

Corporate Divestitures and Value Creation in Acquisition–Centered Restructuring Programs

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Abstract

Divestitures often accompany acquisitions, representing on average 33% of the acquisition value. Relying on a global sample, we provide support for the efficient restructuring view of acquisition–related divestitures. On average, acquisition–related divestitures are associated with an increase of 2% in the total value creation around focal acquisitions. The value contribution of divestitures is higher in large acquisitions, and in countries with low employee protection. Examining returns for divestitures only, we find that those around acquisitions are not transactions with weak bargaining positions. Overall, the value contribution of divestitures varies with the synergistic potential of the acquisition–centered restructuring program.

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1. Introduction

Acquisitions, and more generally the market for corporate control, constantly redraw the boundaries of the firms (Rhodes–Kropf and Robinson, 2008). From this perspective, major acquisitions can be viewed as opportunities to restructure the firm (Maksimovic et al., 2011), selling old assets while buying new ones with potentially long–lasting effects on the composition of the firm’s asset portfolios. Real world cases of acquisition–related divestitures abound: for example, Royal Dutch Shell sold more than \$27 billion in assets since its \$54 billion acquisition of BG Group in 2015;¹ Anheuser–Busch InBev sold assets to ease the merger with SABMiller in 2015;² the Walt Disney Company agreed to sell 21 Fox Regional Sports Networks for almost \$10 billion as part of its \$71.3 billion acquisition of Twenty–First Century Fox.³

In the above–mentioned examples, the common trait is the existence of a focal acquisition that is accompanied by corporate divestitures. These acquisition–driven divestitures are instrumental for the completion and the success of the focal transaction (Capron, Mitchell, and Swaminathan, 2001). Departing from prior literature that has emphasized agency–related correction and refocusing (see, e.g., Kaplan and Weisbach, 1992; Comment and Jarrell, 1995; John and Ofek, 1995; Fluck and Lynch, 1999), we investigate the role of asset sales as a tool to bolster the acquisition synergies.⁴ This paper examines, therefore, the value effect of restructuring plans centered on a focal acquisition that is complemented by divestitures, henceforth denoted *acquisition–centered restructuring process*. Using a global sample, we study the entire

¹ [Young, Mark, "Shell has sold US\\$27 billion in assets since acquiring BG Group: Charts", JWNenergy 31 January, 2018.](#)

² [Bray, Chad, "Anheuser–Busch InBev to Sell Brands in Europe to Ease Beer Merger", The New York Times, 3 December 2015.](#)

³ [Barnes, Brooks, "Disney Moves From Behemoth to Colossus With Closing of Fox Deal, The New York Times, 20 March 2019; Fontanella–Khan, James, Nicolau, Anna, and Pratt, Eric, "Sinclair nears deal to acquire Disney regional sport networks", Financial Times, 3 May 2019.](#)

⁴ There is also a vast literature that has examined divestitures in isolation without associating them to acquisitions (see, e.g., Mulherin and Boone; 2000, Schlingeman et al., 2002; and Bates, 2005).

restructuring process, implemented through buy–and–sell activities, and assess the contribution of corporate divestitures to its total value creation. We also study the effect on this contribution exploiting two contextual factors that correlate with the cost reduction potentials of the focal deal, which are a major driver of synergies in takeovers (see, e.g., Houston et al., 2001; Devos et al., 2009): the size of the deal (Jansen et al., 2013), and the tightness of employment protection legislation at the country level (see, e.g., John et al., 2015; Dessaint et al., 2017).

From a theoretical perspective, acquisition–driven divestitures may occur for various reasons. In a neoclassical model of profit maximizing (Maksimovic and Phillips, 2001; 2002), firms will either divest their least productive assets, improving the efficiency of their capital allocation, or sell the parts of the business that command a price above their replacement cost in the market. In both scenarios, divestitures will have a positive effect on the value creation of the acquisition–centered restructuring process by facilitating the focal deal and helping the implementation of the acquisition–related synergies. Thus, divestitures are part of an efficiency–improving restructuring process. In addition, divestitures may also ease the focal deal from a financial point of view and/or decrease the likelihood of a regulatory challenge. Recent papers emphasize, indeed, the importance of the financing role of corporate divestitures (Bongaerts and Schlingemann, 2017; Arnold et al., 2018; Edmans and Mann, 2019; Mavis et al., 2020).⁵ If the considered asset sales allow the acquirer to reduce the financing cost of the acquisition, then value creation will be further enhanced. Regulators can impose divestitures as a condition to approve the focal acquisition, and their interventions are known to be costly (see, e.g., Aktas et al., 2004;

⁵ Dissynergistic non–core assets may be sold either by firms with low financing needs (Edmans and Mann, 2019) or to relax credit constraints (Bongaerts and Schlingemann, 2017). Arnold et al. (2018) observe that financing–related asset sales are more pronounced for highly–leveraged firms and are more likely to happen in economic downturns.

Fidrmuc et al., 2018).⁶ If some divestitures are undertaken in anticipation of regulatory requests, firms may avoid the cost associated with selling under urgency. These efficiency arguments lead to our main prediction: *under the efficient restructuring hypothesis, divestitures ease value extraction from the focal acquisition, contributing positively to the total value creation of the acquisition-centered restructuring process.* Our corollary hypothesis is that *corporate divestitures around acquisitions are neither fire sale transactions nor transactions with weak bargaining power.*

The efficient restructuring view is, of course, not the only explanation for acquisition-related divestitures. Agency-based considerations can also be a possible driver of the decision to sell assets. In fact, divestitures can unwind inefficient investments previously made by the firm (Maksimovic and Phillips, 2001). However, the agency view struggles to explain the type of processes we investigate, where we can observe both acquisitions and divestitures in a short time span.⁷ In fact, refocusing divestitures often happen several years after the assets were acquired to correct previous agency-driven conglomerate mergers, resulting in a reduction of agency and coordination costs (see, e.g., Kaplan and Weisbach, 1992; Comment and Jarrell, 1995; John and Ofek, 1995; Fluck and Lynch, 1999) and in an improvement of the allocation of resources (Maksimovic and Phillips, 2001; 2002). Unexpected difficulties in the financing of the focal deal and unanticipated regulatory requests may lead to divestitures that are not efficient. In fact, the urgency for the seller to complete the sale in time to avoid delays in the acquisition program may weaken its bargaining power, increasing the likelihood of a sale at a dislocated price (see, e.g.,

⁶ Fidrmuc et al. (2018) estimate the cost of an adverse antitrust review outcome in the US. This cost is substantial and corresponds to 2.8% of the acquirer firm value. Aktas et al. (2004) find a negative abnormal reaction of -2.65% for acquirers subject to an in-depth investigation by the European Commission.

