

The Decreasing Returns of Serial Acquirers around the World

G. Andrew Karolyi
Rose C. Liao
Gilberto Loureiro¹

Abstract

We study 18,359 acquisitions made by serial acquirers around the world and uncover significantly lower announcement-day returns in later acquisitions. We find that the decreasing announcement returns in later acquisitions is mitigated when serial acquirers are domiciled in better governed countries or have a higher fraction of institutional holdings by investors from better governed countries. . To disentangle a potential agency-based explanation from others for the acquisitive pattern, we utilize a unique database of private firms and subsidiaries to examine the post-acquisition operating performance of the targets. Profitability, sales growth, and investment improves but at a slower rate for the target firms in later acquisitions by serial acquirers. Overall, we interpret our evidence as consistent with agency cost explanations for serial acquisition behavior.

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¹ Karolyi is Professor of Finance and Economics and Alumni Professor in Asset Management at the Johnson Graduate School of Management, Cornell University, Email: gak56@cornell.edu; Liao is Assistant Professor of Finance, Rutgers Business School, Rutgers University, Email: liao@business.rutgers.edu; Loureiro is Assistant Professor of Finance, University of Minho, School of Economics and Management & NIPE, Email: gilberto@eeg.uminho.pt. We would like to thank Da Woon Kim for providing excellent research assistance. We gratefully acknowledge the helpful comments of Miguel Ferreira, René Stulz, Mike Weisbach and the brownbag seminar participants at Nova SBE, Rutgers University, and the University of Manitoba. All errors are our own.

1. Introduction

In the past decade, two-thirds of the \$16 trillion in cumulative acquisition value around the world were driven by firms that are serial acquirers.² One in five public acquirers is a serial acquirer. Some firms have acquired more than 50 corporations in the past 10 years, amounting to tens of billions of dollars spent by each, including IBM, Microsoft, Google, Cisco, Park Hannifin, to name a few. These serial acquirers not only purchase assets in their own industry and country, but also engage in cross-border and inter-industry acquisitions. For example, Parker Hannifin of Ohio made 68 acquisitions in the past decade targeting firms in 15 different industries and 18 different countries. This may be partially due to the increasing volume of cross-border acquisitions, but another part may be due to the changing landscape of industrial competition. After the recent financial crisis, firms have accumulated substantial amount of cash on hand, which may have facilitated a new wave of mergers and acquisitions. Despite the significant role played by these serial acquirers in the world market for mergers and acquisitions, the Finance literature on the motives for and post-acquisition performance of these serial acquirers is scarce, especially in the global context.³

Conceptually, firms engage in acquisitions when combining with targets increases firm value from the perspective of the acquiring firm's managers. However, in practice, many frictions exist to facilitate or impede mergers and acquisitions (M&A) and a large empirical literature has documented that acquirers experience fewer gains (Andrade, Mitchell, and Stafford, 2001) or even significant losses (Moeller, Schlingemann, and Stulz, 2004). Many theories exist for why such acquisitions occur despite losses to the acquirers' shareholders: self-serving managers and other related agency costs, attempts to create market power, diversification. Additional frictions exist for cross-border mergers. For example, cultural distance, language, nationalism, a large government ownership stake, or geographic differences can increase the costs of combining two firms (see, among many others,

² We define serial acquirers as companies that acquired more than five targets over our extended sample period. It is similar in spirit to the definition in Fuller, Netter, and Stegemoller (2002), who were the first to study them in a systematic way. Billet and Qian (2009) define serial acquirers to be those that make more than two over the entire sample period or over a three- or five-year rolling window.

³ Phalippou, Xu, and Zhao (2013) examine the announcement returns of acquirers when targets were "serial acquirers" in the past and find that acquirers experience lower returns when the target firms made many acquisitions in the past. Boubakri, Chan, and Kooli (2012) examine the announcement returns of US serial acquirers engaging in both domestic and cross-border acquisitions and find that acquirers enjoyed much higher returns during the tech-bubble period and lower returns in cross-border acquisitions

Ahern, Daminelli, and Fracassi, 2011, Dinc and Erel, 2013, Karolyi and Liao, 2014). Exchange rate movements or differences in stock market valuations can sometimes motivate cross-border mergers if target firms become inexpensive as a result of appreciating currency of the acquirer (Erel, Liao, and Weisbach, 2012). Savings on taxes, as a result of mergers, have been a large factor in many of the recent cross-border mergers (Col and Errunza, 2013).⁴

When firms serially engage in mergers and acquisitions over time, they earn lower returns in later acquisitions according to existing research (Fuller, Netter, and Stegemoller, 2002, Billet and Qian, 2009, Ahern, 2010, Boubakri, Chan, and Kooli, 2012). There are several explanations for why serial acquirers experience more negative returns in subsequent deals. First, early research on program bids has found support for an “anticipation effect” among acquirers with acquisition agendas (see Schipper and Thompson, 1983, Malatesta and Thompson, 1985, and Loderer and Martin, 1990, Fuller, Netter, and Stegemoller, 2002). The argument for the anticipation effect is that a bid from acquirers who are known to be a serial acquirer is likely to be anticipated by the market and therefore the announcement return is increasingly attenuated with additional deals. Jensen (2005), however, argues that serial acquirers suffer from agency costs and they are more likely to make value-destroying investments for the “illusion of growth.” Along the same lines, Billet and Qian (2009) find that experienced acquirers who become more overconfident from successful acquisitions in the past are more likely to acquire again and their subsequent deals, driven by management hubris, are associated with deteriorating shareholder returns.⁵

Despite the large M&A literature and several studies on serial acquirers to date, we know little as to the extent of serial acquisition activity outside the U.S. Our first major contribution is to remedy this deficiency. That is, we analyze the pattern of announcement returns of serial acquirers, by comparing the first with later acquisitions and test whether that pattern can be explained by an anticipation effect or agency problems that favor managerial opportunistic behavior. But, even more importantly, our global experimental setting affords us an important advantage by relating the pattern

⁴ A few recent examples include the Omnicom and Publicis deal and the Liberty Global and Virgin Media deal. (see Financial Times, August 13, 2013;Section: Companies & Markets; Page: 13).

⁵ Ahern (2010) argues that lower percentage returns in latter acquisitions could yet be consistent with the q-theory of investment. The theory predicts that larger acquirers optimally choose larger targets but of smaller relative size. The percentage returns decrease as acquirers get larger and so the returns decline in later acquisitions for serial acquirers. The study finds support for this theory over the agency explanation.

of their announcement returns across earlier and later deals with the institutional attributes of the countries in which the acquirers and their targets are domiciled. Specifically, we analyze cross-country differences in corporate governance and institutional ownership that have been shown to have an impact on the propensity and valuation of cross-border mergers (among others, see Rossi and Volpin, 2004; Ferreira, Massa, and Matos, 2010). We further exploit yet another advantage of the global setting in the study of serial acquirers thanks to a unique database – namely, *Bureau van Dijk's Amadeus* database - which provides information on private firms and subsidiaries of public firms in many countries around the world. We are able to compare the pre- and post-acquisition operating and financial performance of the private and subsidiary targets of global serial acquirers and, as a result, we are able to disentangle the two main competing hypotheses – the agency and anticipation hypotheses - that have been put forward to explain the decreasing announcement returns in later deals made by the same acquirer.

The focus of our analysis is on 2,374 public serial acquirers involved in 18,359 domestic and cross-border acquisitions, and a benchmark sample of 9,797 unique public acquirers involved in 15,370 deals over 1997 to 2012. Out of the 18,359 deals involving serial acquirers, 8,849 were from the United States; of the 15,370 deals involving non-serial acquirers, 4,329 were from the United States. We study only completed acquisitions of 100% stakes (which constitutes 90% of the merger and acquisition sample in *Bureau van Dijk's Zephyr* database).

Serial acquirers tend to merge with other firms in waves and cluster in industries. We find that the highest dollar value of M&A activity happened in years 2000 and 2007, for both serial acquirers and non-serial acquirers. Interestingly, the number of mergers has been steadily increasing in the 2000s and reached its peak in the year of 2007 for both serial acquirers and non-serial acquirers. Despite engaging in increasingly larger deals, serial acquirers are more likely to pay in cash.

In our first set of experiments, we test for significant differences in the capital market outcomes for all deals led by serial acquirers. We control for country-, industry-, and time- fixed effects in our cross-sectional tests and find that the differences between serial acquirers and non-serial acquirers in the announcement returns to acquirer firms are significant, showing that, on average, serial acquirers earn lower announcement returns. Next, once we consider the sequence of

acquisitions made by serial acquirers, we learn that serial acquirers earn relatively higher announcement returns in their first acquisitions compared to the later deals.⁶ This result is both statistically and economically significant: acquirer announcement returns on fifth and subsequent acquisitions are about 90 to 140 basis points lower, on average.

We next examine whether country governance plays an important role in mitigating the increasingly negative wealth effects of serial acquisitions. We find that serial acquirers from better-governed countries experience relatively higher returns in their later deals. There is a large literature that documents the effect of law and legal protection on financial development, in particular, that of the stock market, the pace of capital raising activity, and the amount of proceeds from equity issues (see La Porta, Lopez-de-Silanes, and Shleifer, 2008, Shleifer and Wolfenzon, 2002, Reese and Weisbach, 2002; and, Doidge, Karolyi, and Stulz, 2004). It is well known that agency costs are lower in countries in which shareholders are better protected. Therefore, we would expect that corporate investments by firms from better-governed countries are more likely to create value. Indeed, Ellis, Moeller, Schlingemann, and Stulz (2013) show that acquirers from better-governed countries earn higher announcement returns when engaged in control cross-border acquisitions. We find evidence consistent with these studies, but go one step further in the analysis of serial acquirers. For instance, when we dichotomize our sample based on country governance (such as those with high anti-self-dealing index (ASDI), as proposed by Djankov et al. (2008), and those with high political stability and low corruption as proposed by Kauffmann, Kraay, and Mastruzzi (2009), we find that serial acquirers from better governed countries experience higher announcement returns. Further, serial acquirers from better-governed countries experience higher returns in later deals.

We also utilize the percentage of institutional holdings by institutional investors domiciled in better-governed countries as a proxy for the quality of corporate governance at the firm level. Our data on institutional ownership is from *FactSet Ownership* (formerly “Lionshares”), which covers institutions such as mutual funds, pension funds, bank trusts, and insurance companies around the world. Ferreira, Massa, and Matos (2010) find that foreign institutional ownership facilitates cross-

⁶ Following Fuller, Netter, and Stegemoller (2002), we define later deals to be those that are the fifth and higher acquisitions made by the same acquirer.

border mergers and increases the probability of takeover success and transfers of complete control. Consistent with the agency explanation, we find that the relatively lower announcement returns of serial acquirers versus non-serial acquirers and the decreasing pattern of serial acquirers returns throughout the series of acquisitions is mitigated when acquirers have higher institutional ownership involving investors domiciled in countries with better shareholder protection.

