results to this alternative definition of VC deals. Coefficients on lagged M&A activity are positive and highly statistically significant in all specifications, both in level-based and change-based regressions.

6.4. Excluding new funds

One potential concern might be that prior exits via M&A may release capital that flows into new VC funds, leading to a positive relation between VC activity and past M&A activity that we document. To alleviate this concern we repeat our analysis while excluding any funds that first appear in our database within one year prior to the transaction. The results from this test are reported in Table A.5 and are consistent with our main results.

6.5. Including all country-industry years

In most of our tests we only include country-industry years where there are VC investments. In Table A.6 we include all observations including country-industry years with no deals as zero values. The reported results in Table A.6 are consistent with our main results.

6.6. Including horizontal mergers only

It is conceivable that horizontal mergers (that involve a target and an acquirer from the same industry) are more relevant for VC professionals as they typically seek to sell out to a firm in the same line of business. For this reason we replicate our main results while including only takeover transactions in which the target and the acquirer belong to the same 2-digit SIC industry. The results from these tests are reported in Table A.7 and are generally very similar to our base case results in Table 4. Coefficients on lagged changes in M&A activity are similar in magnitude (and statistically significant in most specifications) while coefficients on lagged levels of M&A activity are higher (and also highly statistically significant).

6.7. Excluding acquisitions of public targets

It is possible that investment by VC firms might be less sensitive to acquisitions of private targets. Obviously, portfolio companies of VC firms are private firms and, as shown by Maksimovic et al. (2013), acquisitions of private and public targets respond differently to various economic conditions like credit spreads and aggregate market valuations. We therefore replicate our main tests while excluding acquisitions of public targets and focus just on private firm takeovers. The corresponding results are reported in table A.8. These results are similar in magnitude and significance to our base case results reported in Table 4.

7. Conclusions

We study how venture capital investments around the world are related to past M&A activity and merger competition laws. Our paper is the first to study the relation of venture capital investments to mergers and the merger legal environment. Using data from 45 countries around the world, we show that there is a strong positive association between venture capital and lagged M&A activity. We argue that increases in M&A deals in a country is likely to attract more investments by VC firms as venture capitalists anticipate more viable future exit opportunities via a takeover.

Consistent with this intuition, we first demonstrate a strong positive relation between VC activity and lagged M&A intensity. We reinforce this evidence by forming a measure of predicted M&A by instrumenting cross-border M&A intensity with the currency depreciation in the target country and local borrowing rates. We show that this measure of predicted cross-border M&A activity is associated with subsequent VC activity. We also examine the time patterns of VC and merger waves and document a strong association between VC activity and merger waves.

We examine how the M&A legal environment interacts with venture capital activity and show that competition laws and takeover legislation have a subsequent impact on VC activity. We exploit differences in competition law across countries and legislative changes within countries that impact the ability and costs of undertaking M&A. We use an index of competition law severity developed by Bradford and Chilton (2018) and the identification of pro-competition law changes following Lel and Miller (2015). We argue that an enactment of a country pro-takeover law represents a positive shock to M&A activity. We show that stricter competition laws are associated with less VC activity while the passage of a pro-takeover law in a country is associated with more subsequent VC deals in that country.

Overall, our results highlight the importance of M&A markets and the merger legal environment on the incentives to engage in VC. As many start-ups rely on VC funding and

venture capitalists rely on acquisitions for subsequent exits, our results suggest that an active M&A market is important for encouraging venture capital investments, entrepreneurship and growth.

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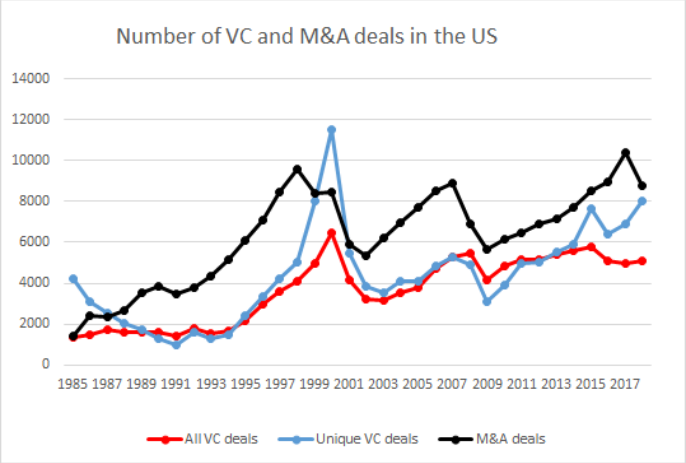
Figure 1
VC and M&A activities in the US and abroad

This figure presents the numbers of VC deals (both total and unique) and the numbers of M&A deals over time. Graphs of VC activities are presented for deals in the US and the rest of the world.



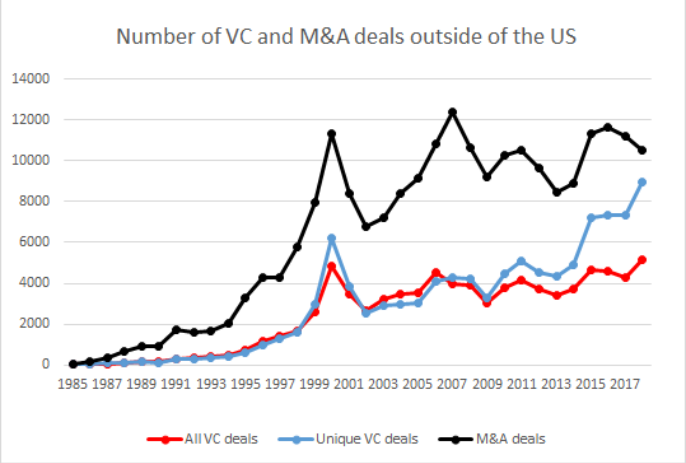


Table 1
DESCRIPTIVE STATISTICS

Table 1 presents the numbers of all VC deals, and takeover transactions by country. The sample period is 1985-2018.