⁷ For example, Fluck and Lynch (1999) proposes a theory that explains value-increasing conglomerate mergers as a technology to overcome agency problems between managers and shareholders and where divestitures follow an increase in profitability. However, this agency explanation assumes that the firm has time to improve its performance before selling the assets.

Shleifer and Vishny, 2011; de Bodt et al., 2014). In these cases, these divestitures have less value–creation potential for the seller, and we should observe, *ceteris paribus*, a null or even negative effect of these asset sales on the overall value creation of the acquisition–centered restructuring process.

Using a global sample, we provide new evidence about the acquisition–centered restructuring process and the associated value effects by focusing on relatively large acquisitions of more than \$50 million in value and representing at least 5% of the acquirer’s market capitalization. These transactions, which we label focal acquisitions, have the potential to trigger a reorganization of the assets of the firm. We test our hypotheses using a sample of 6,845 focal acquisitions announced between 1996 to 2016, ensuring that there is no overlapping acquisition that may contaminate the measurement of the value creation. While this approach eliminates complex programs with multiple acquisitions in a short–time span,⁸ removing all cases with overlapping deals where it is difficult to link divestitures to acquisitions.⁹ We associate the focal acquisition with all divestitures taking place between one year before the announcement and one year after the deal becomes effective, identifying three phases: the year before its announcement (pre–acquisition phase), the period between the announcement and when the deal becomes effective (interim phase), and the year after the deal becomes effective (post–acquisition phase).

We find that about 13% of the acquisitions are associated with corporate divestitures (i.e., out of the 6,845 focal acquisitions in our sample, 876 focal deals are associated with almost 1,400 corporate divestitures). Like in the anecdotal evidence at the beginning of this introduction, the amount of assets divested is substantial: divestitures represent on average about 33% of the

⁸ We examine these more complex programs in Section 4.4 when we propose an alternative way to identify restructuring programs.

⁹ Another advantage is that the approach permits to identify the beginning and the end of the restructuring process, which allows us to determine the value creation associated with the overall process.

acquisition value, suggesting that a significant number of firms reorganize their assets around major acquisitions. Divestitures in the post-acquisition period, both in terms of likelihood and intensity relative to the value of the focal deal, are slightly more important than divestitures in the pre-acquisition period. We observe systematic differences between acquirers that divest and acquirers that do not. Divesting acquirers are on average larger, more diversified, more leveraged, more experienced with acquisitions, and more profitable (ROA). Moreover, they have lower growth opportunities (Tobin's Q), hold less cash, pay more dividends, and invest more. In terms of characteristics of the focal deal, divestitures are more frequent in large deals, acquisition of listed targets, cash deals, and cross-border deals.

To investigate the overall value effect, we adopt a three-step procedure: first, we measure the stock market reaction at the announcement of the focal acquisition; second, we compute the abnormal returns associated with the related divestment announcements; finally, we add the abnormal returns at the acquisition announcement to those computed for divestitures to obtain a measure of the value creation associated with the overall acquisition-centered restructuring process.¹⁰

The focal acquisitions in our sample create value for the acquirers, with an average 3-day announcement abnormal return of 2.34%. Univariate analysis shows that the average announcement abnormal return of acquirers with divestment activities (i.e., 1.73%) is significantly

¹⁰ Given acquisitions and divestitures are interrelated (and being part of the considered M&A restructuring process), it could be that these abnormal returns are affected by an anticipation effect (Cai et al., 2011; Wang, 2018). In fact, the announcement returns of divestitures taking place before acquisition may incorporate part of the value creation associated with the focal acquisition. Similarly, the market reaction around the announcement of divestitures in the post-completion period could be anticipated by the market at the time of the focal deal announcement. Since we are interested in the value creation associated with the overall M&A restructuring process, we sum the announcement abnormal returns of the acquisition and divestitures included in the whole process. This measure of total value creation mitigates the concerns relative to the anticipation effect.

lower than that of non-divesting acquirers (i.e., 2.44%).¹¹ However, when we account for the value creation of the whole acquisition-centered restructuring process, this underperformance disappears (3.03% vs 2.44%). Once we control for deal and firm characteristics, we find evidence that divestiture activity enhances the total value creation of the focal deal by 2.01%, which translates into a dollar gain of \$149 million for the average firm implementing an acquisition-centered restructuring process. Divestitures substantially contribute to the total value created by the acquisition-centered restructuring process, especially if taking place in both the pre-announcement and post-completion periods. Divestitures occurring during the interim phase do not affect the total value creation of the acquisition-centered restructuring process, consistent with those divestitures implemented under the pressure of regulatory actions. Taken collectively, our results indicate that unlocking synergy potential in the focal deal appears to be a major motive behind corporate divestitures related to acquisitions, consistent with our efficient restructuring hypothesis.

To further support the efficiency-restructuring view, we rely on two contextual factors that correlate with the synergistic potential of the focal deal and examine whether these factors affect the contribution of corporate divestitures to the total value creation of the restructuring process. The synergistic potential of the deal largely depends on cost reductions (see, e.g., Houston et al., 2001; Devos et al., 2009). The considered first factor is the relative size of the focal deal, which is known to be associated with acquirer's announcement return (see, e.g., Asquith et al., 1983; Moeller et al., 2004). In synergy-driven transactions (i.e., positive net present value deals), Jansen et al. (2013) argue and document that the larger is the deal, relative to the size of the acquiring

¹¹ The fact that the market reaction is different for these two groups of acquirers does not imply that the market is able to fully anticipate which firms will divest assets. In fact, some divestitures happen before the acquisition announcement.

firm, the larger the value creation associated with the deal. Relatively large deals are therefore more likely to trigger value creating restructuring activities, such as asset sales, to better exploit operating synergies. The second considered factor correlated with synergy potential is the tightness of employment protection legislation at the country level. Dessaint et al. (2017) document that potential synergies are lower in high employee protection environments. This is because tighter employment protection hinders the ability of the acquiring firm to fully exploit merger synergies through workforce layoffs (see, also, John et al., 2015). The sale of assets might be considered as an alternative to direct workforce reduction, but given their low synergy potential in a high employee protection environment, these assets are likely to command a low price. We predict therefore that *the potential for value-enhancing divestitures in acquisition-centered restructuring process is higher in relatively large deals and lower in countries with high employment protection.*

We put these ideas to test. We document that the positive value effect of corporate divestitures in acquisition-centered restructuring process increases with the relative size of the focal deal, and it is attenuated in the presence of tight employee protection laws at the country level, measured with the Employee Protection Law (EPL) index of the OECD. Our estimates imply that the value contribution of divestitures increases by 1.21% (i.e., from 2.01% to 3.22%) when we increase the relative size threshold from 5% to 33% for the focal deal to be included in our sample. Moreover, the value contribution of divestitures in acquisition-centered restructuring process decreases, depending on the considered model, by an amount between 0.90% and 1.41% for one standard deviation increase in the EPL index. These values represent a sizeable economic impact given that the average total CAR associated with acquisition-centered restructuring processes is 3.03% in our sample.