We further examine whether this pattern of announcement returns can be explained by the anticipation effect of later acquisitions made by serial acquirers, or by the managerial discretion or hubris hypothesis, in which, after successful prior deals, managers tend to make poorer subsequent acquisitions to keep the illusion of growth or as result of their increasing overconfidence. We first estimate the probability (hazard rate) of subsequent deal occurrence using the passage of time to proxy for the anticipation effect. After controlling for the anticipation effect, we find similar results as before – namely, we still find that serial acquirers earn significantly lower returns in latter deals.

To further distinguish the competing explanations for the phenomenon, we then compute the differences in the financial and operating outcomes of targets involved in deals led by serial acquirers and non-serial acquirers. With the market anticipation hypothesis, we propose that there should be no significant difference in the target's post-acquisition operating performance. If, on the contrary, later acquisitions are worse investment decisions, we should observe lower post operating performance for the corresponding targets. We exploit the *Amadeus* database to track financial and operating performance data of subsidiary firms. Thus, we are able to examine the target financial performance after the acquisition and compare it with the pre-acquisition performance.⁷

The tests revolve around five performance measures: return-on-assets (ROA), return-on-equity (ROE), total assets growth, sales growth, and fixed assets as a fraction of total assets. We test for significant differences in the changes of these measures from one year before to one year after and to two years after between targets in the later deals led by serial acquirers compared to the first five deals. Univariate tests reveal significant differences in the long-term operating performance of the

⁷ Note that as long as the target remains an independent subsidiary following the acquisition, we can obtain data on the target firms both before and after the acquisition. A potential concern is that the target firm's assets have changed after they are acquired because the parent combines some of its other assets with those of the target firm and keeps them together organizationally in a subsidiary. To address this concern, we follow Erel et al. (2013) and include only targets whose number of employees or size as measured by total assets does not change more than 15% (100%).

target firms subsequent to acquisitions. We find that target firms in the subsequent deals of serial acquirers tend to experience significantly lower profitability, lower sales, and lower investment. We interpret this evidence to be consistent with the view of Jensen (2005) that serial acquirers suffer from agency costs and make poor investments for the “illusion of growth.”⁸

The remainder of the paper is organized as follows: section 2 reviews the literature and presents the testable hypotheses; section 3 presents the data and summary statistics; section 4 shows the results of short-term market reactions to the deal announcement for serial and non-serial acquirers; section 5 tests alternative explanations for the different pattern of announcement returns between serial and non-serial acquirers (first and later acquisitions); section 6 analyzes the role of country governance and institutional ownership; and section 7 concludes.

2. Hypotheses Development

Earlier studies on serial acquisitions were motivated to examine why bidding firms still engage in mergers when they do not appear to gain from the acquisitions (see, for example, Asquith, Bruner, and Mullins, 1983). An important distinction of these studies from previous work on mergers is that they now separately consider firms that engage in many acquisitions over their sample period (see Asquith, Bruner, and Mullins, 1983, and Schipper and Thompson, 1983). These firms tend to be large conglomerates. These studies find that at the announcement of a merger program, the bidders do experience significant positive abnormal returns, which suggests that the acquisition program is value-enhancing. The subsequent announcements of individual deals in these acquisition programs however do not earn positive abnormal returns. These findings suggest that the market has anticipated subsequent deals and therefore it is important to separately examine firms that engage in serial acquisitions.⁹ Thus, we might expect that the average abnormal return is lower for serial acquirers than non-serial acquirers.

⁸ Though our results so far are also consistent with the “management hubris” view of Billet and Qian (2009), we fail to find evidence on deal premium to support this alternative hypothesis. Following Ahern (2010), we also test whether serial acquirers pay higher premium in later acquisitions and find no such evidence.

⁹ Instead of examining anticipation effect in serial acquisitions, Song and Walkling (2011) examine the anticipation effect among industry rivals.

More recently, Fuller, Netter, and Stegemoller (2002) examine the first large sample of serial acquirers from 1900 to 2000. Though their primary focus is on the differential announcement returns of the bidders depending on public status of the target firms, they are the first authors finding that bidders experience more negative returns in later acquisitions. Moeller, Schlingemann, and Stulz (2005) study the merger wave at the end of 1990s and find that mergers that are associated with large losses (\$1 billion or more) are usually preceded by value-enhancing acquisitions and are correlated with high market-to-book ratios, consistent with managerial discretion hypothesis of Jensen (2005). Masulis, Wang, and Xie (2007) find that acquirers with more anti-takeover provisions experience significantly lower announcement-period stock returns than other acquirers. Alternatively, Aktas, de Bodt, and Roll (2009) argue that managers suffer from hubris as a result of successful outcome in earlier mergers and Billet and Qian (2009) examine the merger history of individual CEOs and indeed find strong empirical support for CEO overconfidence in series of acquisitions. Building on this reasoning, we formulate our first hypothesis:

H1: The average announcement return of serial acquirers is lower than that of non-serial acquirers, ceteris paribus; later acquisitions made by a serial acquirer earn lower announcement returns relative to earlier acquisitions, ceteris paribus.

Despite the fact that a large proportion of worldwide merger activity involves the same acquirers targeting private firms from foreign countries, the voluminous literature on mergers has focused primarily on domestic deals that involve publicly traded firms without paying special attention to the repetitive nature of acquisition programs. Though this literature helps understand many factors that are in play, it does not address for example, whether market frictions created by differences in country origin play any role in the decisions of serial acquirers. Boubakri, Chan, and Kooli (2012) and Fuller, Netter, and Stegemoller (2002) find that US serial acquirers experience significantly negative returns when engaging in cross-border acquisitions. In our study we examine a large global sample of mergers and acquisitions since the latest merger waves in the late 1990s.¹⁰ The market for mergers has become increasingly global (see Erel, Liao, and Weisbach, 2012). National

¹⁰ A related paper by Kengelbach, Klemmer, Schwetzler, and Sperling (2012) examines a large global sample of 20,975 transactions by serial acquirers but focuses mainly on post-merger integration problems. They find that a longer waiting time between two consecutive transactions are associated with higher announcement returns.

borders bring about a set of frictions that domestic mergers do not have, for example, cultural, language, geographic, accounting, tax, currency, and market sentiment differences can increase the costs of combining two firms. Firms that used to engage in serial domestic acquisitions are now engaging in serial cross-border acquisitions. Given the potentially higher costs associated with cross-border acquisitions, global serial acquirers would experience even more negative announcement returns in later acquisitions if the managerial discretion/hubris hypothesis holds. The anticipation hypothesis however has no specific predictions on global serial acquirers.

There is a large literature that documents the effect of law and legal shareholder protection on financial development, in particular, that of the stock market, the pace of capital raising activity, and the amount of proceeds raised in equity issues (see La Porta, Lopez-de-Silanes, and Shleifer, 2008; Shleifer and Wolfenzon, 2002; and, Reese and Weisbach, 2002). Agency costs are lower in countries where shareholders are better protected. Therefore, we would expect that corporate investments by firms from better governed countries are more likely to create value. Indeed, Ellis, Moeller, Schlingemann, and Stulz (2013) show that acquirers from better governed countries earn higher announcement returns when engaged in control cross-border acquisitions. Ferreira, Massa, and Matos (2010) find that foreign institutional ownership facilitates cross-border mergers and increase the probability of takeover success and complete controls. Since institutional investors can be from different countries, those domiciled in countries with greater shareholder protection laws should be able to provide more effective monitoring to the firms where they have their holdings. Building on these arguments, we develop our second hypothesis:

H2: Global serial acquirers from countries with lower quality governance standards, or those with a lower fraction of institutional holdings of investors domiciled in countries with superior quality governance standards, earn significantly lower announcement returns, particularly in subsequent deals, ceteris paribus.

One way to distinguish the competing hypotheses is to examine the operating performance of the target firms subsequent to the acquisitions. If the lower announcement returns in later acquisitions are driven by anticipation, then we would see no significant difference in subsequent operating performance of target firms regardless of the sequence. However, if the lower announcement returns

in later acquisitions are driven either by managerial discretion or managerial hubris, then we would expect to see poorer performance of the target firms in later acquisitions.

Until recently, data on operating performance of target firms subsequent to a merger are not publicly available in the U.S., which renders testing of subsequent performance of the target firms impossible. However, most European countries require disclosure of financial data for subsidiaries, so it is now possible to examine the operating performance of the target firms subsequent to the acquisition as long as the target remains an independent subsidiary following the acquisition (see Erel, Jang, and Weisbach, 2013). The availability of these data allows us to test our third hypothesis:

H3: If serial acquirers are driven by managerial discretion or managerial hubris, then the post-merger operating performance of target firms acquired in later acquisitions should be weaker compared to that of targets acquired in earlier acquisitions, ceteris paribus.

To establish positive evidence for the managerial discretion hypothesis, we follow the sales of any target firms subsequent to the purchases made by serial acquirers. If these acquisitions were poor decisions made by managers of serial acquirers, then we'd expect the subsequent sales of these target firms to be good news to the market and therefore serial acquirers would gain positive announcement returns. Admittedly, these poor decisions may not be viewed as such by managers of serial acquirers and thus very few target firms were subsequently sold. Empirically, we can only observe the pricing impact on the acquirer when the target firms were indeed sold. We test whether the average announcement return around sales of target firms previously acquired by a serial acquirer is higher if the target was acquired in later, rather than earlier, acquisitions, ceteris paribus.

3. Data

We use several sources to construct the panel of firms involved in mergers and acquisitions. Our sample starts with acquisitions of 100 percent stakes of the target from the *Zephyr* database provided by *Bureau Van Dijk*.¹¹ We then match the public acquirers with Thomson Reuters' *Worldscope/Datastream* databases to collect accounting, ownership, and return information. For the

¹¹ We have also used acquisition deals from Thomson Reuters *Securities Data Corporation* (SDC), which is widely used in the acquisition literature and has similar coverage as *Zephyr*. Our results on acquirer announcement returns are very similar regardless of the dataset we use.

subset of target firms that can be found on *Amadeus*, we use the common identifier between *Zephyr* and *Amadeus* provided by *Bureau Van Dijk* to obtain information on financial and operating performance.

Our sample starts with all 100% acquisition deals involving public acquirers over the period 1997-2012 from *Zephyr*. Acquirers that make more than five acquisitions over the sample period are classified as “serial acquirers.”¹² After matching public acquirers with *Datastream/Worldscope*, we end up with a sample of 2,374 unique public serial acquirers, involved in 18,359 acquisitions, totaling \$4.5 trillion in 2010 constant dollars. We benchmark them with a sample of 9,797 unique public acquirers involved in 15,370 deals, totaling \$2.4 trillion in 2010 constant dollars.