Country	Number of VC deals	Number of unique VC deals	Number of M&A deals
Argentina	115	154	334
Australia	2094	1792	12288
Austria	469	542	919
Belgium	774	1107	1930
Brazil	654	798	2669
Canada	22320	20031	30700
China	13107	20409	16758
Czech Republic	103	104	138
Denmark	1001	1001	2186
Egypt	84	115	54
Finland	1602	1479	2687
France	7455	10703	22221
Germany	5038	6887	19839
Hong Kong	975	1728	4283
Hungary	135	142	276
India	4167	5103	5422
Indonesia	172	292	204
Ireland	942	1173	1146
Israel	1956	3007	911
Italy	929	1095	5161
Japan	2119	3254	14136
Kenya	91	144	30
Malaysia	158	202	1553
Mexico	128	188	292
Netherlands	1428	1572	5479
New Zealand	234	263	877
Nigeria	74	111	48
Norway	606	617	1914
Poland	432	392	1037
Portugal	422	364	566
Romania	110	101	172
Russia	565	673	3853
Singapore	849	1234	1898
South Africa	146	186	783
South Korea	3238	3406	3249
Spain	1440	1781	6355
Sweden	2425	2531	5793
Switzerland	1022	1422	2675
Taiwan	468	620	457
Thailand	128	148	207
Turkey	100	120	238
United Kingdom	11674	14582	58188
United States	124456	148186	215459
Utd. Arab Em.	228	311	213
Vietnam	120	136	105
Total	216753	260206	455703

Table 2

Contemporaneous and lagged correlations of VC and M&A activities.

Table 2 reports contemporaneous and lagged correlations between VC, M&A, and IPO activities. *% change in VC deals /% change in M&A deals /% change in IPO deals* is the difference between the number of VC /M&A /IPO deals in the current and previous years divided by the total number of deals in the previous year. *Scaled VC deals /Scaled M&A deals /Scaled IPO deals* is the number of VC /M&A /IPO deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases.

Panel A. Percentage growth in deals.

	% change in VC deals	% change in VC deals (t-1)	% change in unique VC deals	% change in unique VC deals (t-1)	% change in M&A deals	% change in M&A deals (t-1)	% change in IPO deals	% change in IPO deals (t-1)
% change in VC deals	1.000							
% change in VC deals (t-1)	-0.187 (0.000)	1.000						
% change in unique VC deals	0.702 (0.000)	-0.153 (0.000)	1.000					
% change in unique VC deals (t-1)	-0.099 (0.000)	0.737 (0.000)	-0.145 (0.000)	1.000				
% change in MA deals	0.099 (0.000)	0.043 (0.005)	0.094 (0.000)	0.018 (0.201)	1.000			
% change in MA deals (t-1)	0.050 (0.000)	0.093 (0.000)	0.057 (0.001)	0.090 (0.000)	-0.145 (0.000)	1.000		
% change in IPO deals	0.090 (0.000)	-0.004 (0.859)	0.102 (0.000)	-0.016 (0.450)	0.082 (0.000)	-0.003 (0.894)	1.000	
% change in IPO deals (t-1)	0.024 (0.249)	0.096 (0.000)	0.016 (0.459)	0.095 (0.000)	0.078 (0.000)	0.098 (0.000)	-0.128 (0.000)	1.000

Panel B. Number of deals.

	Scaled VC deals	Scaled VC deals (t-1)	Scaled unique VC deals	Scaled unique VC deals (t-1)	Scaled M&A deals	Scaled M&A deals (t-1)	Scaled IPO deals	Scaled IPO deals(t-1)
Scaled VC deals	1.000							
Scaled VC deals (t-1)	0.379 (0.000)	1.000						
Scaled unique VC deals	0.990 (0.000)	0.373 (0.000)	1.000					
Scaled unique VC deals (t-1)	0.375 (0.000)	0.991 (0.000)	0.376 (0.000)	1.000				
Scaled M&A deals	0.788 (0.000)	0.294 (0.000)	0.816 (0.000)	0.305 (0.000)	1.000			
Scaled M&A deals (t-1)	0.298 (0.000)	0.794 (0.000)	0.311 (0.000)	0.823 (0.000)	0.405 (0.000)	1.000		
Scaled IPO deals	0.249 (0.000)	0.139 (0.000)	0.264 (0.000)	0.147 (0.000)	0.305 (0.000)	0.163 (0.000)	1.000	
Scaled IPO deals(t-1)	0.107 (0.000)	0.248 (0.000)	0.109 (0.000)	0.263 (0.000)	0.113 (0.000)	0.303 (0.000)	0.578 (0.000)	1.000

Table 3

PERSISTENCE OF COUNTRY-INDUSTRY M&A ACTIVITY

Table 3 reports regressions of the M&A activity on past M&A activity at the country-industry level. *Scaled M&A deals* is the number of M&A deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Standard errors are clustered by country-industry, year and country fixed effects are included.