Some of our results are also consistent with the financing motives of corporate divestitures, in particular the ones around large focal deals. But the sensitivity of the value effect of corporate divestitures to the tightness of labor protection is difficult to reconcile with a financing motive only. Moreover, the negative impact of corporate divestitures on the total value created in acquisition-centered restructuring process in high employee protection environment is mainly driven by divestitures occurring in the post-completion phase, where the need for asset-restructuring is likely to be higher to better exploit operating synergies. To further mitigate the concern that financing motives are responsible for our results, we control for the firm's financial characteristics (such as leverage and cash holding), and for the ease of financing at the country level using broad indexes such as stock market development and banking development (see, e.g., Levine and Zervos, 1998; Demirgüç-Kunt et al., 2013; Hsu et al., 2014). Finally, we show that the contribution of divestitures to value creation is similar in both cash and stock deals, suggesting that financing motives alone cannot explain our results.

It is important to emphasize that we do not claim a causal impact from divestitures to value creation in mergers and acquisitions. Our results do not imply that “if we pick a random acquirer and force it to divest around the focal deal, this will cause an increase in its value”. It is likely that acquisitions and divestitures are jointly determined through an optimization process, and in equilibrium, acquirers that need to disinvest to bolster acquisition-related synergies do it, and the ones that do not need to do disinvestment do not do it. To examine whether this equilibrium argument is at play in our sample, we have compared the buy-and-hold abnormal returns (BHAR) computed over the period used to identify divestitures (i.e., 1 year before the announcement of the focal deal, till 1 year after its completion) for firms with divestitures and without divestiture. The average BHAR around the focal acquisition is 4.68% in our sample, and it is not statistically

different for acquirers with divestitures and without divestiture, a result which is consistent with the equilibrium argument.

Another possible concern is that divesting during an acquisition process is a suboptimal choice for the company. Comparing abnormal returns for divestitures embedded in an acquisition–centered restructuring process and the ones that are not, we do not observe significant differences after controlling for variables known to affect divestiture abnormal returns. This key result indicates that acquisition–driven asset sales are neither fire sales nor that the focal acquisition weakens the bargaining power of the seller in those transactions.

Our results are robust to a battery of additional tests, in which we account for equity and debt issues around the focal acquisition, and employ alternative proxies for labor protection at the country level, including bargaining coverage and union density (see, e.g., Ahmad and Lambert, 2019). To further assess to validity of our findings, we also rely on the dormant period approach as an alternative method to identify the asset restructuring process (see, e.g., Aktas et al. (2013) for a similar approach). To identify the start (and the end) of a new asset restructuring process, we impose a period of 1 (3) year(s) without any asset–related restructuring activity (i.e., a dormant period without any acquisition or divestiture). The results with the dormant period approach are largely consistent with our initial findings, with divestitures having a positive contribution to the total value created in the asset restructuring process.

Our paper offers several contributions to the literature. First, our paper is related to studies that examine divestitures that follows an acquisition (see, e.g., Kaplan and Weisbach, 1992; Capron et al., 2001; Maksimovic et al., 2011). Kaplan and Weisbach (1992) and Maksimovic et al. (2011) document that acquirers divest most of the target assets in the years following the acquisition. In an important departure with prior literature, we consider all divestitures around the

focal deal, not limiting our analysis to the divestiture of target assets in the post-completion period. Capron et al. (2001) also study divestitures as a mean of dynamically reconfiguring the assets within the combined firm to better exploit synergies, but they neither examine its value effects nor consider divestitures occurring before the completion of the focal deal.

Second, considering the entire acquisition-related restructuring process instead of the focal acquisition in isolation allows a more precise assessment of the value effect. While other papers have also analyzed corporate divestitures in the acquisition context (see, e.g., Mavis et al., 2020), they mostly focus on corporate divestitures as a way to finance the subsequent acquisition. We show that there is more to the financing role of asset sales: divestitures around acquisitions not only facilitate deal completion but are also part of a larger and value-increasing reorganization plan.

Third, related to the previous point, we also add to studies on corporate divestitures that has mostly examined acquisitions and divestitures as isolated events (see, e.g., Mulherin and Boone, 2000, Maksimovic and Philipps, 2001; Schlingeman et al., 2002; Bates, 2005). For example, Maksimovic and Philipps (2001) document an active market for corporate assets that generates efficiency gains and improve the allocation of resources. We also confirm the contribution of asset sales to allocative efficiency, but in the context of an acquisition-centered restructuring process in which divestitures are used as a tool to bolster the synergies of the focal transaction.

Finally, our paper builds on prior studies documenting the impact of employment protection regulation on merger outcomes (see, e.g., Alimov, 2015; John et al., 2015; Dessaint, Golubov, and Volpin, 2017; Ahmad and Lambert, 2019; Levine et al., 2020), corporate restructuring (Atanassov and Kim, 2009), and asset sales (Lie and Que, 2019). In particular,

Dessaint et al. (2017) show that synergy potentials in mergers is lower in high employment protection environment, consistent with workforce cut being an important driver of the value creation. Our analysis indicates that in such a rigid labor environment the value contribution of divestitures is also lower. This finding is also consistent with Lie and Que (2019), who show that the anticipation of union concessions positively affects the excess stock returns around asset sale announcements in the US. In fact, union concessions are less likely in countries with high employment protection, reducing their value. Overall, we examine asset sales embedded in an acquisition program in an international context, and document that their value contribution relates to labor market rigidity.

The remainder of the paper proceeds as follows. Section 2 describes our sample selection procedure and summary statistics. Section 3 is devoted to the empirical analyses examining the value contribution of corporate divestitures in acquisition–centered restructuring programs. Section 4 reports additional tests and robustness checks. Section 5 concludes.

2. Sample Description and Variable Definitions

2.1 Sample Description

Acquisition’s data are from Thomson One Banker M&A database and cover the deals announced between 1996 and 2016.¹² We consider only acquisitions announced by publicly listed companies with a transaction value of at least \$50 million in which the target is not owned by the government, a joint venture, or a mutual. Acquirer and target firms should operate in neither the financial industry (SIC code 6000–6999) nor the utility sector (SIC code 4900–4999). For the acquisition to be included in the sample, the acquirer must own less than 20% before the deal and more than 90%

¹² We stop at 2016 in terms of announcement year because we need to be sure that the acquisition deal was completed ex post, and we need one year after the completion to verify if there was a related divestiture or not.

after completion. Since we are interested in acquisitions triggering a reorganization of the portfolio of assets of the acquiring firm, we require that the deal value be at least 5% of its pre-deal market capitalization.