Table 1 shows the country distribution of serial acquirers and non-serial acquirers. The most active countries in the market for mergers and acquisitions are the U.S., the U.K., Canada, Australia, Japan, France, and Sweden. Interestingly, 78% of the global serial acquirers also originate from these countries, whereas 42% of the global non-serial acquirers are from other countries.

Table 2 presents summary statistics of serial acquirers and non-serial acquirers. We present dummy variables for public targets, deals paid in stock, cross-border deals, and same-industry deals. We also include the following deal characteristics: number of deals the acquirers have done in the past, the average number of years between deals, the acquirer’s market-to-book ratio, book leverage, and the logarithm of deal value.

Only 4 percent of all acquisitions by serial acquirers involve a publicly traded target, similar to that of acquisitions by non-serial acquirers (5%). Despite engaging in larger deals, serial acquirers are less likely to pay in stock (13%), whereas non-serial acquirers are much more likely to pay in stock (28%). Serial acquirers and non-serial acquirers are very similar in other characteristics of the deals. For example, one in three acquisitions made by either serial acquirers or non-serial acquirers is of cross-border nature. Two in three deals are related in terms of industry. Serial acquirers tend to have higher leverage, higher market-to-book ratio, and engage in larger deals.

¹² We have also used other definitions of serial acquirers such as firms that make more than two acquisitions over the sample period, or firms that make more than two acquisitions over the period of three (five) years. We show in our empirical analysis that our results are robust to the alternative definitions of serial acquirers.

Figure 1 plots the number and total value of all acquisitions by year for both serial acquirers and non-serial acquirers. It demonstrates that there is a steady increase in acquisition activity occurred in early 2000s, a significant drop in acquisition activity at the peak of the global crisis, in 2009, and a comeback in 2010. This pattern in acquisition activity in the 2000s is similar for both serial acquirers and non-serial acquirers though serial acquirers are engaged in proportionately more deals and larger deals than non-serial acquirers.

To see whether serial acquirers and non-serial acquirers differ in the industries they reside, we report the number and total value of all acquisitions by industry. Figure 2 plots the top industries in declining rank by total number of deals led by both serial acquirers and non-serial acquirers. We use Fama-French 48 industry classifications and only report those acquirer industries in which there are more than 500 deals in the sample period. We identify sequential acquisitions in a large number of industries. Notably, almost 40 percent of serial acquirers concentrate in three industries (Software, Business Services, and Wholesale), while only 24 percent of non-serial acquirers concentrate in these industries. Further, some industries such as telecom, oil, and drugs have larger deals despite fewer in number. This is not surprising given that firms in these industries are relatively large in size.

4. Acquirer Announcement Returns

In this section, we test whether serial acquirers differ from non-serial acquirers in the short-term market reaction to the deal announcement and whether the sequence of acquisitions affects the announcement returns of serial acquirers. Previous studies (Fuller, Netter, and Stegemoller, 2002, Moeller, Schlingemann, and Stulz, 2005, Aktas, de Bodt, and Roll, 2009, and Billet and Qian, 2009) have found evidence that serial acquirers earn significantly lower returns in later acquisitions (often measured as fifth and above). However, all of these studies focus on the U.S. firms and the majority of their data are from the 1990s, during which time one of the largest merger waves has occurred.

We follow Brown and Warner's (1985) standard event study methodology to calculate cumulative market-adjusted returns (CMARs) for the 21-day period ($t-10, t+10$), 11-day period ($t-5, t+5$), and 3-day period ($t-1, t+1$) around the announcement date supplied by *Zephyr*. We estimate the cumulative market-adjusted buy-and-hold returns instead of utilizing a market model since our sample

of serial acquirers are frequent buyers and there is a high probability that previous takeover attempts will be included in the estimation period thus making beta estimations less meaningful (see Fuller, Netter, and Stegemoller, 2002).¹³

We report results from cross-sectional regressions of bidders' CMARs on various deal- and firm-specific variables in Table 3. In the first set of regressions – Models (1) to (4) – we use the full sample of both serial and non-serial acquirers (what we refer to as the “extensive margin”), and in the second set of regressions – Models (5) to (8) – we use the sample of serial acquirers only (or the “intensive margin”). Given the findings of previous studies that the sequence of the acquisitions also matter, we include two dummy variables that indicate the first deal made by an acquirer as well as the fifth and higher deals (for serial acquirers only), along with variables that reflect acquisition learning (Aktas, de Bodt, and Roll, 2009).

We follow the literature on what control variables to employ in the regressions. For example, Fuller, Netter, and Stegemoller (2002) argue that acquirers of private firms experience more positive announcement returns due to the illiquidity of the market for assets. Whether acquirers pay in stock or in cash would also have an effect in the announcement returns, either because of the winner's curse (Martin, 1996, Hansen, 1987, Boon and Mulherin, 2008) or because of misevaluation of the acquirer stock (Shleifer and Vishny, 2003, and Baker, Stein, and Wurgler, 2003). It can also be argued that cross-border deals usually are available to firms from many countries and therefore the price is globally set for such deals (Ellis, Moeller, Schlingemann, and Stulz, 2013). There is a consensus in the literature that deals that involve firms in related industries usually create more synergy gains and avoid the diversification discount (Lang and Stulz, 1994; Graham, Lemmon and Wolf, 2002). Additionally, we include country characteristics such as GDP per capita and the stock market size scaled by GDP.¹⁴ Finally, all regressions (except where noted) include industry, year, and country fixed-effects; standard errors are clustered by country and year.¹⁵

¹³ We do not use the market model because our sample of acquirers frequently engage in cross-border acquisitions which makes it harder to interpret a standard market model typically used for domestic firms.

¹⁴ In unreported regressions, we also include firm characteristics such as firm size, leverage, and market-to-book ratios and find very similar results. However, including additional firm controls reduces sample size, so we choose to focus on a broader sample throughout the paper. The results with additional firm controls are available upon request.

¹⁵ In unreported tables, we have also included firm fixed effects for examining intensive margin where only serial acquirers are examined. Our results on fifth and higher deals remain significant.

We begin with the simple ordinary least-squares (OLS) regressions, using the full sample, of 21- and 11-day window CMARs on the serial acquirer dummy variable in Models (1) and (2) of Table 3 and then introduce additional control variables in Models (3) and (4). All regressions include year, country, and industry fixed effects; the results indicate that serial acquirers experience significantly lower returns than non-serial acquirers. The economic magnitude of this effect is also significant. For instance, taking Model (3) as an example, we observe that serial acquirers experience, on average, a 142 basis point lower announcement return than non-serial acquirers. We proceed our analysis using the subsample of serial acquirer only (intensive margin) to uncover whether the sequence of deals matter. Models (5) and (6) of Table 3 include the dummy variables that indicate the first and the fifth & higher acquisitions of serial acquirers; Models (7) and (8) include the additional control variables. As before, all regressions include year, country and industry fixed effects. The results show that serial acquirers experience higher announcement returns in the first acquisition, but significantly lower in fifth and higher acquisitions. The results are both statistically and economically significant – taking Model (7) as an example, on average, serial acquirers obtain lower returns in fifth and higher acquisitions of 117 basis points (about 70% of the mean CMAR(-10,+10) of serial acquirers).

There is a statistically significant negative relation between the public status of the target firm and the announcement returns of the acquirer, consistent with the conjecture that private firms are more illiquid and acquirers can extract higher gains. Acquirers earn higher announcement returns when purchasing target firms using stocks, which can be viewed inconsistent with the “market misvaluation” hypothesis. However, it is important to point out that the majority of the target firms are privately-held and therefore our results are consistent with the hypothesis that payment in stock is valued higher when a new blockholder is likely to join the firm and increase managerial monitoring (see Chang, 1998, Fuller, Netter, and Stegemoller, 2002, and Moeller, Schlingemann and Stulz, 2004).¹⁶ Consistent with the notion that a cross-border deal involves a target firm that is bid for openly in a global market, acquirers of cross-border deals tend to experience a lower announcement return. Although negative in sign, the coefficient of the cross-border dummy is not statistically different from zero in one specification - the 11-day event window on the extensive margin. Finally, serial acquirers

¹⁶ In unreported tables, we find that acquirers earn lower announcement returns when purchasing public target using stock.

tend to experience lower returns as they engage in higher numbers of acquisitions (albeit not statistically significant for the 11-day window on the intensive margin). In contrast to the learning hypothesis which predicts that acquirers earn higher returns when the time gap between deals is shorter, in general we do not find that the time gap between deals helps with acquirer returns.

We explore a number of robustness tests in Table 4 on both samples (for the extensive and intensive margins), primarily by using different subsamples and various definitions of serial acquirers.¹⁷ First, we separate U.S. from non-U.S. acquirers in Models (1) and (2) (full sample) and Models (6) and (7) (serial acquirers only), respectively. Earlier papers have mostly focused on U.S. firms so we test whether a similar pattern holds in our sample for both U.S. firms and non-U.S. firms. Second, to make sure that our results are not driven by small deals (deal value lower than \$1 million), and to alleviate any concerns that announcement returns of serial acquirers may not be accurate if they had engaged in multiple deals within a short 30-day window, we exclude such deals in Models (3) and (8). Finally, we test the robustness of our results to alternate definitions of serial acquirers used in the literature. For instance, Fuller, Netter, and Stegemoller (2002) and Macias, Rau, and Stouraitis (2013) used a definition of serial acquirers based on a three-year or a five-year rolling window. Thus, we also test whether our results hold up when we define a serial acquirer to be any firm that engaged in more than five acquisitions in a three-year window (Models 4 and 9) and a five-year window (Models 5 and 10).¹⁸

In unreported tables, we also explore whether our results could be explained by an alternative hypothesis. For example, one may argue that firms are more likely to become a serial acquirer if they had earned higher returns in their first acquisition. We check whether this is a possibility by interacting the first acquisition dummy with the serial acquirer dummy and find no support for this hypothesis. It could also be the case that cross-border deals are significantly different from domestic acquisitions and may lead to different results if they are estimated separately. We check whether our

¹⁷ To save space, we omit reporting results on CARS (-5,+5) from this point on, but all our results hold for alternative event windows.

¹⁸ In unreported tables, we also test whether our results are robust to other definitions of serial acquirers. Billet and Qian (2009) defined a serial acquirer to be one that engaged in at least two acquisitions. Given the relatively shorter sample period of our sample, there is a concern that we are selecting a sample of acquirers that are the most frequent shoppers. We examine whether our result holds up when we define a serial acquirer to be any firm that engaged in more than two acquisitions in our sample period, in three-year or five-year rolling windows and the results are very similar to those reported in Table 4.

results hold for domestic deals and cross-border deals separately and find that the results are significant in both sub-samples.