VARIABLES	(1) Scaled M&A deals	(2) Scaled M&A deals	(3) Scaled M&A deals	(4) Scaled M&A deals	(5) Scaled M&A deals
Scaled M&A deals (t-1)	0.509***				
	(0.036)				
Scaled M&A deals (t-2)		0.263***			
		(0.037)			
Scaled M&A deals (t-3)			0.406***		
			(0.037)		
Scaled M&A deals (t-4)				0.299***	
				(0.024)	
Scaled M&A deals (t-5)					0.287**
					(0.128)
Observations	6,426	5,848	5,336	4,892	4,489
R-squared	0.314	0.145	0.221	0.151	0.140
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes

Table 4

Country-Industry level regressions of VC intensity.

Table 4 reports results from country-industry regressions of VC intensity on lagged M&A intensity. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions in a country-industry year. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - number of deals scaled by the number of public firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.219***	0.219***	0.217***	0.288***	0.266***	0.266***	0.263***	0.339***
	(0.084)	(0.084)	(0.084)	(0.055)	(0.091)	(0.090)	(0.090)	(0.055)
Industry Capex/TA (t-1)		-7.980	-8.908	-11.874		-10.344	-11.243	-14.061
		(6.344)	(6.581)	(8.978)		(7.288)	(7.578)	(10.163)
Industry Market-to-Book (t-1)			0.078	0.124			0.103	0.158
			(0.062)	(0.142)			(0.078)	(0.181)
Scaled IPO deals (t-1)				-0.081				-0.109
				(0.148)				(0.143)
Observations	6,423	6,381	6,321	2,790	6,325	6,284	6,227	2,766
R-squared	0.115	0.116	0.117	0.155	0.118	0.120	0.120	0.160
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - growth in VC deals

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals
% change in M&A deals (t-1)	0.045***	0.050***	0.051***	0.096**	0.088***	0.090***	0.090***	0.079
	(0.016)	(0.019)	(0.019)	(0.037)	(0.024)	(0.027)	(0.027)	(0.052)
Industry Capex/TA (t-1)		0.336	1.011	0.626		0.641**	0.641**	0.882
		(0.264)	(0.618)	(0.983)		(0.287)	(0.287)	(1.471)
Industry Market-to-Book (t-1)			0.001***	0.003				0.000
			(0.000)	(0.007)				(0.013)
% change in IPOs (t-1)				0.012				0.020
				(0.016)				(0.026)
Observations	7,163	6,609	6,514	2,115	6,831	6,316	6,316	2,085
R-squared	0.058	0.056	0.056	0.085	0.036	0.037	0.037	0.075
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel C. Using past 3-year growth in M&A deals.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals
lagged 3 year % change in MA deals	0.072***	0.072***	0.070***	0.048	0.073***	0.063**	0.060**	0.090**
	(0.018)	(0.019)	(0.019)	(0.030)	(0.027)	(0.025)	(0.025)	(0.041)
Industry Capex/TA (t-1)		0.807*	0.976**	-0.186		0.235	0.453	-1.003*
		(0.464)	(0.478)	(0.511)		(0.654)	(0.662)	(0.544)
Industry Market-to-Book (t-1)			0.001***	0.005			0.005***	0.001
			(0.000)	(0.008)			(0.000)	(0.013)
% change in IPOs (t-1)				-0.001				0.019
				(0.019)				(0.029)
Observations	5,708	5,410	5,362	1,935	5,499	5,216	5,169	1,907
R-squared	0.042	0.042	0.042	0.083	0.030	0.030	0.033	0.083
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 5
WAVES IN VC AND M&A ACTIVITIES.

Table 5 reports results from logistic regressions of the VC wave dummies on lagged M&A and IPO wave dummies. *Industry Capex/TA (t-1)* is lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. Standard errors are clustered by country-industry, year and country fixed effects are included. See Section 4.2 for details on construction of VC, M&A, and IPO waves.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave
Lagged M&A wave	0.304***	0.105***	0.160***	0.305***	0.102***	0.305***	0.102***	0.168***
	(0.032)	(0.018)	(0.028)	(0.056)	(0.035)	(0.057)	(0.036)	(0.036)
Lagged VC wave		0.637***	0.706***		0.636***		0.636***	0.703***
		(0.021)	(0.023)		(0.029)		(0.029)	(0.022)
Lagged IPO wave			0.068*					0.082**
			(0.038)					(0.041)
Industry Capex/TA (t-1)				-0.400	0.010	-0.379	0.054	-0.005
				(0.247)	(0.136)	(0.269)	(0.173)	(0.228)
Industry Market-to-Book (t-1)						0.002	0.002	0.006**
						(0.002)	(0.001)	(0.003)
Observations	5,496	5,483	2,768	5,195	5,184	5,135	5,124	2,591
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 6
INSTRUMENTAL VARIABLE APPROACH WITH GMM ESTIMATION.

Table 6 reports results from two-stage IV regressions while using both instruments - change in the local treasury rates and local currency depreciation to instrument cross-border M&A deals. Columns (1) and (2) report results from the 2SLS estimation, columns (3) and (4) report results from the GMM estimation. The dependent variables are domestic total (unique) VC deals. Year fixed effects are included, standard errors are clustered by country.

	2SLS		GMM	
	(1)	(2)	(3)	(4)
	Scaled VC deals	Scaled unique VC deals	Scaled VC deals	Scaled unique VC deals
Instrumented CB M&A, lagged	0.129***	0.105***	0.150***	0.125***
	(0.038)	(0.031)	(0.046)	(0.044)
Median market-to-book	0.011***	0.008***	-0.002	-0.002
	(0.002)	(0.002)	(0.010)	(0.008)
Median Investment	13.897	14.706	22.818	16.143
	(42.481)	(34.797)	(23.464)	(19.117)
GDP growth	0.201**	0.169**	0.165**	0.144**
	(0.095)	(0.080)	(0.073)	(0.063)
Observations	504	498	504	498
Year fixed effects	Yes	Yes	Yes	Yes

Table 7
COMPETITION LAWS AND VC ACTIVITY.