To measure the value of the whole acquisition-centered restructuring process, we link divestitures to a particular acquisition controlling for other conflicting deal announcements. Therefore, we start by identifying all companies that made acquisitions during our sample period. Since we define the acquisition-centered restructuring period as the period starting one year before the announcement of the focal acquisition and ending one year after its completion date, we need to make sure that we drop all acquisitions that overlap.¹³ This implies that all acquisition-centered restructuring processes we study have at most one focal acquisition in the period examined. While this eliminates complex programs composed of a series of acquisitions in a short time, this approach provides two important advantages. First, it allows us to perform a clean analysis of the whole acquisition-centered restructuring process, facilitating the association between divestitures and focal acquisitions, and ensuring that there are no other deals that may contaminate the value creation of the considered focal deal. Second, since we have only one focal acquisition in the process, we can determine the beginning and the end of the process. Finally, we apply some final filters. We retain only transactions for which: (i) the length of the period between deal announcement and completion, i.e., the interim period, is less than 3 years; (ii) the acquirer has financial data available in Thomson Reuters' Worldscope database and stock price data in Thomson Reuters' Datastream; (iii) the value of acquirer's assets at the end of the year before the

¹³ For instance, if a specific company had three acquisitions, out of which the second was announced in the year after the first acquisition was completed, whereas the third took place three years after the second acquisition was completed, we drop the first two acquisition altogether from the sample, and only keep the third acquisition in the sample.

acquisition is not negative. Our final sample comprises 6,845 focal acquisitions made by 5,419 different acquirers from 60 different countries.

For each of the focal acquisition in our sample, we search for the divestitures carried out from one year before the announcement date to one year after the completion date. We choose this period to strengthen the association between acquisition and divestitures and reduce the risk that divestiture decisions are independent from the acquisition one. Maksimovic et al. (2011) uses a longer horizon (3 years) for sales at plant level. However, they look at the decision to sell the assets bought with the acquisition. Since we want to examine the changes in the asset portfolio triggered by the acquisitions but not limited to the assets acquired with the transaction, a three-year period carries a high risk of including divestitures unrelated to the acquisition. Moreover, a longer horizon like the one used by Maksimovic et al. (2011) could lead to the inclusion of divestitures that unwind the previous acquisition. These sales are not part of the initial acquisition-centered restructuring plan of the firm, and therefore should not be included. Because of this, we opt for a more conservative approach and limit the period from one year before the announcement to one year after the completion. Using Thomson One Banker M&A database, we consider divestiture deals that are classified as acquisition of certain assets and acquisition of assets with a non-missing deal value. We consider only completed divestiture deals whose value of transaction is known. We require that the divesting firm has financial and price data available in Worldscope. Overall, we identify 17,806 divestitures that satisfy these requirements, out of which 1,399 divestiture events are related to 876 focal acquisitions implemented by 780 unique firms.

Table I presents the breakdown of the focal acquisitions as well as the related divestitures by year. Panel A describes the global acquisition deals in our final sample. The sample period from 1996 to 2016 covers three cycles. The number of transactions increases in the late 1990s, then

declines in early 2000s, before picking up again in the period 2005–2009, and again towards the end of our sample period. The cyclicity of acquisition activity is also in line with prior literature (see, e.g., Harford, 2005; Betton et al., 2008; Maksimovic et al., 2013; Ahern and Harford, 2014). The average acquisition value in the sample is \$912 million, with the median deal amounting close to \$186 million. Even if smaller on average than acquisitions, the divestitures identified are sizeable deals, with an average value of about \$262 million (Table I, Panel A). The divestiture activity through time follows a trend comparable to the one of acquisitions.

Panel B presents summary statistics on the acquisitions and divestitures in our sample. The average of the divestiture dummy indicates that 12.80% of the focal acquisitions are accompanied by divestitures in our sample. Acquisitions with corporate divestitures are larger on average than isolated acquisitions (\$2,492 million vs. \$680 million). We also report summary statistics on the value of the divestitures at the restructuring program level. If there is more than one divestiture in a given restructuring program, we first sum their value before computing the corresponding summary statistic. The average divestiture value at the restructuring program level is \$418 million. Collectively, divestitures are, on average, not negligible and represent almost one third of the acquisition value. This confirms the importance of accounting for these transactions in the acquisition–centered restructuring process.

Concerning the timing of the divestitures in the restructuring process, 5.83% of the processes do have a least one divestiture in the pre–announcement phase, 2.07% in the interim phase, and 7.54% in the post–completion phase.¹⁴ These proportions indicate that most of the divestitures take place in the year prior to acquisition announcement and in the post–completion period. The size of these divestitures in dollar value and relative to the size of the focal deal are

¹⁴ The sum of these proportions is higher than 12.80%, because a given process may have several divestitures occurring at various stages of the restructuring process.

almost comparable. The proportion of focal deals with divestitures in the interim period is smaller, indicating that companies rarely sell while closing a major transaction.

[Please insert Table I about here]

2.2 Variable Definitions and Summary Statistics

Following the extant literature on acquisitions and divestitures, we employ a large set of firm, industry, deal, and country characteristics to describe our sample, and as explanatory variables in our multivariate analyses. This subsection provides a succinct description of the considered variables. Detailed variable definitions are in Appendix A.

At the firm level, we control for financial performance, debt capacity (or financial flexibility), and investment with the following variables: *ROA*, earnings before interest and depreciation divided by total assets; *Leverage*, total debt divided by total assets; *Cash holding*, cash reserves divided by total assets; *Dividend dummy*, indicator variable identifying firms that pay cash dividend; *R&D*, research and development expenses divided by total assets; *CAPEX*, capital expenditures divided by total assets; *Tobin's Q*, sum of market value of equity and total debt, divided by total assets; *Diversified*, indicator variable identifying multi-segment firms; *Serial acquirer*, indicator variable identifying firms that have implemented other acquisitions in the 3-year period before the announcement of the focal acquisitions. Finally, following Gaspar and Massa (2005) and Peress (2010), we use the *excess price margin* as a proxy for firm's market power. It represents the ability of the firm to price above marginal cost.¹⁵

Among the industry-level variables, we consider the Herfindahl index and the M&A liquidity variable. We estimate industry concentration with Herfindahl index as the sum of the

¹⁵ Gaspar and Massa (2005) point out that negative values for the variable are mechanical result of positive correlation between size and profitability and the fact that value weights are used to calculate industry averages.

squares of the market shares of all firms sharing the same three-digit SIC code, in which market share is defined as sales of a firm divided by the sum of sales within the industry (Fidrmuc et al., 2018). Following Schlingemann et al. (2002), we compute the liquidity of the M&A market in the industry of the acquiring firm in a given year as the total deal value of acquisitions divided by the sum of total assets for each 2-digit SIC industry at country level.