Overall, we find that serial acquirers earn significantly lower returns in their fifth and higher acquisitions throughout the table. The results are reliable and robust to alternative subsamples of firms and definitions. The economic magnitudes are comparable to that found in Table 3 where we defined serial acquirers to be those with five or more acquisitions throughout the entire sample period. Eliminating smaller deals or deals that occurred within 30 days by the same acquirer does not affect our results.

5. The Role of Country Governance and Institutional Ownership

In this section, we examine whether global serial acquirers would experience different announcement returns depending on the acquirer country characteristics and institutional ownership of the acquirer. There is a large literature that documents the effect of law and legal protection on financial development, in particular, that of the stock market, the pace of capital raising activity, and the amount of proceeds raised in equity issues (see La Porta, Lopez-de-Silanes, and Shleifer, 2008, Shleifer and Wolfenzon, 2002, Reese and Weisbach, 2002). It is well known that agency costs are lower in countries where shareholders are better protected and in firms where institutional ownership is high. Therefore, we would expect that corporate investments by better governed firms from better governed countries are more likely to create value. Ellis, Moeller, Schlingemann, and Stulz (2013) show that acquirers from better governed countries earn higher announcement returns when engaged in control cross-border acquisitions. Based on these arguments, the agency problems affecting serial acquirers uncovered in the previous section, should be mitigated when the serial acquirer is from a country with better governance or has higher levels of institutional ownership.

To measure how well a country is governed, we utilize three measures of the governance quality at the country level: the ASDI index, as proposed by Djankov et al. (2008), political stability index, and corruption control index, both as proposed by Kauffmann, Kraay, and Mastruzzi (2009). The last two indicators are constructed using an unobserved components methodology and reflect the responses on the quality of governance given by a large number of enterprises, citizens and expert

survey respondents. We create three dummy variables based on these indices and define countries as better governed if these measures are above the world median.

Table 5 estimates cross-sectional regressions of bidders' CMARs on the same variables included in Table 3 (for both the full sample and the sample of serial acquirers only) plus three additional dummy variables based on the country-level governance measures as well as the interaction terms between serial acquirers and these country-level governance measures. As before, all regressions include industry, year, and country fixed-effects; standard errors are clustered by year. In the first set of regressions in Table 5 – Models (1) to (3) – we use the full sample of acquirers and in the second set of regressions – Models (4) to (6) – we use the sample of serial acquirers only. Our coefficients of interest are the interactions between serial acquirer and the country-level proxy for good governance in Models (1) to (3), and the interactions between fifth and higher acquisition and the proxy for better governed countries, in Models (4) to (6).

Though we find that, on average, serial acquirers still experience significantly lower announcement returns, this effect is mitigated when the serial acquirer is from a country with better quality governance standards. The coefficient of the interaction between high country-level governance and the serial acquirer dummy is positive and statistically significant in two of the three measures (ASDI Index and Anti-Corruption Index). The economic magnitude of the cross-country differences is large. For example, in Model (1), we observe that although serial acquirers experience, on average, lower 21-day announcement returns of 168 basis points, those from better governed countries perform relatively better and experience higher announcement returns of about 106 basis points, on average. Further, among serial acquirers only, the sequence of the acquisitions matters: although serial acquirers experience lower announcement returns for their fifth and higher acquisitions, this effect is significantly mitigated when the serial acquirer is domiciled in a country with better shareholder protection. The coefficients of the interactions between the proxies for better governed countries and the fifth-and-higher acquisition dummy variable is positive and statistically significant for two of the three alternative proxies. The economic magnitude of the cross-country differences is again large and, in some cases, may even offset the average negative effect that serial acquirers experience in later acquisitions. For example, in Model (5), the positive coefficient of the

interaction term of 135 basis points is greater than that of fifth-and-higher acquisitions dummy variable of -125 basis points.

We next perform a similar analysis using variables based on the percentage of the acquirer's institutional ownership that are domiciled in turn in countries with better quality governance standards. That is, we take into account the domicile of the institutional investor, as institutional investors from better governed countries are expected to monitor more intensely and to improve the quality of the acquirer's corporate governance standards. Table 6 reports results from our typical cross-sectional regressions of bidders' CMARs (-10, +10), using both the full sample and the sample of serial acquirers only, and adds our variables based on the institutional ownership as well as the interaction terms with serial acquirers and fifth and higher acquisitions. As before, all regressions include industry, year, and country fixed-effects; standard errors are clustered by year. The data on institutional ownership are from *FactSet/LionShares* database as in Ferreira and Matos (2008). This database covers institutions such as mutual funds, pension funds, bank trusts, and insurance companies. Total, foreign, and domestic institutional ownership are defined in Aggarwal, Erel, Ferreira, and Matos (2011). For instance, total institutional ownership is computed as the sum of the holdings by all institutions in the firm's stock divided by the firm's market capitalization. Whenever a stock is not held by any institution, according to *FactSet/LionShares*, the authors, as do we, follow Gompers and Metrick (2001) to set institutional holdings equal to zero. We further separate institutional owners according to their country of origin, as those from better governed countries are more likely to improve the quality of the acquirer's corporate governance. Thus, we compute the percentage of holdings of the acquirer's stocks held by institutional investors domiciled in countries with better governance quality, based on the same three measures of country governance quality used above: the ASDI index, as proposed by Djankov et al. (2008), political stability index, and corruption control index as proposed by Kauffmann et al. (2009).

The results, shown in Table 6, are in line with what we find in the cross-country multivariate analysis in Table 5, but the economic magnitudes are larger and the coefficients are statistically more precise. For instance, we observe that the lower abnormal announcement returns of serial acquirers are mitigated when the serial acquirer has larger stake of institutional ownership held by institutional

investors from better governed countries. Each of the interaction coefficients of the serial acquirer dummy and total institutional ownership from high ASDI, high Anti-Corruption, or high Political Stability are statistically significant at the 1% significance level.

Active institutional investors are expected to provide better monitoring to the firms in which they have holdings (Aggrawal et al., 2011; Ferreira and Matos, 2008), so we refine our analysis further by creating an alternative measure of institutional ownership based only on holdings from active investors. We classify institutional investors into active and passive following Ferreira and Matos (2008). We classify institutional investors into active and passive following Ferreira and Matos (2008). For instance, active institutional investors include investment advisors (e.g., brokers, research firms, investment banking), hedge funds, and venture capital/ private equity firms; passive institutional investors include banks, insurance companies, and pension funds and endowments. Models (4) and (8) in Table 6 exhibit results that are consistent with what we found earlier. In our extensive margin analysis, we still find that the lower announcement returns experienced by serial acquirers are mitigated when the serial acquirers have higher levels of active institutional ownership. Similarly, our intensive margin analysis shows that, among serial acquirers, the pattern of lower announcement returns in the fifth and higher acquisitions is mitigated for serial acquirers with greater levels of active institutional ownership.

Overall, we find evidence that serial acquirers from countries with higher governance standards, those that have higher levels of institutional ownership from investors domiciled in countries with better quality governance standards or those with higher levels of active institutional ownership are less prone to make worse acquisitions in later deals. This evidence is consistent with the idea that better corporate governance helps mitigate the agency problems of serial acquirers.

6. Anticipation or Managerial Discretion?

Two explanations can be provided for the pattern of announcement returns uncovered in the previous section that shows lower abnormal returns for the average serial acquirer vs. non-serial acquirer, especially in later acquisitions. First, when the market knows that a bidder is a serial acquirer, future acquisitions will be anticipated and the potential stock price impact of a value-creating acquisition would be mitigated. Therefore, later acquisitions made by a serial acquirer would

be associated with lower announcement abnormal returns. Second, in the spirit of the agency cost argument of Jensen (2005), the success of prior acquisitions may put pressure on managers to keep the value of equity high, which leads them to make poor acquiring decisions for the illusion of growth. Moreover, serial acquirers may also become more overconfident over the course of a series of successful acquisitions, which leads them to make value-destroying acquisitions in the future (managerial hubris). Both situations result in serial acquirers making poorer acquisitions in later deals.

To test which of the two explanations prevails – that is, whether later acquisitions are indeed worse or not for the acquirer’s shareholders - we first estimate the probability (hazard rate) of subsequent deal occurrence to proxy for the “anticipation” effect. Giglio and Shue (2014) show that the passage of time during the period between the merger announcement and resolution contains important information about whether the deal will ultimately be completed. We adopt a similar approach, but use the passage of time between deal announcements by the same acquirer to proxy for the anticipation effect we seek to model.

Table 7 reports the regressions results. Model (1) presents the regression where cumulative returns of the 21-day window are the dependent variable and the hazard rate as the independent variable.¹⁹ Models (2) to (5) present the regression results where additional variables of interests are included as independent variables. As in previous tables, we report results from our typical cross-sectional regressions of bidders’ CMARs (-10, +10), using both the full sample (Models 2 and 3) and the sample of serial acquirers only (Models 4 and 5). As before, all regressions include industry, year, and country fixed-effects; standard errors are clustered by year.

We find that indeed anticipation plays a role in explaining the announcement returns. The higher the hazard rate —or, if a deal is more eagerly anticipated due to the passage of time since the last deal - the lower the announcement returns. More importantly, after controlling for the anticipation effect, we still find that serial acquirers earn significantly lower returns in latter deals. The economic magnitude is still very large and comparable to what we found in Table 3 without correcting for the “anticipation” effect.

¹⁹ In the spirit of Giglio and Shue (2014), we estimate empirical hazard rates as the proportion of subsequent acquisitions made by serial versus non-serial acquirers within one, two, three, and so on months of the previous acquisition. This gives us the event-time relative frequency of acquisitions made by serial and non-serial acquirers with respect to the previous acquisition.

To further disentangle the two competing hypotheses, we focus on target companies and analyze their changes in operating performance before and after the acquisition. To do this, we utilize the *Amadeus* database, a pan-European financial database containing information on over 5 million companies from 34 countries, including all the EU countries and Eastern Europe. One reason to focus on this sample of firms is simply due to data availability on targets as subsidiaries. But a better reason to choose a sample of European firms rather than U.S. firms is due to differences in the accounting disclosure policies for target firms in these two regions. For instance, in the U.S. subsidiary firms via acquisition are not required to disclose their financial data, whereas in most European countries they are. Therefore, for most European targets we are able to track down their financial performance after the acquisition and compare it with the pre-acquisition performance.

In Table 8, we examine five measures of financial and operating performance changes experienced by target firms: return on equity, return on assets, total assets, fixed assets as a ratio of total assets, and sales. Panel A presents univariate results for changes from one year before the acquisition to one year after the acquisition. Panel B summarizes changes from one year before the acquisition to two years after the acquisition. Our hypothesis is that if the negative announcement returns of later deals by serial acquirers are driven by the fact that such deals are anticipated, then we should not see any significant difference in the changes of target operating and financial performance between first and later acquisitions. However, if later deals are indeed “worse” deals because of agency problems or managerial hubris, then we would expect a significantly poorer target performance subsequent to the deal.