Table 7 reports results from country-industry regressions of VC intensity on a competition law index for each country. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% CLI mergers* is the Competition Law Index, mergers subindex from Bradford and Chilton (2018). *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals* is the number of VC deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - number of deals scaled by the number of public firms

	(1)	(2)	(3)	(4)	(5)	(6)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
CLI mergers	-2.794***	-1.870***	-1.756***	-3.172***	-1.951***	-1.832***
	(0.691)	(0.315)	(0.305)	(0.909)	(0.387)	(0.378)
Industry Capex/TA (t-1)		0.998	3.765**		1.017	3.595*
		(1.145)	(1.876)		(1.071)	(1.927)
Industry Market-to-Book (t-1)			0.037*			0.058**
			(0.020)			(0.029)
Observations	4,429	4,266	4,205	4,360	4,199	4,141
R-squared	0.047	0.058	0.060	0.041	0.055	0.060
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - growth in VC deals

	(1)	(2)	(3)	(4)	(5)	(6)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals
CLI mergers	-0.476***	-0.422***	-0.372***	-0.539***	-0.414***	-0.378***
	(0.074)	(0.082)	(0.085)	(0.116)	(0.127)	(0.131)
Industry Capex/TA (t-1)		0.086	0.394		0.410*	0.482
		(0.184)	(0.628)		(0.212)	(0.774)
Industry Market-to-Book (t-1)			0.002**			0.004**
			(0.001)			(0.002)
Observations	4,559	4,093	4,021	4,312	3,883	3,818
R-squared	0.079	0.074	0.072	0.062	0.059	0.059
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Table 8

CLI index regressions for concentrated and competitive industries

Table 8 reports results from country-industry regressions of VC intensity on the competition law index separately for high (above median) and low (below median) HHI industries. *HHI* is lagged Herfindahl index constructed from sales. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% CLI mergers* is the Competition Law Index, mergers subindex from Bradford and Chilton (2018). *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals* is the number of VC deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - number of deals scaled by the number of public firms

	Low HHI		High HHI	
	(1)	(2)	(3)	(4)
	Scaled VC deals	Scaled unique VC deals	Scaled VC deals	Scaled unique VC deals
CLI mergers	-1.180***	-1.284***	-3.604***	-3.591***
	(0.322)	(0.453)	(0.636)	(0.707)
Industry Capex/TA (t-1)	1.537	1.457	5.324*	5.002*
	(1.981)	(1.978)	(2.721)	(2.963)
Industry Market-to-Book (t-1)	0.024*	0.039*	0.124	0.201
	(0.014)	(0.021)	(0.096)	(0.123)
Observations	2,626	2,600	1,121	1,089
R-squared	0.050	0.048	0.113	0.120
Year fixed effects	Yes	Yes	Yes	Yes

Panel B. Dependent variable - growth in VC deals

	Low HHI		High HHI	
	(1)	(2)	(3)	(4)
	% change in VC deals	% change in unique VC deals	% change in VC deals	% change in unique VC deals
CLI mergers	-0.370***	-0.422**	-0.615***	-0.444*
	(0.103)	(0.170)	(0.193)	(0.264)
Industry Capex/TA (t-1)	-0.432	0.205	1.569*	1.409
	(0.757)	(0.983)	(0.934)	(1.231)
Industry Market-to-Book (t-1)	0.011**	0.030***	0.007	0.007
	(0.004)	(0.007)	(0.015)	(0.016)
Observations	2,495	2,408	1,044	952
R-squared	0.082	0.073	0.081	0.057
Year fixed effects	Yes	Yes	Yes	Yes

Table 9

COUNTRIES WITH TAKEOVER LAWS

Table 9 reports the list of countries that passed a takeover law between 1980 and 2011.

Country	Year of takeover law
Austria	1998
Belgium	1989
Germany	2002
Finland	1989
India	1997
Indonesia	1998
Italy	1992
Ireland	1997
Malaysia	1998
New Zealand	1993
Spain	1991
Sweden	1991
Switzerland	2004
South Africa	1991
Taiwan	2002

Table 10

VC regressions and country takeover laws

Table 10 reports results from industry regressions of VC intensity on the *POSTLAW* dummy. *POSTLAW* dummy is set to one if there was a takeover law in the country before, and to zero otherwise. *Sales HHI (t-1)* is lagged Herfindahl index constructed from sales. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *Median industry size (t-1)* is the lagged median industry size. *Prelaw t(-1)* dummy is set to one in the year preceding the takeover law year and to zero otherwise. *Prelaw t(-2)* dummy is set to one in the year two years prior to the takeover law year and to zero otherwise. Country, industry, and year fixed effects included. Standard errors are clustered by country-industry.

Panel A. All VC deals.

	(1)	(2)	(3)	(4)	(5)	(6)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals
Postlaw dummy	0.161**	0.146***	0.149***	0.162**	0.160***	0.168***
	(0.074)	(0.054)	(0.054)	(0.076)	(0.061)	(0.060)
Sales HHI (t-1)			0.026			0.026
			(0.029)			(0.029)
Industry Capex/TA (t-1) (t-1)		1.464*	0.990		1.467*	0.993
		(0.760)	(0.817)		(0.760)	(0.818)
Industry Market-to-Book (t-1)		0.001	0.001		0.001	0.001
		(0.005)	(0.006)		(0.005)	(0.006)
Median industry size (t-1)		-0.042***	0.010		-0.042***	0.010
		(0.011)	(0.011)		(0.011)	(0.011)
Prelaw t(-1) dummy				-0.028	0.080	0.090
				(0.094)	(0.064)	(0.064)
Prelaw t(-2) dummy				0.137	0.034	0.051
				(0.108)	(0.085)	(0.086)
Observations	16,207	10,249	9,033	16,207	10,249	9,033
R-squared	0.099	0.153	0.181	0.099	0.153	0.181
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Only unique VC deals.