We also control for deal characteristics that are known to affect announcement abnormal returns (see, e.g., Betton et al., 2008, for a review). The considered deals characteristics are: *relative size*, the acquisition value divided by the market capitalization of the acquiring firm from the year prior to the deal announcement; *cross-industry*, indicator variable identifying cross-industry transactions; *cross-border*, indicator variable identifying cross-border transactions; *public target*, indicator variable identifying transactions in which the target is a listed company; and *stock (cash)*, indicator variable identifying fully stock (cash) paid transactions.

Finally, at the country level, we account for the general state of the economy with the variables GDP growth and GDP per capita. In some of our analyses, to better account for the ease of financing at the country level, we rely on broad indexes such as stock market development and banking development (see, e.g., Levine and Zervos, 1998; Demirgüç-Kunt et al., 2013; Hsu et al., 2014). *Stock market development* corresponds to the aggregate stock market capitalization as a percentage of the corresponding country GDP, and *banking development* is the domestic credit to private sector by banks as a percentage of the corresponding country GDP. To measure for the tightness of labor rights and employment protection at the country level, we follow Dessaint et al. (2017) and Ahmad and Lambert (2019), and use the following proxies: *employment protection law*, an index measuring the strictness of regulations that an employer must follow to dismiss a worker; *union density*, percentage of employees who are members of a trade union; and

bargaining coverage, measures the real extent to which salaried workers are subject to union–negotiated terms and conditions of employment.

Table II presents the summary statistics for the considered firm–, industry–, deal–, and country–level variables.¹⁶ The first three columns report on the sample of all acquisitions, and the next six columns report on the subsamples of acquirers with and without divestitures, respectively. The last two columns report the *p*–values of the difference in mean and median tests between the two subsamples.

[Please insert Table II about here]

The summary statistics in Table II indicate the existence of a systematic difference between acquirers associated with divestitures and the ones without divestitures. Divesting acquirers are on average larger (both in terms of total assets and market capitalization), more diversified, more leveraged, more experienced with acquisitions, and more profitable (ROA). Moreover, they have lower growth opportunities (Tobin’s Q), hold less cash, pay more dividends, and invest more. In terms of deal characteristics, full stock–payment is relatively more common in acquisitions without divestiture. Firms appear to divest relatively more around the focal deal when the target firm is publicly listed, foreign, and the method of payment is fully in cash. Relative size is larger in acquisitions without divestitures, probably due to the significantly smaller size of the acquirer in those transactions. The country characteristics indicate that acquirers with divestitures operate in economies which are slightly more stock market oriented (and less banking oriented), in comparison to acquirers without divestitures around the focal deal. Finally, the considered three proxies for employment protection are not statistically different across the two subsamples.

¹⁶ All continuous variables are winsorized at the 1st and 99th percentile.

3. Value Creation and Acquisition–Centered Restructuring Process

In this section, we assess the efficiency of the acquisition–centered restructuring process. First, we explain the adopted approach to measure the value creation at the restructuring program level and provide some univariate comparisons. Then, we examine, in a multivariate setting, the determinants of the value effect associated with the acquisition–centered restructuring process, emphasizing the contribution of divestitures to total value creation. Finally, we rely on two contextual factors correlated with synergy potentials of the focal deal and examine whether they affect the value contribution of acquisition–related divestitures.

3.1 Measuring Value Creation and Univariate Results

Under the considered efficient restructuring hypothesis, acquisition–centered divestitures aiming at easing the focal deal and unlocking its synergy potential are expected to add to the total value creation of the restructuring process. To test this intuition, we examine the abnormal returns associated with the acquisition–centered restructuring process.

We start by computing the abnormal returns at the announcement of the focal acquisition using the classical market model.¹⁷ As common in M&A literature, the considered event window is the interval $(-1, +1)$ centered on the announcement day of the focal deal.¹⁸ Given the relation between acquisitions and divestitures, which are part of the considered restructuring process, these abnormal returns may be affected by an anticipation effect (see, e.g., Cai et al., 2011; Wang, 2018). In fact, the abnormal returns associated with the divestitures taking place before the acquisition likely incorporate part of the value effect of the focal acquisition. Similarly, the abnormal returns

¹⁷ Results using a market–adjusted model, which does not require an estimation window, are qualitatively similar and presented in Section 4.2.

¹⁸ In unreported analysis, we also employ the 5–day event window $(-2, +2)$. Results are qualitatively similar to those shown in the section and omitted for sake of brevity. These unreported results are available from the authors upon request.

of divestitures happening after the acquisitions could be anticipated by the market at the time of the acquisition announcement. Since we are interested in the total value creation of the acquisition–centered restructuring process, we sum the abnormal returns of the acquisition announcement and the ones of the divestiture announcement, and denote the variable *Total CAR*.¹⁹ By including all the events in the acquisition–centered restructuring process, the considered value creation measure mitigates the concerns relative to the anticipation effect.

We report the average and median abnormal returns associated with the focal deal, the associated divestitures, and the whole acquisition–centered restructuring process in last three rows of Table II. Focal acquisitions in our sample are on average value creating for acquiring firm shareholders, with an average 3–day abnormal return of 2.34%. These positive abnormal returns are consistent with the existence of positive synergies associated with the focal transaction on average, and the acquirer is able to keep a portion of these synergies for its own shareholders. We also observe that the value creation at acquisition announcement differs between divesting and non–divesting acquirers, being significantly lower for the former ones (1.73% vs 2.44%). This difference can be, at least partially, explained by the anticipation effect due to the divestitures taking place before the announcement of the focal deal. Thus, to estimate the value creation of the whole process for divesting acquirers, we also need to consider the value creation of all related divestitures. We find that the value creation associated with divestitures is on average around 1.07%. When we add the abnormal returns of divestiture events to those of the acquisition announcement to compute the *Total CAR* measure, the underperformance for divesting acquirers disappears. Indeed, the average total value creation is 3.03% for divesting acquirers, while the total

¹⁹ Loderer and Martin (1990) also use the sum of bid announcement effects experienced by a firm in response to acquisitions during a given period.

value creation for acquirers without divestitures is 2.44%.²⁰ The univariate analysis shows that the considered acquisition-centered restructuring processes are on average value enhancing for shareholders, and therefore, efficiency-driven to a large extent.