The table shows the median change for each financial and operating performance variable and the z-statistics from the Wilcoxon rank-sum test that tests the differences in medians between the group of targets that were acquired by a serial acquirer in their fifth and above acquisitions and the group of targets acquired by a serial acquirer in the first five acquisitions. So far, our result is consistent with the managerial discretion or hubris hypothesis. We find that subsequent to the acquisition, target firms in fifth and higher acquisitions of serial acquirers experience significantly lower improvement in profitability as measured by ROA and ROE. They also expand less as

evidenced by smaller increases in total assets and total sales. And proportional to the size of the firm, they invest less in fixed assets. This pattern holds up to a two-year period after the acquisition.

Several potential concerns arise with this analysis. First, serial acquirers, especially in later acquisitions, may be more prone to keep targets as independent subsidiaries rather than to fully integrate the two businesses. We do not find this to be the case. Serial acquirers in later acquisitions (fifth and above) and earlier acquisitions (first four) keep about 20% of the targets as independent subsidiaries. Second, one may worry that this sample is substantially different from the full sample. We test whether our earlier results hold for this restricted sample where we have information on subsequent operating performance for the targets. And we find that our results are similar to what we found in our original larger sample: serial acquirers experience reliably negative returns in later acquisitions.

Another concern is that the target firm's assets have changed after they were acquired because the parent combines some of its other assets with those of the target firm and keeps them together organizationally in a subsidiary. To address this concern, we follow Erel et al. (2013) and include only targets whose number of employees or size as measured by total assets does not change more than 15% (100%). Table 9 repeats the analysis of Table 8 with these additional requirements to ensure that our target firms are comparable before and after the acquisition. Consistent with the previous analysis, the pattern we find reveals that target firms in fifth and higher acquisitions of serial acquirers experience significantly lower increase in profitability, size, and investment expenditures.

We again explore a number of robustness tests in Table 10, primarily using various definitions of serial acquirers and subsamples, similar to Table 4. Panel A examines whether our result holds up when we define a serial acquirer to be any firm that engaged in more than 2 acquisitions in our sample period. Panel B excludes smaller deals (<\$1million). Panels C and D repeat the analysis with an alternative definition of serial acquirers; namely, serial acquirers are firms that engaged in more than 2 acquisitions in a trailing five-year window.

We find that target firms of serial acquirers in fifth and higher acquisitions experience significantly less improvement in profitability, investment, and sales. The results are strong and robust. The economic magnitude is very similar to those found in Table 8 where we defined serial

acquirers to be those with five or more acquisitions. Further, eliminating smaller deals does not affect our results. This evidence is consistent with the argument of managerial discretion or hubris in later acquisitions made by serial acquirers.

Additionally, to more directly check the existence of a potential market anticipation effect throughout the series of acquisitions, we also test whether there was a price run-up prior to the acquisition announcement. In unreported tables, we calculate CMARs for the 12-month period, 6-month period, and 3-month period up until ten days prior to the announcement date. As before, we estimate the cumulative market-adjusted buy-and-hold returns. If the lower announcement returns associated with later acquisitions are due to heightened market anticipation, then we would expect a higher price run-up in later acquisitions. However, if serial acquirers are affected by agency costs or hubris over the course of a series of acquisitions, then we would expect that the price run-up is either not statistically different between earlier and later acquisitions or lower for later acquisitions as the quality of acquisitions deteriorates over time. We find that stock price run-ups for all three windows are significantly lower for later acquisitions, consistent with managerial discretion hypothesis.

In our last set of experiments, we examine what happens when the serial acquirers eventually sell the target firms. It is important to note that we have not observed many sales in our sample period. It could be because the sample period is very recent and not enough time has passed for an empirical researcher to observe many sales. Equally likely, most target firms are eventually fully integrated into the acquirer firm and therefore no sales will occur even with a longer window. Whatever the reason may be, our goal here is to test for those sales that did happen subsequent to the acquisitions. More specifically, we want to investigate whether there is any difference between sales of the target firm in the first five acquisitions and those of target firms in the fifth and higher acquisitions. So far, the evidence suggests that serial acquirers make worse decisions in later acquisitions and if this is the case, then we'd expect them to experience higher announcement returns when they subsequently sell these target firms.

We collect information on the seller as well as the seller's parent firm including the name and the seller's Bureau Van Dijk ID from *Zephyr*. We then match the seller with the acquirer of our sample that involves the same target firm. Our sample here consists of 18 target firms in the first

acquisition that are subsequently sold and 29 target firms in the fifth and higher acquisitions that are sold. In unreported tables, we verify that our earlier results hold for this sample of deals where we also observe the subsequent sales. Table 11 summarizes the announcement returns when acquirers sell their target firms. We find that serial acquirers on average experience positive announcement returns when they sold their later targets (0.8% to 1%) and negative announcement returns when they sold their first targets (-0.4% to -0.8%). However, we cannot establish statistical significance due to the small sample size.

Altogether, our tests provide evidence consistent with the managerial discretion or hubris hypothesis. In other words, our results indicate that the lower announcement returns of serial acquirers in later acquisitions cannot be explained by a pure market anticipation effect; instead, the poorer quality of those later deals is the most plausible explanation. Following Ahern (2010) and Aktas, de Bodt, and Roll (2009), we test more directly whether serial acquirers are driven by managerial hubris and pay higher premium in later deals. In unreported tables, we examine whether serial acquirers bid more or less aggressively than non-serial acquirers. It is important to note that we only have information on bid premium from *Zephyr* for 20-25% of the deals. The bid premium is computed as the bid price as a percentage of the closing price of the target shares one day, one week, and four weeks prior to the announcement date. For the four-week bid premium, for example, both non-serial acquires and serial acquirers bid 40% over the target closing price. There is no significant difference for other proxies of bid premium between serial acquirers and non-serial acquirers. Although we acknowledge that this analysis only applies to a smaller subsample of our dataset, we fail to provide evidence consistent with managerial hubris; thus, the main explanation for our results should be more related to the agency problems of serial acquirers.²⁰

²⁰ Ideally, one would also like to examine whether targets of global serial acquirers would experience a different improvement in subsequent operating performance depending on the acquirer's country characteristics and on the institutional ownership of the acquirer. However, given that most of our data on target operating performance are from European countries, there is very little dispersion in country-level governance characteristics. As a result, we have a very small sample size. In unreported tables, we also examine how institutional ownership affects subsequent operating performance and find evidence consistent with what we find for the announcement returns. Higher institutional ownership helps mitigate the lower target operating performance in later acquisitions.

7. Conclusions

Serial acquisitions around the world have become more of the norm in the past decade. One in every five public acquirers is a serial acquirer. A McKinsey Quarterly report by Rehm, Uhlaner, and West (2012) find that the world's top 1000 nonfinancial companies completed more than 15,000 deals over the past decade. These serial acquirers do not only purchase assets in their own industry and country, but also engage in cross-border and inter-industry acquisitions. Despite the significant role played by these serial acquirers in the world market for mergers and acquisitions, the literature on the motives and performance of these serial acquirers is relatively scarce, especially in the global context.

Our study performs one of the first comprehensive global studies of serial acquirer deals. Of 2,374 unique public serial acquirers involved in 18,359 acquisitions, and benchmark them with a sample of 9,797 unique public acquirers involved in 15,370 deals. We find that serial acquirers experience lower announcement returns compared to non-serial acquirers. Acquirers experience lower announcement returns mostly when the acquisition is the fifth and higher in a serial acquisition. The pattern of lower serial acquirer's announcement returns, especially in later acquisitions, is aggravated when serial acquirers are from countries with poor shareholder protection and have lower levels of institutional ownership. Furthermore, institutional investors from countries with better quality governance standards and with institutional investors domiciled in such countries play an important role in mitigating the agency problems.

To see whether the anticipation effect could explain our findings, we estimate the hazard rate of deal occurrence and find that though acquirers earn lower returns when a deal is more anticipated, our results are still significant even after correcting for the anticipation effect. When we examine the post-deal performance of the targets after the acquisition, we find that those of serial acquirers in their fifth and higher acquisitions experience significantly less improvement in profitability, investment, and sales. We interpret this as support for the managerial discretion hypothesis as opposite to the market anticipation argument.

This study leaves some issues unresolved. For example, for the international sample, there is no reliable global data source over an extended sample period with which to measure governance activity at the firm level. We cannot test whether the managers of these global acquirers are

entrenched or not using proxies that are readily available in the U.S. (for example, Harford and Li, 2007). Future work with richer data on firm governance activities internationally could lead to more fruitful results. Secondly, we attempt to cover as large a sample as possible in this paper, there is the necessary caveat that we cannot hone in on one particular industry, such as the technology industry or the beverage industry, or one geographic region that have seen waves of consolidation in the past decade. Given the increasing prevalence of waves of such transactions around the world, we have good reasons to believe that it should be given more attention than it has received so far.

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Table 1. Sample Distribution by Acquirer Country of Domicile.

The table shows country distribution of a sample of acquisition deals involving public acquirers over the period from 1997 to 2012. The data are obtained from *Bureau Van Dijk's Zephyr Mergers and Corporate Transactions* database. Serial acquirers are companies that acquired more than five targets over the sample period.

Country	# of firms	# of Serial Acquirers	# of non-Serial Acquirers	# of Deals	# of Deals by Serial Acquirers	# of Deals by Non-Serial Acquirers
Argentina	14		14	22		22
Australia	715	106	609	1,642	713	929
Austria	50	8	42	114	47	67
Belgium	92	26	66	283	155	128
Brazil	99	14	85	198	80	118
Canada	1,038	136	902	2,217	867	1,350
Chile	17	1	16	24	2	22
China	374	16	358	585	100	485
Colombia	2		2	2		2
Croatia	11	1	10	16	5	11
Cyprus	6		6	6		6
Czech Republic	4	1	3	8	5	3
Denmark	78	11	67	209	113	96
Finland	119	46	73	532	397	135
France	466	118	348	1,423	847	576
Germany	350	44	306	788	309	479
Greece	77	3	74	116	15	101
Hong Kong	26	1	25	38	5	33
Hungary	9	1	8	20	6	14
India	277	18	259	451	90	361
Indonesia	4		4	8		8
Ireland-Rep	60	18	42	251	183	68
Israel	84	6	78	148	35	113
Italy	152	16	136	312	102	210
Japan	580	25	555	909	125	784
Luxembourg	17	1	16	35	7	28
Malaysia	392	27	365	749	196	553
Mexico	35	8	27	89	50	39
Netherlands	140	53	87	628	480	148
New Zealand	56	8	48	121	44	77
Norway	117	18	99	277	117	160
Peru	12	1	11	16	1	15
Philippines	35	1	34	45	5	40
Poland	170	8	162	269	42	227
Portugal	28	1	27	49	1	48
Russian Fed	103	32	71	293	193	100
Singapore	256	31	225	557	198	359
South Africa	114	9	105	190	39	151
South Korea	91	4	87	138	20	118
Spain	107	21	86	248	99	149
Sweden	267	63	204	919	581	338
Switzerland	186	26	160	467	220	247
Taiwan	182	9	173	304	75	229
Thailand	32		32	40		40
Turkey	28		28	31		31
United Kingdom	1,467	389	1,078	4,764	2,941	1,823
United States	3,632	1,048	2,584	13,178	8,849	4,329
Total	12,171	2,374	9,797	33,729	18,359	15,370

Table 2. Descriptive statistics.