	(1)	(2)	(3)	(4)	(5)	(6)
	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Postlaw dummy	0.167**	0.129*	0.144**	0.182**	0.146**	0.165**
	(0.083)	(0.066)	(0.064)	(0.083)	(0.072)	(0.070)
Sales HHI (t-1)			0.030			0.030
			(0.029)			(0.029)
Industry Capex/TA (t-1)		1.712**	1.063		1.716**	1.068
		(0.783)	(0.833)		(0.784)	(0.834)
Industry Market-to-Book (t-1)		0.004	0.006		0.004	0.006
		(0.019)	(0.018)		(0.019)	(0.018)
Medium industry size (t-1)		0.038	0.084*		0.038	0.084*
		(0.047)	(0.045)		(0.047)	(0.045)
Prelaw t(-1) dummy				0.168	0.107	0.132
				(0.293)	(0.195)	(0.206)
Prelaw t(-2) dummy				0.488	0.102	0.176
				(0.334)	(0.174)	(0.172)
Observations	5,535	4,308	4,308	5,535	4,308	4,308
R-squared	0.239	0.278	0.283	0.239	0.278	0.283
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes

Internet Appendix for

"Venture Capital Investments and Merger and Acquisition Activity around the World"
(*Not for publication*)

Table A1
International Non-US VC intensity.

Table A1 reports results from country-industry level regressions of VC intensity on lagged M&A intensity using international data only (excluding the US). *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope database. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - growth in VC deals

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals
% change in M&A deals (t-1)	0.051**	0.056**	0.059**	0.091*	0.073**	0.071*	0.071*	-0.002
	(0.021)	(0.025)	(0.026)	(0.047)	(0.033)	(0.038)	(0.038)	(0.063)
Industry Capex/TA (t-1)		0.880	1.235	0.390		1.035	1.035	1.157
		(0.802)	(0.962)	(1.560)		(1.112)	(1.112)	(2.385)
Industry Market-to-Book (t-1)			0.007	-0.004				-0.002
			(0.006)	(0.006)				(0.013)
% change in IPOs (t-1)				0.010				0.022
				(0.020)				(0.030)
Observations	4,597	4,199	4,120	1,244	4,435	4,054	4,054	1,231
R-squared	0.088	0.089	0.091	0.120	0.059	0.061	0.061	0.091
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - number of deals scaled by the number of public firms.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.289**	0.289**	0.287**	0.419***	0.347**	0.346**	0.343**	0.488***
	(0.132)	(0.132)	(0.133)	(0.107)	(0.144)	(0.144)	(0.146)	(0.112)
Industry Capex/TA (t-1)		-5.395	-6.160	-3.024		-9.346	-10.119	-5.067
		(6.964)	(7.199)	(5.782)		(7.845)	(8.102)	(6.335)
Industry Market-to-Book (t-1)			0.067	0.036			0.157*	0.118
			(0.077)	(0.106)			(0.093)	(0.135)
Scaled IPO deals (t-1)				-0.194				-0.226
				(0.233)				(0.233)
Observations	3,919	3,887	3,839	1,630	3,887	3,855	3,808	1,621
R-squared	0.149	0.150	0.150	0.206	0.156	0.158	0.159	0.214
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A2
VC intensity and VC firm experience

Table A2 reports results from industry regressions of VC intensity on lagged M&A intensity. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Panel A presents results for more experienced VC firms (with the number of previous investments above the median). Panel B presents results for less experienced VC firms (with the number of previous investments below the median). Standard errors are clustered by country-industry, country and year fixed effects are included.

Panel A. More experienced VC firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.160***	0.160***	0.163***	0.120*	0.158***	0.160***	0.154***	0.115
	(0.048)	(0.047)	(0.059)	(0.072)	(0.048)	(0.048)	(0.058)	(0.072)
Industry Capex/TA (t-1)		-0.418	-1.350	-3.369*		-1.466	-2.181	-3.691**
		(1.989)	(1.819)	(2.005)		(1.607)	(1.493)	(1.861)
Industry Market-to-Book (t-1)			0.069	0.201*			0.093	0.276**
			(0.063)	(0.117)			(0.072)	(0.133)
Scaled IPO deals (t-1)				0.077				0.033
				(0.144)				(0.115)
Observations	3,612	3,600	3,580	1,828	3,547	3,535	3,516	1,808
R-squared	0.312	0.308	0.301	0.316	0.337	0.335	0.323	0.343
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Less experienced VC firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.025	0.027	0.012	0.034	0.041	0.044	0.026	0.074
	(0.025)	(0.024)	(0.024)	(0.024)	(0.037)	(0.035)	(0.037)	(0.051)
Industry Capex/TA (t-1)		-2.314	-1.728	-2.165		-3.420	-2.947	-3.334
		(1.846)	(1.608)	(1.675)		(2.398)	(2.114)	(2.331)
Industry Market-to-Book (t-1)			0.063	0.154**			0.095	0.210**
			(0.051)	(0.066)			(0.068)	(0.093)
Scaled IPO deals (t-1)				-0.118*				-0.192
				(0.066)				(0.122)
Observations	1,305	1,303	1,298	883	1,303	1,301	1,296	882
R-squared	0.448	0.449	0.409	0.453	0.446	0.449	0.416	0.451
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A3