3.2 Multivariate Results

To examine whether divestitures contribute to the total value creation of the acquisition-centered restructuring process, in Table III, we estimate OLS regressions and control for firm, deal and industry characteristics that are known to affect announcement returns. Our specifications also include country and industry fixed effects to account for time-invariant country and industry unobservable factors, and year dummies to control for changing economic and financing conditions through time.

The first three columns report on the acquirer 3-day abnormal returns around the acquisition announcement as dependent variable. Across the three specifications, we find that the value effects are lower for firms that are larger, that have higher valuation, and are acquiring other public companies. This is in line with Moeller et al. (2004) who find that abnormal returns at acquisition announcements for smaller firms exceeds those of larger firms. The negative coefficient for Tobin's Q supports the view that acquirers signal their overvaluation to the market (Dong et al., 2006). Firms more involved in R&D have lower abnormal returns. Firms with experience in M&A activity and that are diversified are associated with higher stock price reaction, as well as firms with high leverage. Relative size has a positive coefficient estimate, a result which is consistent with the existence of high synergy potential in relatively large value creating deals (see, e.g., Jansen et al., 2013). Differently from Harford and Uysal (2014), the coefficient estimate

²⁰ The sum of acquisition CAR (1.73%) and divestiture CAR (1.07%) does not equal Total CAR (3.03%) because the variables are winsorized to limit the influence of outliers. Without winsorization, the acquisition CAR is 1.89%, the divestiture CAR 1.34%, and total CAR 3.23% (=1.89%+1.34%).

of M&A liquidity is positive in a worldwide context, indicating that acquisitions in industries with more M&A activity have higher abnormal returns.

[Please insert Table III about here]

In Column II, we augment the specification with the divestiture dummy, identifying whether the focal deal is associated to divestitures or not. The coefficient estimate of the divestiture dummy is positive and significant at the 10% level. In Column III, we extend the baseline specification with three divestiture dummies to account for the timing of the divestiture around the focal acquisition. The coefficient estimates of all three dummies are positive, but only the dummy identifying divestiture taking place between the announcement and the completion of the focal deal (i.e., divestiture interim) is statistically significant. This result suggests that acquisitions with high abnormal returns are more likely to be followed by divestitures in the interim period. This result echoes the finding of Aktas et al. (2004), in which the authors document that mergers with greater promise of value creation attract more severe actions from European regulators, such as the imposition of conditions and charges.²¹

Finally, we study the determinants of the value creation for the whole acquisition-centered restructuring process in the last three columns of Table III. The dependent variable is *Total CAR*, the sum of the abnormal return for the acquisition and those of the eventual divestitures. Once we control for firm, deal, and industry characteristics, we find that divestitures enhance the value creation of the restructuring process. In particular, in Column V, we find that the coefficient estimate of the divestiture dummy is positive and significant, indicating that divestitures enhance the total value creation of the focal deal by 2.01%, which translates into a dollar gain of \$149 million for the average firm implementing an acquisition-centered restructuring process in our

²¹ The authors interpret this result being consistent with an anti-monopoly objective of the European Commission because value creation could potentially stem from monopoly rents.

sample.²² Finally, in Column VI, we examine whether the timing of the divestitures matters for the overall value creation. Divestitures in pre-announcement and post-completion periods contribute positively to the total value creation (with a value contribution of 1.71% and 1.42%, respectively). We do not find evidence of a positive contribution for divestitures that occur in the interim period, as these are the deals that are likely to be forced by regulators. Putting this result in perspective with the one reported in column III indicates that a portion of the value creation associated with the focal deal, likely the component related to potential monopoly rent, appears to be transferred by the restructuring firm to the purchaser of the asset in the interim period. Concerning the remaining explanatory variables, the significant control variables in acquisition CAR models are also significant in the total CAR models with coefficient estimates of the same magnitude, the only exception being the dummy variable identifying serial acquirer, which becomes insignificant in total CAR models.

Taken collectively, our results show that firms exploit the acquisition event to restructure its asset portfolio, and this restructuring process is efficiency-driven to a large extent. To provide further evidence consistent with the efficient restructuring hypothesis, we next explore whether the value contribution of divestitures is related to the synergy potential of the focal deal.

3.3 Synergy Potential and Total Value Creation

We consider two contextual factors that are known to correlate with the synergistic potential of the restructuring process. The first factor is the relative size of the focal deal and the second one is the tightness of employment protection legislation at the country level.

3.3.a Relative Size

²² In unreported analysis, we obtain a similar value effect (2.09%) when we rely on 5-day CARs instead of 3-day CARs.

Relative size is an important determinant of acquirer announcement returns (see, e.g., Asquith et al., 1983; Moeller et al., 2004), and in synergy-driven transactions, relatively large deals result in larger positive abnormal returns for acquirers (Jansen et al., 2013). Relatively large deals are also likely to trigger more asset restructuring activities to facilitate the completion of the focal deal and to better exploit operating synergies. Our sample of focal deals are value creating on average, as documented in Table II, and the coefficient estimate of relative size is positive in Table III, consistent with the existence of more synergy potentials in relatively large transactions.

In Table IV, we assess whether the positive value effect of corporate divestitures in acquisition-centered restructuring process increases with the relative size of the focal deal. To this end, we rely on subsamples with increasing relative size threshold for the focal deal to be included in the corresponding sample. Our baseline results reported in Table III rely on a sample of deals with a minimum relative size of 5%. The first two columns of Table IV report the total CAR regressions on the subsample of focal deals with a relative size higher than 10%, the middle columns on relative size larger than 20%, and the last two columns on relative size larger than 33%. The regression models include the same set of control variables as in Table III, whose coefficient estimates are suppressed for brevity. Regardless the relative size threshold and the timing of the divestitures, the results indicate that divestitures positively contribute to total value creation in acquisition-centered restructuring process, and the value contribution clearly increases with the relative size of the deals.

[Please insert Table IV about here]

Our estimates imply that when we increase the relative size threshold from 10% to 33%, the value contribution of divestitures increases by 81 basis points (i.e., the coefficient estimate of the divestiture dummy increases from 2.41% to 3.22%). The increase is even more pronounced if

we consider our initial sample with relative size threshold of 5%. In the latter case, the differential impact of the divestiture dummy is 1.21% (i.e., the coefficient estimate of the divestiture dummy increases from 2.01% to 3.22%). Concerning the timing of the divestitures in the restructuring process, the value contribution of divestitures in the pre-announcement and post-completion periods increases also with the relative size threshold. For example, the divestitures in the pre-announcement (post-completion) period are associated with an increase of 2.57% (2.43%) in total CAR in focal deal with a relative size larger than 33%. Compared with the baseline results reported in Column VI of Table III with a relative size larger than 5%, the value contribution increases by circa 1% both for pre-announcement and post-completion divestitures.