The table shows descriptive statistics of a sample of acquisition deals involving public acquirers over the period from 1997 to 2012. The data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database. Serial acquirers are companies that acquired more than five targets over the sample period.

Variables	Obs	Min	Mean	Median	Std. Dev.	Max
Serial Acquirers						
First Acquisition Dummy	18,359	0.00	0.09	0.00	0.28	1.00
Fifth and Higher Acquisition Dummy	18,359	0.00	0.63	1.00	0.48	1.00
Public Target Dummy	18,359	0.00	0.04	0.00	0.19	1.00
Deal Paid in Stock	18,359	0.00	0.13	0.00	0.33	1.00
Cross-border Dummy	18,359	0.00	0.37	0.00	0.48	1.00
Same Industry Dummy	18,359	0.00	0.63	1.00	0.48	1.00
# of Deals	18,359	0.00	8.96	5.00	14.64	189.00
Time between Deals	18,359	0.00	0.66	0.00	1.22	12.00
Non-serial Acquirers						
Public Target Dummy	15,370	0.00	0.05	0.00	0.22	1.00
Deal Paid in Stock	15,370	0.00	0.28	0.00	0.45	1.00
Cross-border Dummy	15,370	0.00	0.33	0.00	0.47	1.00
Same Industry Dummy	15,370	0.00	0.64	1.00	0.48	1.00
# of Deals	15,370	0.00	0.66	0.00	0.88	3.00
Time between Deals	15,370	0.00	0.38	0.00	1.13	12.00

Table 3. Acquirers' cumulative abnormal returns – Multivariate analysis.

This table reports multivariate regressions for cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and the daily return data are obtained from *Thomson Financial Datastream*. Serial acquirers are companies that acquired more than five targets over the sample period. CMARs are estimated for the event windows (-10, +10) and (-5, +5) days around the acquisition announcement date. Summary statistics are in Table 1. Constants, GDP per capita, and stock market capitalization/GDP are not reported. All regressions include acquirer country, industry (1-digit SIC), and year fixed-effects with robust standard errors clustered by country and year. T-stats are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	Full Sample (Extensive Margin)				Serial Acquirers Only (Intensive Margin)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(-10, +10)	(-5, +5)	(-10, +10)	(-5, +5)	(-10, +10)	(-5, +5)	(-10, +10)	(-5, +5)
Serial Acquirer Dummy	-0.0179*** (-7.79)	-0.0128*** (-6.44)	-0.0142*** (-6.28)	-0.0105*** (-5.49)				
First Acquisition Dummy			0.0154*** (3.34)	0.0120*** (3.45)	0.0109** (1.97)	0.0086** (2.24)	0.0111** (1.98)	0.0091** (2.42)
Public Target Dummy			-0.0248*** (-5.70)	-0.0228*** (-7.19)			-0.0166*** (-3.47)	-0.0144*** (-3.80)
Deal Paid in Stock			0.0207*** (6.05)	0.0141*** (7.46)			0.0119*** (3.13)	0.0125*** (3.98)
Cross-border Dummy			-0.0038** (-2.31)	-0.0011 (-0.91)			-0.0060*** (-3.45)	-0.0026* (-1.78)
Same Industry Dummy			0.0003 (0.15)	0.0008 (0.57)			0.0033* (1.85)	0.0018 (1.37)
# of Deals			-0.0003*** (-4.26)	-0.0002*** (-4.55)			-0.0001** (-2.21)	-0.0000 (-1.17)
Time between Deals			-0.0007 (-1.46)	-0.0005 (-1.27)			0.0010 (1.61)	0.0011** (2.04)
Fifth and Higher Acquisition					-0.0144*** (-6.88)	-0.0109*** (-6.99)	-0.0117*** (-4.89)	-0.0089*** (-5.00)
Observations	33,410	33,410	33,410	33,410	18,284	18,284	18,284	18,284
R-squared	0.014	0.011	0.020	0.016	0.015	0.014	0.018	0.017

Table 4. Robustness on acquirers' cumulative abnormal returns – Multivariate analysis.

This table reports multivariate regressions for cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and the daily return data are obtained from *Thomson Financial Datastream*. Serial acquirers are companies that acquired more than five targets over the sample period. CMARs are estimated for the event windows (-10, +10) days around the acquisition announcement date. Summary statistics are in Table 1 Constants, GDP per capita, and stock market capitalization/GDP are not reported. All regressions include acquirer country, industry (1-digit SIC), and year fixed-effects with robust standard errors clustered by country and year. T-stats are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Full Sample (Extensive Margin)					Serial Acquirers Only (Intensive Margin)				
	Small deals (<\$1mil) and same acquirer within 30 days are excluded		3-year rolling window	5-year rolling window	Small deals (<\$1mil) and same acquirer within 30 days are excluded		3-year rolling window	5-year rolling window		
	US only	Non-US only			US only	Non-US only				
Serial Acquirer	-0.0230*** (-7.55)	-0.0072*** (-2.72)	-0.0134*** (-6.25)	-0.0093*** (-5.41)	-0.0110*** (-6.12)					
First Acquisition	0.0180* (1.86)	0.0122*** (2.88)	0.0155*** (3.53)	0.0212*** (3.48)	0.0139*** (2.78)	0.0143 (1.28)	0.0084* (1.88)	0.0132*** (2.59)	0.0173** (2.51)	0.0073 (1.27)
Public Target Dummy	-0.0279*** (-3.55)	-0.0209*** (-4.26)	-0.0243*** (-5.15)	-0.0251*** (-5.74)	-0.0250*** (-5.71)	-0.0196** (-2.74)	-0.0114* (-1.77)	-0.0154*** (-2.96)	-0.0199*** (-3.39)	-0.0164*** (-2.90)
Deal Paid in Stock	0.0226*** (3.55)	0.0192*** (4.81)	0.0220*** (6.24)	0.0220*** (6.41)	0.0214*** (6.28)	0.0118* (2.03)	0.0120** (2.28)	0.0120*** (3.04)	0.0127** (2.41)	0.0138*** (2.84)
Cross-border Dummy	-0.0064** (-2.64)	-0.0020 (-0.92)	-0.0037** (-2.24)	-0.0042** (-2.54)	-0.0039** (-2.40)	-0.0059** (-2.90)	-0.0058** (-2.06)	-0.0055*** (-3.32)	-0.0045* (-1.90)	-0.0064*** (-3.04)
Same Industry	0.0008 (0.18)	-0.0004 (-0.23)	-0.0003 (-0.12)	0.0005 (0.24)	0.0004 (0.20)	0.0043 (1.62)	0.0023 (0.96)	0.0036* (1.98)	0.0044** (2.00)	0.0041* (1.89)
# of Deals	-0.0002*** (-3.05)	-0.0005*** (-3.10)	-0.0005*** (-6.30)	-0.0008*** (-5.69)	-0.0005*** (-4.53)	-0.0002** (-2.92)	-0.0002* (-1.82)	-0.0002*** (-3.60)	-0.0003* (-1.87)	-0.0001 (-1.31)
Time between Deals	-0.0009 (-1.00)	-0.0006 (-1.08)	-0.0007 (-1.33)	-0.0015*** (-2.82)	-0.0012** (-2.42)	0.0003 (0.41)	0.0015* (1.66)	0.0012* (1.89)	0.0004 (0.29)	0.0002 (0.21)
Fifth and Higher						-0.0091** (-2.35)	-0.0133*** (-4.29)	-0.0082*** (-3.54)	-0.0107*** (-4.04)	-0.0129*** (-4.74)
Observations	13,178	20,232	28,370	33,410	33,410	8,849	9,435	14,673	11,415	14,651
R-squared	0.020	0.023	0.020	0.019	0.019	0.013	0.027	0.017	0.021	0.019

Table 5. Acquirers' cumulative abnormal returns – Cross-country Multivariate Analysis.

This table reports multivariate cross-country regressions for cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database, the daily return data are obtained from *Thomson Financial Datastream*. CMARs are estimated for the event windows (-10, +10) days around the acquisition announcement date. Summary statistics are in Table 1 Constants, GDP per capita, and stock market capitalization/GDP are not reported. All regressions include acquirer country, industry (1-digit SIC), and year fixed-effects with robust standard errors clustered by year. T-stats are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
	Full Sample (Extensive Margin)			Serial Acquirers Only (Intensive Margin)		
Serial Acquirer Dummy	-0.0168*** (-9.87)	-0.0153*** (-8.77)	-0.0154*** (-8.95)			
First Acquisition Dummy	0.0161*** (3.06)	0.0154*** (2.99)	0.0154*** (2.98)	0.0118* (1.96)	0.0112* (1.88)	0.0112* (1.88)
Public Target Dummy	-0.0253*** (-4.94)	-0.0248*** (-5.00)	-0.0247*** (-5.00)	-0.0165*** (-3.33)	-0.0166*** (-3.36)	-0.0166*** (-3.35)
Deal Paid in Stock	0.0198*** (5.38)	0.0205*** (5.98)	0.0205*** (5.96)	0.0119*** (3.08)	0.0118*** (3.07)	0.0118*** (3.07)
Cross-border Dummy	-0.0044** (-2.63)	-0.0038** (-2.31)	-0.0039** (-2.33)	-0.0059** (-2.72)	-0.0060** (-2.70)	-0.0060** (-2.70)
Same Industry Dummy	0.0011 (0.43)	0.0003 (0.14)	0.0003 (0.14)	0.0038** (2.80)	0.0033** (2.22)	0.0033** (2.22)
# of Deals	-0.0003*** (-4.42)	-0.0003*** (-4.41)	-0.0003*** (-4.42)	-0.0001** (-2.87)	-0.0001** (-2.71)	-0.0001** (-2.68)
Time between Deals	-0.0006 (-1.13)	-0.0007 (-1.25)	-0.0007 (-1.25)	0.0011* (2.05)	0.0010* (1.86)	0.0010* (1.86)
High ASDI	-0.0245 (-1.74)			0.0734*** (4.10)		
High ASDI × Serial	0.0106** (2.39)					
High Anti-corruption		-0.1120** (-2.23)			-0.1440*** (-5.29)	
High Anti-corruption × Serial		0.0115 (1.66)				
High Political Stability			0.1050* (1.96)			-0.0807*** (-4.56)
High Political Stability × Serial			0.0113* (2.03)			
Fifth and Higher				-0.0115*** (-4.36)	-0.0125*** (-5.03)	-0.0124*** (-4.86)
High ASDI × Fifth and Higher				0.0000 (0.00)		
High Anti-corruption × Fifth and Higher					0.0135** (2.34)	
High Political Stability × Fifth and Higher						0.0104* (1.97)
Observations	32,178	33,394	33,394	17,926	18,283	18,283
R-squared	0.019	0.020	0.020	0.017	0.018	0.018

Table 6. Acquirers' cumulative abnormal returns – Institutional Ownership.