WAVES IN VC AND M&A ACTIVITIES USING NON-US DATA

Table A3 reports results from logistic regressions of the VC wave dummies on lagged M&A and IPO wave dummies on international data only. *Industry Capex/TA* is lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. Standard errors are clustered by country-industry, year and country fixed effects are included. See Section 4 for details on construction of VC, M&A, and IPO waves.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave	VC wave
Lagged M&A wave	0.271***	0.078***	0.121***	0.271***	0.071***	0.270***	0.070***	0.133***
	(0.033)	(0.021)	(0.033)	(0.039)	(0.024)	(0.040)	(0.025)	(0.020)
Lagged VC wave		0.647***	0.706***		0.646***		0.646***	0.706***
		(0.023)	(0.028)		(0.035)		(0.035)	(0.029)
Lagged IPO wave			0.030					0.044
			(0.046)					(0.032)
Industry Capex/TA (t-1)				-0.364	0.045	-0.303	0.137	0.039
				(0.293)	(0.143)	(0.329)	(0.206)	(0.375)
Industry Market-to-Book (t-1)						0.003	0.002	0.005*
						(0.003)	(0.002)	(0.003)
Observations	3,540	3,533	1,588	3,296	3,290	3,246	3,240	1,424
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A4

Aggregating Investments: Country-industry regressions of VC intensity

Table A4 reports results from country-industry regressions of VC intensity on lagged M&A intensity while treating investments by multiple VC firms in the same portfolio company as multiple deals. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope (for international companies) and Compustat (for US companies) databases. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - growth in VC deals.

	(1)	(2)	(3)	(4)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in VC deals
% change in M&A deals (t-1)	0.079***	0.070***	0.071***	0.109**
	(0.024)	(0.025)	(0.026)	(0.051)
Industry Capex/TA (t-1)		0.921**	1.897*	1.407
		(0.414)	(1.093)	(1.915)
Industry Market-to-Book (t-1)			0.002	0.001
			(0.001)	(0.015)
% change in IPOs (t-1)				0.015
				(0.024)
Observations	7,174	6,617	6,522	2,116
R-squared	0.034	0.035	0.036	0.065
Year fixed effects	Yes	Yes	Yes	Yes

Panel B. Dependent variable - number of deals scaled by the number of public firms.

	(1)	(2)	(3)	(4)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals
Scaled M&A deals (t-1)	0.481***	0.480***	0.478***	0.626***
	(0.142)	(0.142)	(0.141)	(0.049)
Industry Capex/TA (t-1)		-18.004	-19.641	-25.459
		(12.507)	(13.035)	(17.884)
Industry Market-to-Book (t-1)			0.158	0.265
			(0.109)	(0.247)
Scaled IPO deals (t-1)				-0.309
				(0.271)
Observations	6,426	6,383	6,323	2,790
R-squared	0.127	0.129	0.130	0.171
Year fixed effects	Yes	Yes	Yes	Yes

Table A5

VC intensity - excluding new funds

Table A5 reports results from country-industry regressions of VC intensity on lagged M&A intensity while excluding new funds (those that first appear in our sample within a 12 month window.) *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope database. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - growth in VC deals.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	% change in VC deals	% change in VC deals	% change in VC deals	% change in VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals	% change in unique VC deals
% change in M&A deals (t-1)	0.094***	0.094***	0.095***	0.136**	0.085***	0.087***	0.087***	0.084
	(0.027)	(0.031)	(0.031)	(0.069)	(0.026)	(0.029)	(0.029)	(0.069)
Industry Capex/TA (t-1)		0.743**	1.410	1.263		0.528*	0.528*	0.971
		(0.360)	(1.173)	(2.130)		(0.273)	(0.273)	(1.624)
Industry Market-to-Book (t-1)			0.003	0.041				0.047
			(0.002)	(0.028)				(0.029)
% change in IPOs (t-1)				0.001				-0.013
				(0.027)				(0.025)
Observations	6,305	5,826	5,755	1,881	5,990	5,551	5,551	1,847
R-squared	0.041	0.041	0.042	0.066	0.041	0.041	0.041	0.080
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - number of deals scaled by the number of public firms.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.151***	0.152***	0.129***	0.099	0.118***	0.118***	0.098***	0.077
	(0.050)	(0.051)	(0.047)	(0.061)	(0.039)	(0.040)	(0.035)	(0.047)
Industry Capex/TA (t-1)		3.780	2.861	-0.801		2.869	2.431	0.375
		(2.580)	(2.554)	(3.573)		(1.756)	(1.735)	(2.514)
Industry Market-to-Book (t-1)			0.246***	0.309**			0.200***	0.270**
			(0.073)	(0.151)			(0.060)	(0.124)
Scaled IPO deals (t-1)				0.280				0.224
				(0.222)				(0.171)
Observations	5,629	5,602	5,562	2,497	5,530	5,504	5,467	2,474
R-squared	0.056	0.057	0.062	0.086	0.060	0.062	0.068	0.101
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A6