3.3.b Employment Protection

Exploiting the cross-country dimension of our sample, we examine the tightness of employment protection legislation at the country level as factor correlated with synergy potential. Dessaint et al. (2017) document that potential synergies are lower in high employee protection environment, because labor market rigidity limits the implementation of cost synergies through workforce reduction. Divestitures might be considered as an alternative to workforce reduction, but given their low synergy potential in such an environment, these assets are likely to be sold at a low price. We expect, therefore, the positive value effect of corporate divestitures in acquisition-centered restructuring process to be attenuated in the presence of labor market rigidity. We rely on the Employee Protection Law (EPL) index of the OECD as proxy for labor market rigidity at the country level. Specifically, we employ the summary indicator for individual dismissals of regular workers.²³

²³ In unreported tests, we also use the summary indicator for individual and collective dismissals of regular workers. We obtain similar results, as discussed in Section 4.3.

Table V reports the estimation results of eight specifications with total CAR as dependent variable. We augment the baseline specification (see Table III) with the EPL variable and its interaction with the divestiture dummy, as well as with the GDP growth and GDP per capita of the corresponding country. The coefficient estimates of the control variables from the baseline model are suppressed for brevity. The first four models report on the specification without country fixed effects, and the last four models present the specification with country fixed effects. In the latter case, the individual EPL term is omitted, because it shows little within-country variation.²⁴ In Columns III, IV, VII and VIII, the specifications also include the stock market development index and the banking development index to account for the ease of financing at the country level.

[Please insert Table V about here]

Four models examine to the average divestiture effect on total value creation (columns with odd numbers), and four models account for the timing of the divestiture in the restructuring process (columns with even numbers). The coefficient estimate of the interaction term between EPL and the divestiture dummy is always negative and statistically significant. This result indicates that, as expected, tight employment protection at country level attenuates the positive contribution of divestitures to total value creation. In terms of economic impact, a one standard deviation increase in the EPL index²⁵ reduces the value contribution of divestitures in acquisition-centered restructuring process between 0.90% and 1.41%, depending on the model. These results imply a sizeable economic impact given that the average of the total value creation associated with the acquisition-centered restructuring process is 3.03% in our sample.

²⁴ We estimate the models also including the EPL index. As expected, its inclusion does not alter the coefficients of the variables of interests. Results are available from the authors upon request.

²⁵ The standard deviation of the EPL index is 0.92 in our sample.

When we account for the timing of the divestitures, we find that divestitures taking place in the post-completion period drive the attenuation of the value effect of divestitures in high EPL environment. These divestitures are those where the need for asset-restructuring is likely to be higher to fully exploit operating synergies. In all models, the coefficient estimate of the interaction term between *EPL* and *Divestiture Post* is negative and statistically significant at conventional levels. The coefficient estimate of the interaction term between *EPL* and *Divestiture Pre* is negative as expected, but only significant in two models out of four.

4. Additional Results and Robustness Checks

In this section, we perform and discuss several additional analyses and robustness checks. We start by assessing the sensitivity of our main findings to the size of the divestiture relative to the focal deal, to the use of an alternative return generating process and event windows, and to alternative proxies for employment protection. To better account for financing motives, the next additional test consists in controlling for equity and debt issues during the acquisition process, and examining whether the value contribution of divestiture depend on the payment method in the focal deal. We then examine whether divestitures around acquisitions are different from the remaining divestitures in terms of value effect. Finally, we rely on the dormant period approach as an alternative method to identify asset restructuring program in our sample.

4.1 Divestiture Intensity

Our main analysis employs binary variables to capture whether acquirers carry out divestitures during the period going from one year prior to the acquisition announcement to one year after its completion. One drawback of these variable is that they do not account for the importance of the divestiture with respect to the acquisition. While Table I shows that on average divestitures are

important, there is variation in the size of the assets sold around the acquisitions. To alleviate the concern that our results are driven by divestitures of negligible value relative to the acquisition, we use a proxy for the intensity of the divestiture activity instead of the binary variable.

Table VI replicates the models presented in Table 3. *Divestiture intensity* is defined as the ratio between the dollar value of the divestitures and the value of the acquisition. Similarly, we define variables to capture the intensity of divestitures in the three phases: pre-announcement (*Divestiture intensity pre*); interim (*Divestiture intensity interim*); and post-completion (*Divestiture intensity post*). The estimates shown in the table corroborate our previous results, showing that the intensity of the divestiture activity positively contributes to the value creation of the acquisition-centered restructuring process.

[Please insert Table VI about here]

4.2 Market-Adjusted CARs and Alternative Event Window

We employ the market model to estimate the abnormal returns around acquisition and divestiture announcements. In some cases, the 200-day window used to estimate the parameters of the market model may overlap with the event window of either acquisitions or divestitures. This can introduce a bias in the measurement of the abnormal return. While we expect this bias to be relatively negligible, in this section we rerun the main analysis using the market-adjusted approach to compute the abnormal returns. Since the market-adjusted approach does not require an estimation window, there is no overlap between events. Panel A of Table VII reports the univariate statistics. While the values of the abnormal returns are slightly larger on average with the market-adjusted approach than those with the market-model approach reported in Table II, the picture that emerges is similar. In fact, the difference observed in the market reaction at the time of the acquisition announcement is reversed once we account for the beneficial effect of divestitures, mitigating the

anticipation effect. Panel B shows the results of the regression models. The results closely mirrors those in Table III, confirming the view that our results are robust to the choice of the normal return generating process.

[Please insert Table VII about here]

As a further test, we examine the robustness of our results computing the market–model CAR with the 5–day event window $(-2, 2)$ instead of the 3–day event window $(-1, 1)$. In untabulated results, we find that using the 5–day event window does not alter our results.

4.3 Alternative Proxies for Labor Protection

As an additional robustness check, we employ alternative proxies for labor protection at the country level. Following Ahmad and Lambert (2019), we use *bargaining coverage* and *union density* as proxies to capture labor power over the firm in a given country. Union density corresponds the proportion of net union membership among salary earners in employment, and ranges from 0 to 1. Bargaining coverage corresponds to the ratio between the number of employees covered by collective bargaining agreements and the number of salary earners with right to bargain in employment. It is a complementary measure of union presence and ranges also from 0 to 1. These two variables are from the ICTWSS database compiled by Visser (2011).²⁶

We replicate the analysis in Table V by replacing the EPL variable with bargaining coverage and union density, respectively. Table VIII shows the results. The first two columns report on bargaining coverage, and the remaining two columns on union density. The coefficient estimate of the interaction term between the considered labor power proxy and the divestiture dummy is negative in both specifications as expected, but it is statistically significant in the model

²⁶ J. Visser, ICTWSS Database. version 6.0. Amsterdam: Amsterdam Institute for Advanced Labour Studies (AIAS), University of Amsterdam. June 2019. Open access database at: <http://ictwss.org/downloads>

with bargaining coverage only. However, when we account for the timing of the divestitures in the acquisition process, both the effect of union density and bargaining coverage on the contribution of divestitures to the total value creation is negative and statistically significant for the divestitures occurring in the post-completion period. This corresponds to the period where the need for asset-restructuring is likely to be higher to better exploit operating synergies associated with the focal deal. Overall, these results further emphasize that the value contribution of divestitures is related to the synergy potential of the focal deal and provide additional support to the efficient view.