This table reports multivariate regressions for cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database, and the daily return data are obtained from *Thomson Financial Datastream*. Institutional ownership (IO) data are from the *FactSet/LionShares* database and are available from 2000 to 2012. The base definition of domestic and foreign institutional ownership follows Ferreira and Matos (2008). We further separate institutional owners according to their country of origin. In Models (1) to (3) and (5) to (7), we focus on Total IO where the percentage of total institutional holdings owned by all institutional investors from countries with better governance – i.e., those with higher scores in terms of Anti-Self-Dealing (ASDI), Anti-Corruption, and Political Stability Indexes than world median. In Models (4) and (8), we use active IO where institutional investors are active or passive following Ferreira and Matos (2008). For instance, active institutional investors include investment advisors (e.g., brokers, research firms, investment banks), hedge funds, venture capital/private equity firms; passive institutions include banks, insurance companies, and pension funds and endowments. Constants and other deal-level controls are omitted from reporting. All regressions include acquirer country, industry (1-digit SIC), and year fixed-effects with robust standard errors clustered by year. T-stats are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	Full Sample (Extensive Margin)				Serial Acquirers Only (Intensive Margin)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Serial Acquirer	-0.0162*** (-7.04)	-0.0164*** (-6.61)	-0.0163*** (-6.61)	-0.0178*** (-8.03)				
First Acquisition	0.0077 (1.78)	0.0077 (1.76)	0.0077 (1.76)	0.0084* (2.03)	0.0040 (0.92)	0.0040 (0.90)	0.0040 (0.91)	0.0039 (0.89)
IO from High ASDI	-0.0706*** (-10.11)			-0.0688*** (-15.66)	-0.0323*** (-3.93)			
IO from High ASDI × Serial	0.0309*** (6.92)							
IO from High Anti-Corruption		-0.0676*** (-10.51)				-0.0315*** (-3.77)		
IO from High Anti-Corruption × Serial		0.0302*** (6.49)						
IO from High Polit. Stability			-0.0677*** (-10.52)				-0.0315*** (-3.78)	
IO from High Polit. Stability × Serial			0.0302*** (6.48)					
Active IO				-0.0688*** (-15.66)				-0.0328*** (-4.15)
Active IO × Serial				0.0330*** (8.29)				
Fifth and Higher					-0.0191*** (-4.36)	-0.0197*** (-4.10)	-0.0197*** (-4.11)	-0.0206*** (-5.10)
IO from High ASDI × Fifth					0.0192** (2.64)			
IO from High Anti-Corruption × Fifth						0.0196** (2.53)		
IO from High Polit. Stability × Fifth							0.0197** (2.54)	
Active IO × Fifth								0.0229*** (3.35)
Observations	31,406	31,406	31,406	31,406	17,028	17,028	17,028	17,028
R-squared	0.028	0.027	0.027	0.027	0.021	0.021	0.021	0.021

Table 7. Acquirers' cumulative abnormal returns – Hazard Rate.

This table reports both first-stage and second-stage regressions of cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. Serial acquirers are companies that acquired more than five targets over the sample period. Summary statistics are in Table 1. CMARs are estimated for the event windows (-10, +10) days around the acquisition announcement date. Hazard rate is the proportion of acquisitions made by serial/ non-serial acquirers within one, two, three, etc. months of the previous acquisition. Constants, GDP per capita and Stock market capitalization/GDP are not reported. All regressions include acquirer country, industry (1-digit SIC), and year fixed-effects with robust standard errors clustered by country and year. T-stats are shown in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	Full Sample (Extensive Margin)			Serial Acquirers Only (Intensive Margin)	
	(1)	(2)	(3)	(4)	(5)
Hazard	-0.1886*** (-9.85)	-0.1201*** (-5.39)	-0.0916*** (-3.96)	-0.0258 (-0.97)	0.0041 (0.13)
Serial Acquirer		-0.0141*** (-5.53)	-0.0115*** (-4.69)		
First Acquisition			0.0111** (2.36)	0.0097* (1.84)	0.0114** (1.97)
Public Target Dummy			-0.0249*** (-5.73)		-0.0166*** (-3.48)
Deal Paid in Stock			0.0205*** (5.98)		0.0119*** (3.14)
Cross-border Dummy			-0.0037** (-2.28)		-0.0060*** (-3.45)
Same Industry			0.0003 (0.14)		0.0033* (1.85)
# of Deals			-0.0002*** (-3.55)		-0.0001** (-2.19)
Time between Deals			-0.0013** (-2.42)		0.0011 (1.46)
Fifth and Higher				-0.0139*** (-6.37)	-0.0117*** (-4.89)
Observations	34,010	33,410	33,410	18,284	18,284
R-squared	0.014	0.015	0.020	0.015	0.018

Table 8. Changes in financial and operating performance of the target firms after acquisitions.

This table reports changes in the target's operating performance one year before to one year after (-1y, +1y) and one year before to two years after (-1y, +2y) the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and data on target operating performance are from Amadeus database, which covers all European targets. Serial acquirers are companies that acquired more than five targets over the sample period. Panel A (B) presents results for changes in operating and financial performance changes from one year before to one year after (two years after). Number of observations and median values are reported along with Wilcoxon rank-sum z-statistics associated with differences in medians between groups. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

Panel A: (-1y, +1y)						
	First Five Acquisitions		Fifth and Above Acquisitions		z statistics	
	N	Median	N	Median		
Δ ROE	787	-2.298	531	-7.900	-1.809	*
Δ TA (%)	1,345	0.172	917	0.094	-2.842	***
Δ ROA	934	-0.007	588	-0.027	-2.371	**
Δ Fixed Assets/TA	1,337	-0.018	915	-0.029	-3.019	***
Δ Sales (%)	527	0.132	294	0.066	-2.141	**
Panel B: (-1y, +2y)						
	First Five Acquisitions		Fifth and Above Acquisitions		z statistics	
	N	Median	N	Median		
Δ ROE	571	-5.331	355	-9.496	-2.111	**
Δ TA (%)	1,004	0.261	639	0.114	-2.639	***
Δ ROA	667	-0.017	371	-0.040	-1.791	*
Δ Fixed Assets/TA	1,003	-0.025	638	-0.041	-3.004	***
Δ Sales (%)	379	0.247	189	0.216	-1.396	

Table 9. Changes in financial and operating performance of the target firms — Robustness Tests on the Sample.

This table reports changes in the target’s operating performance one year before to one year after (-1y, +1y) the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012, after eliminating target firms where the number of employees or the total assets changed by more than 15% (Panel A and B) or 100% (Panel C and D). The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and data on target operating performance are from Amadeus database, which covers all European targets. Serial acquirers are companies that acquired more than five targets over the sample period. Median values are reported along with Wilcoxon rank-sum z-statistics associated with differences in medians between groups. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	Panel A:Δ(Total Assets)<15%			Panel B:Δ(# of Employees)<15%			Panel C:Δ(Total Assets)<100%			Panel D:Δ(# of Employees)<100%		
	First Five (1)	Fifth and Above (2)	z- statistics	First Five (1)	Fifth and Above (2)	z- statistics	First Five (1)	Fifth and Above (2)	z- statistics	First Five (1)	Fifth and Above (2)	z- statistics
ΔROE	-0.129	-9.944	-2.223**	-2.180	-3.710	-0.379	-0.525	-7.821	-1.979**	-0.027	-4.285	-1.768*
ΔTA (%)	0.015	0.016	-0.173	0.217	0.060	-3.005***	0.043	-0.038	-2.419**	0.190	0.099	-1.732*
ΔEBIT/TA	0.011	-0.031	-2.256**	0.006	-0.014	-1.353	-0.002	-0.026	-2.420**	0.006	-0.025	-2.441**
ΔFixed Assets/TA	-0.005	-0.021	-2.107**	-0.010	-0.018	-2.012**	-0.023	-0.029	-1.720*	-0.010	-0.031	-3.168***
ΔSales (%)	0.046	0.036	-0.438	0.117	0.041	-2.183**	0.109	0.037	-1.604	0.180	0.066	-2.320**

Table 10. Robustness Tests on Changes in financial and operating performance of the target firms—Alternative Definition of Serial Acquirers.

This table reports changes in the target’s operating performance one year before to one year after (-1y, +1y) the announcement dates of acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and data on target operating performance are from Amadeus database, which covers all European targets. Serial acquirers are companies that acquired more than **two** targets over the sample period. Panel A present results for changes in operating and financial performance changes from one year before to one year after for the entire sample of deals. Panel B excludes small deals that are less than \$1 million in deal value. In Panel C, serial acquirers are defined based on 5-year rolling window. In Panel D, serial acquirers are defined based on 5-year rolling window and small deals with less than \$1million in deal value are excluded. Median values are reported along with Wilcoxon rank-sum z-statistics associated with differences in medians between groups. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	Panel A: Whole Sample			Panel B: Small deals (<\$1mil) are excluded			Panel C: 5-year rolling window			Panel D: 5-year rolling window, small deals (<\$1mil) are excluded		
	First Five (1)	Fifth and Above (2)	z-statistics	First Five (1)	Fifth and Above (2)	z-statistics	First Five (1)	Fifth and Above (2)	z-statistics	First Five (1)	Fifth and Above (2)	z-statistics
Δ ROE	-1.335	-7.900	-2.174**	-1.224	-7.741	-2.229**	-2.256	-7.025	-2.191**	-2.092	-6.852	-2.209**
Δ TA (%)	0.169	0.094	-2.743***	0.190	0.100	-3.057***	0.153	0.100	-1.778*	0.166	0.106	-2.117**
Δ EBIT/TA	-0.005	-0.027	-2.466**	-0.004	-0.028	-2.877***	-0.011	-0.025	-1.724*	-0.009	-0.026	-1.997**
Δ Fixed Assets/TA	-0.021	-0.029	-2.393**	-0.021	-0.029	-2.439**	-0.024	-0.023	-0.946	-0.024	-0.023	-0.990
Δ Sales (%)	0.125	0.066	-2.091**	0.123	0.066	-2.169**	0.137	0.053	-2.797***	0.135	0.053	-2.886***

Table 11. Acquirers' cumulative abnormal returns selling targets – Univariate analysis.