VC intensity including all observations

Table A6 reports results from country-industry regressions of VC intensity on lagged M&A intensity while including all observations (even those with no deals in a country-industry-year). *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope database. Standard errors are clustered by country-industry, year fixed effects are included.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals	Scaled unique VC deals
Scaled M&A deals (t-1)	0.282***	0.284***	0.285***	0.381***	0.345***	0.347***	0.349***	0.455***
	(0.107)	(0.107)	(0.108)	(0.091)	(0.115)	(0.115)	(0.116)	(0.092)
Industry Capex/TA (t-1)		-2.529	-4.028*	-9.230		-3.163*	-5.070*	-11.141
		(1.604)	(2.436)	(6.569)		(1.858)	(2.720)	(7.312)
Industry Market-to-Book (t-1)			0.001	0.006*			0.002	0.007*
			(0.001)	(0.003)			(0.001)	(0.004)
Scaled IPO deals (t-1)				-0.096				-0.107
				(0.177)				(0.178)
Observations	13,911	13,832	13,529	3,884	13,911	13,832	13,529	3,884
R-squared	0.163	0.164	0.165	0.212	0.173	0.174	0.175	0.219
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A7

Country-industry regressions of VC intensity: horizontal mergers only

Table A7 reports results from country-industry regressions of VC intensity on lagged M&A intensity while including horizontal mergers only. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope database. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - growth in VC deals.

	(1) % change in VC deals	(2) % change in VC deals	(3) % change in VC deals	(4) % change in VC deals	(5) % change in unique VC deals	(6) % change in unique VC deals	(7) % change in unique VC deals	(8) % change in unique VC deals
% change in M&A deals (t-1)	0.045***	0.041**	0.040**	0.089***	0.062***	0.048**	0.048**	0.083**
	(0.016)	(0.017)	(0.017)	(0.029)	(0.022)	(0.021)	(0.021)	(0.037)
Industry Capex/TA (t-1)		0.196	0.588	-0.237		0.374	0.374	-0.700
		(0.185)	(0.575)	(0.537)		(0.235)	(0.235)	(0.685)
Industry Market-to-Book (t-1)			0.002**	0.024				0.037
			(0.001)	(0.020)				(0.031)
% change in IPOs (t-1)				-0.005				-0.012
				(0.015)				(0.024)
Observations	5,419	5,164	5,122	1,827	5,194	4,952	4,952	1,803
R-squared	0.063	0.060	0.061	0.098	0.047	0.044	0.044	0.100
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - number of deals scaled by the number of public firms

	(1) Scaled VC deals	(2) Scaled VC deals	(3) Scaled VC deals	(4) Scaled VC deals	(5) Scaled unique VC deals	(6) Scaled unique VC deals	(7) Scaled unique VC deals	(8) Scaled unique VC deals
Scaled M&A deals (t-1)	0.206***	0.206***	0.186***	0.147	0.267***	0.267***	0.240***	0.208*
	(0.065)	(0.065)	(0.062)	(0.099)	(0.083)	(0.084)	(0.079)	(0.125)
Industry Capex/TA (t-1)		3.349*	2.529	0.340		3.085	2.402	-0.180
		(1.957)	(1.887)	(2.612)		(2.076)	(2.059)	(2.893)
Industry Market-to-Book (t-1)			0.093**	0.150			0.138**	0.254**
			(0.047)	(0.101)			(0.066)	(0.129)
Scaled IPO deals (t-1)				0.289				0.288
				(0.230)				(0.228)
Observations	5,068	5,044	5,022	2,396	4,995	4,972	4,950	2,376
R-squared	0.055	0.058	0.058	0.106	0.057	0.059	0.062	0.098
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A8

Country-industry regressions of VC intensity, excluding acquisitions of public targets

Table A8 reports results from industry regressions of VC intensity on lagged M&A intensity while excluding acquisitions of public targets. *% change in VC deals* is the difference between the numbers of VC deals in the current and previous years divided by the number of deals in the previous year. *% change in M&A deals (t-1)* is lagged percentage growth in the number of M&A transactions. *Industry Capex/TA (t-1)* is the lagged industry CAPEX scaled by total assets. *Industry Market-to-Book (t-1)* is lagged industry market-to-book ratio. *% change in unique VC deals* is the percentage growth in the number of unique VC deals. *Scaled VC deals (Scaled M&A deals)* is the number of VC (M&A) deals divided by the total number of public firms in the same industry-year in the Worldscope database. Standard errors are clustered by country-industry, year fixed effects are included.

Panel A. Dependent variable - growth in VC deals.

	(1) % change in VC deals	(2) % change in VC deals	(3) % change in VC deals	(4) % change in VC deals	(5) % change in unique VC deals	(6) % change in unique VC deals	(7) % change in unique VC deals	(8) % change in unique VC deals
% change in M&A deals (t-1)	0.036**	0.040**	0.040**	0.072*	0.082***	0.078***	0.078***	0.052
	(0.015)	(0.018)	(0.018)	(0.040)	(0.025)	(0.026)	(0.026)	(0.057)
Industry Capex/TA (t-1)		0.309	0.933	0.400		0.610**	0.610**	0.385
		(0.257)	(0.635)	(0.989)		(0.282)	(0.282)	(1.487)
Industry Market-to-Book (t-1)			0.001***	0.013				0.025
			(0.000)	(0.016)				(0.026)
% change in IPOs (t-1)				0.004				-0.002
				(0.017)				(0.026)
Observations	6,776	6,251	6,173	1,964	6,451	5,963	5,963	1,934
R-squared	0.055	0.053	0.054	0.082	0.038	0.037	0.037	0.084
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B. Dependent variable - number of deals scaled by the number of public firms