This table reports the cumulative market-adjusted buy-and-hold returns (CMARs) around the announcement dates of selling target firms by serial acquirers over the period from 1997 to 2012. Buy-and-hold returns are cumulated over three different returns horizons around the announcement date ($t=0$), including from days $t=-10$ to $t=+10$ ("CMARs(-10,+10)"), days $t=-5$ to $t=+5$ ("CMARs(-5,+5)"), and days $t=-1$ to $t=+1$ ("CMARs(-1,+1)"). The acquisition data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database and the daily return data are obtained from *Thomson Financial Datastream*. Serial acquirers are companies that acquired more than five targets over the sample period. Mean and Median values are reported with p-values for the Student's t-test and Wilcoxon rank-sum tests associated with differences in means and medians between groups are presented in parentheses. ***, **, and * denote statistical significance at the 1%, 5% and 10% levels.

	CMARs (-1, +1)	CMARs (-5, +5)	CMARs (-10, +10)
		Mean	
Selling First Five Acquisition Targets (18)	-0.35%	-0.79%	-0.46%
Selling Fifth and Above Acquisition Targets (29)	0.99%	1.07%	0.79%
<i>p</i> -values	(0.41)	(0.47)	(0.73)
		Median	
Selling First Five Acquisition Targets (18)	0.14%	1.17%	0.94%
Selling Fifth and Above Acquisition Targets (29)	1.11%*	1.25%	2.30%
<i>p</i> -values	(0.31)	(0.59)	(0.53)

Figure 1. Number and Total Deal Value of Acquisitions Led by Serial Acquirers and Non-serial Acquirers by Year.

This figure exhibits the number of and total deal value (in billions of Dollars, 2010 constant prices) of all acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database. Serial acquirers are companies that acquired more than five targets over the sample period.

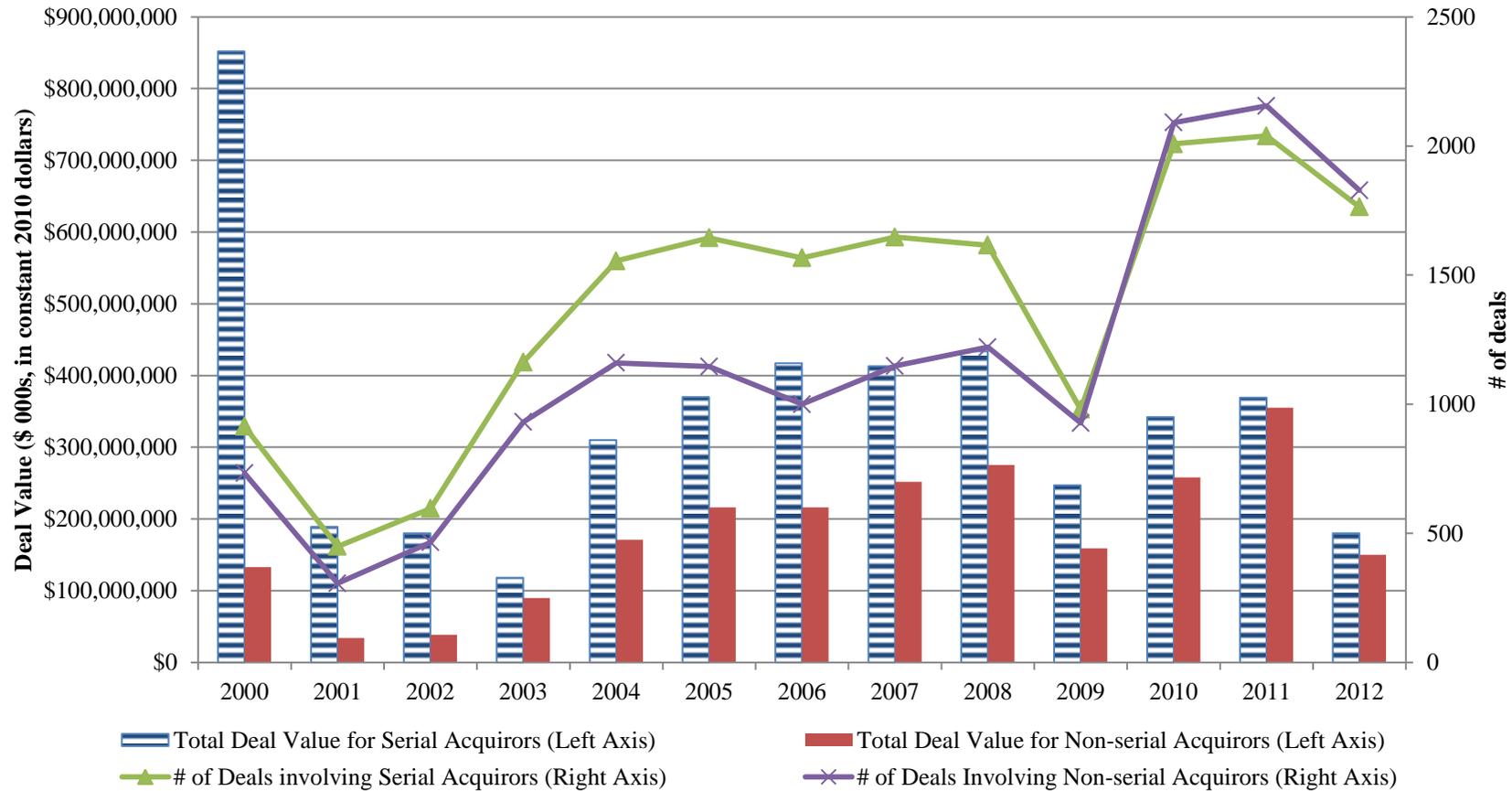


Figure 2. Number and Total Deal Value of Acquisitions Led by Serial Acquirers and Non-serial Acquirers by Industry.

This figure exhibits the number of and total deal value (in billions of Dollars, 2010 constant prices) of all acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. The data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database. Serial acquirers are companies that acquired more than five targets over the sample period. We use Fama-French 48 industry classifications and only report those acquirer industries in which there are more than 500 deals in the sample period.

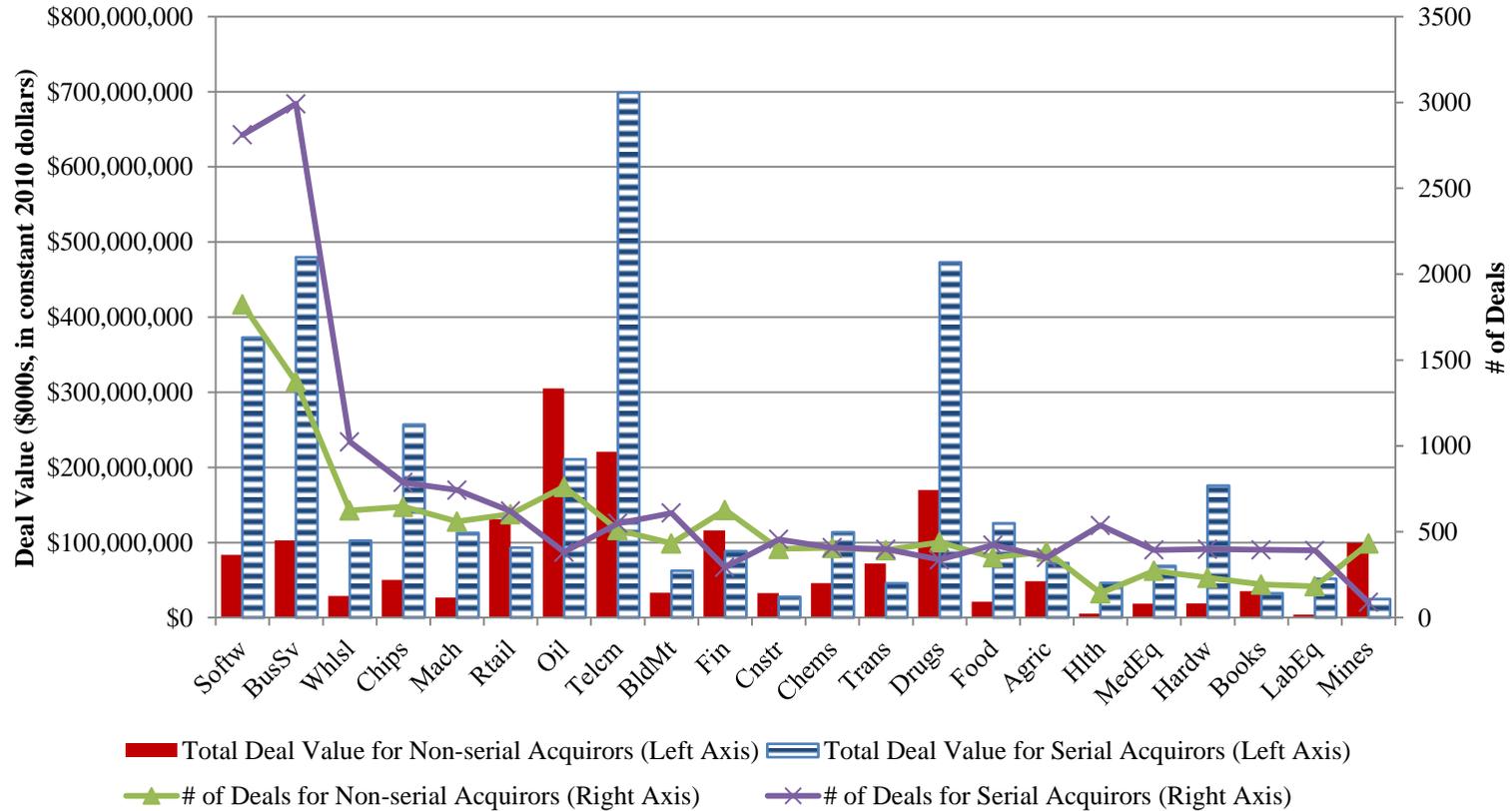


Figure 3. CMARs and Sequence of Serial Acquisitions.

This figure exhibits the median CMARs of all acquisitions led by serial acquirers and non-serial acquirers over the period from 1997 to 2012. Buy-and-hold returns are cumulated over (-10,+10) and (-5, +5) windows around the announcement date ($t=0$). The data are obtained from *Bureau Van Dijk Zephyr Mergers and Corporate Transactions* database. Serial acquirers are companies that acquired more than five targets over the sample period.