	(1) Scaled VC deals	(2) Scaled VC deals	(3) Scaled VC deals	(4) Scaled VC deals	(5) Scaled unique VC deals	(6) Scaled unique VC deals	(7) Scaled unique VC deals	(8) Scaled unique VC deals
Scaled M&A deals (t-1)	0.117***	0.118***	0.101***	0.070	0.150***	0.151***	0.128***	0.100*
	(0.038)	(0.039)	(0.035)	(0.048)	(0.049)	(0.051)	(0.045)	(0.061)
Industry Capex/TA (t-1)		3.453*	2.998*	-0.109		3.040	2.602	-0.558
		(1.779)	(1.771)	(2.444)		(1.872)	(1.882)	(2.749)
Industry Market-to-Book (t-1)			0.094**	0.184*			0.139**	0.301**
			(0.042)	(0.105)			(0.060)	(0.136)
Scaled IPO deals (t-1)				(0.227)				(0.226)
				(0.226)				(0.224)
Observations	6,069	6,034	5,989	2,639	5,973	5,939	5,897	2,615
R-squared	0.059	0.062	0.059	0.109	0.060	0.061	0.060	0.101
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table A9

Details on country takeover laws

Country	Year	Name of the law	Source	Details
Austria	1998	Takeover Act	Lel and Miller (2015)	Introduces for the first time formal rules for acquiring a majority interest in a company. Also intended to make Austria takeover legislation more transparent and consistent with that of other major European Countries. Explicit rules regarding purchase offers involving acquisitions of a controlling participation in a company. For further details, see, for example, Poch (1998).
Belgium	1989	Royal Decree of 11/8/1989 and the law of March 3/2/1989	Lel and Miller (2015), Nenova (2006)	Specific rules about takeover bids, mandatory offers, and disclosure of shareholder information. Formal provisions for governing mergers and acquisitions.
Germany	2002	Takeover Act	Lel and Miller (2015), Strelow and Wildberger (2002), Baum (2006)	Formal provisions for governing acquisitions of publicly traded companies. Under the Act, a bidder who has obtained control over a target must make an offer for all of the target outstanding shares, including any preference shares ("mandatory offer"). As per Strelow and Wildberger (2002), prior to the passage of the takeover act, takeovers of public companies had not often been considered worth pursuing.
Finland	1989	Securities Markets Act of 1989	Lel and Miller (2015)	Relates to the issuance of securities to the public, the transfer and clearing of securities issued to the public as well as to the arrangement of trading in securities. Sections 6 and 8 regulate takeover bids, including publication and communication of the bid, time allowed for acceptance of the bid, and treatment of competing bids. Section 10 regulates mandatory bids.
India	1997	Substantial Acquisition of Shares and Takeovers	Government of India, Ministry of Finance: http://dipam.gov.in/, Lel and Miller (2015)	Regulates disclosures of shareholding and control in a listed company as well as acquisition of shares or voting rights, acquisition of control over a listed company and bail out takeovers.
Indonesia	1998	M&A regulations (Gorvernment regulation No 27/1998), Presidential Decree No. 96 and No. 118	Lel and Miller (2015)	Is intended to guard the interests of the target company, its shareholders, and employees. Introduces formal requirements for transactions involving acquisition of controlling interest in the target company.
Italy	1992	Public Tender Offer, Law 149/1992	Nenova(2006), Lel and Miller (2015), Rossi (2012)	Regulates public tender offers and the transfer of corporate control by giving powers to the Commissione Nazionale per le Societa e la Borsa.

Table A9: Details on country takeover laws – continued

Country	Year	Name of the law	Source	Details
Malaysia	1998	Code on Takeovers and Mergers	Nenova(2006), Lel and Miller (2015)	Regulates mandatory offers, voluntary offers, advisers, acquisition of additional voting shares, etc. For further details see https://www.sc.com.my/the-malaysian-code-on-take-overs-and-mergers-1998-the-code/.
New Zealand	2001	Takeover Code	Lel and Miller (2015)	Ensures that all shareholders have the opportunity to participate in changes of control and that all parties to the transaction have a level playing field. The rules of the Takeovers Code are intended to ensure that shareholders will have all of the information they need and plenty of time to make their decision about the control-change transaction. See also http://www.takeovers.govt.nz/assets/Assets-2/Takeovers-Directors-booklet-linked2a.pdf.
Spain	1991	Public Takeover Offerings (Royal Decree 1197/1991)	Lel and Miller (2015)	Regulates disclosure of significant shareholdings in listed companies and acquisitions of shares owned by them.
Sweden	1991	Industry and Commerce Stock Exchange Committee Takeover Standard, Financial Instruments Trading Act	Nenova(2006), Lel and Miller (2015)	Regulates disclosure of changes in shareholdings. The disclosure obligation is triggered if a holding reaches, exceeds or falls below certain thresholds of the votes or the number of shares in a company. A company's acquisition and transfer of its own shares shall also be reported if the transaction implies that the holding reaches, exceeds or falls below any of the thresholds.
Switzerland	2004	The Merger Act	Lel and Miller (2015)	Regulates the civil law aspects of mergers in a broad comprehensive framework, significantly facilitating acquisition deals, which used to be governed by under Swiss corporate law and had to be carried out through a series of complicated transactions, often triggering unfavorable tax consequences and formal liquidation procedures.
South Africa	1991	Code on Takeovers and Mergers	Nenova(2006), Lel and Miller (2015)	The Takeover Regulations are largely based on older versions of the UK City Code on Takeovers and Mergers. The Takeover Regulations are statutory and are enforced by the courts rather than through self-regulation.
Taiwan	2002	Business Mergers and Acquisitions Act	Lel and Miller (2015)	Provides some general amendments to the Company Act to simplify the M&A process, introduces more types of mergers including cash-out mergers and cross-border mergers, as well as provides some tax incentives to neutralize the transaction costs associated with M&A deals.