[Please insert Table VIII about here]

In addition, we perform a battery of unreported robustness tests using the employment protection law index (EPL). First, we assess whether the negative impact of EPL on the value contribution of divestitures is concentrated in industries with high labor dependence. Following Levine, Chen, and Shen (2020), we use high labor volatility at the industry level as a proxy for labor dependence. Our unreported results indicate that the negative joint effect of EPL and divestitures on total value creation is driven mainly by acquiring firms in industries with high labor dependence. Second, given that 31% of the focal acquisitions are cross-border in our sample, which implies that there may be a difference in the tightness of the employment protection in the countries of the target and acquiring firms, we examine next whether our main findings are robust to the use of the EPL index of the target company in the focal deal in lieu of the one of the acquirers. Our findings are not sensitive to this alteration. Third, we also include both the EPL of the acquiring firm and the EPL of the target firm in the same specification. In this model, the EPL of the target captures the incremental effect of acquiring a non-domestic firm. We find results that are qualitatively similar to those reported in Table 5. Moreover, when we include both EPL indexes, the effect is driven by the one of the acquirers, supporting our initial choice. Finally, the

EPL measure used in our analysis is the summary indicator for individual dismissals of regular workers. As a last check, we therefore re-run our models employing the summary indicator for individual and collective dismissals of regular workers. Given that two measures have an extremely high correlation (0.98), it is not surprising that our results are unaffected by the choice of the EPL measure.²⁷

4.4 Controlling for the Financing Motive

Debt and equity issues are external sources of financing a firm can use to fund its future investments (Hovakimian and Titman, 2006). As such, firm can decide to issue either debt or equity to finance an acquisition rather than or in addition to a divestiture. Thus, to make sure that the value contribution of divestitures in acquisition-centered restructuring process is not solely due to financing motive, we need to account for alternative mode of financing. While we already control for the financial characteristics of the firm (such as leverage and cash holding) in the baseline model in Table III, and also for the ease of financing at the country level in Table V, we repeat the analyses including variables that control for equity and debt issues to better account for the financing motives. For each focal acquisition, we record equity and debt (both bond and loan) issues of the acquiring firms that have occurred in the period of interest, i.e. from one year before the acquisition announcement to one year following its completion. Results are shown in Table IX.

Panel A of Table IX reports the descriptive statistics of these issues. Relative to acquirers without divestiture, firms that divest around a focal transaction are more (less) likely to be associated with debt (equity) issue. However, when it comes to the proceeds (i.e., the size of the issue in \$ million), both debt and equity issues are relatively larger on average for acquirers with

²⁷ All these unreported results are available from the authors upon request.

divestitures.²⁸ In Panel B, we estimate the total CAR models after including into the specification the dummies for external financing. The results are qualitatively similar to our main findings, with coefficient estimates of the same magnitude. We still find that divestitures are associated with higher total CAR even after including the dummies for external capital issues.

[Please insert Table IX about here]

Finally, as a further test to rule out that our results are mostly driven by the financing motives rather than efficiency ones, we examine whether the method of payment used in the deal affects our results (Travlos, 1987; Faccio and Masulis, 2005). Acquisitions paid for with stock require no (or limited) cash outflows for the acquiring company compared to cash deals. Thus, if financing motives are driving the wealth effect associated to divestitures, we should observe a smaller value contribution of divestitures in stock deals. We test this conjecture in Table X where we add to our baseline model the dummy *Stock*, which takes value 1 if the deal is stock-financed and 0 otherwise, and its interactions with the divestiture dummies. These results indicate that no coefficient of these interactions is negative and significant, suggesting that the contribution of divestitures to the value-enhancement of the acquisition-centered restructuring program does not depend on the method of payment.

[Please insert Table X about here]

Collectively, these additional results further corroborate the view that divestitures are part of a value-increasing asset restructuring process with the aim of unlocking potential synergies from the focal deal.

4.5 Buy-and-Hold Abnormal Returns

²⁸ Some debt issues are not necessarily related to the acquisition, but they can also be related to the financing of firm's operations or roll-overs of previous debt. This can explain why debt issues can sometimes be larger than the deal value of the acquisition.

Acquisitions and divestitures are likely to be jointly determined through an optimization process, and in equilibrium, firms that need to disinvest to bolster acquisition-related synergies do it, and the ones that do not need to do disinvestment do not do it. To examine whether this equilibrium argument is at play in our sample, we assess the value effect of the asset-related restructuring process over a longer window by computing the buy-and-hold abnormal returns (BHAR) over the period used to identify the divestitures. The BHAR of firm i is given by the following equation:

$$\text{BHAR}_i = \Pi(1+R_{i,t}) - \Pi(1+R_{M,t}), \quad (1)$$

where $R_{i,t}$ is the stock return of firm i on day t , and $R_{M,t}$ is the return of the market index on day t . The period used to compute the BHAR goes from one year before the announcement of the focal deal, till one year after its completion. Table XI reports the result. The average BHAR around the focal acquisition is 4.68% in our sample (see Panel A), and it is not statistically different for acquirers with divestitures and without divestiture. Panel B reports OLS regressions with BHAR as dependent variable, and the same set of control variables as in Table III. In the two models, the divestiture dummies are statistically insignificant. These results are consistent with the equilibrium argument.

[Please insert Table XI about here]

4.6 Are Divestitures Around Acquisitions Associated with Weak Bargaining Power?

An important question to address is whether selling assets during the M&A restructuring process rather than in other times is an optimal choice for the firms involved. While the previous analysis has shown that divestitures increase the efficiency of the acquisition process, selling assets during the restructuring process could still be a suboptimal decision in comparison to a sale process organized in isolation. Thus, to confirm that divestitures are truly part of an efficient value-

maximizing strategy, we need to show that firms are, at least, not worse off by selling assets around focal acquisitions rather than as isolated transactions.

As a further step in our analysis, we investigate the abnormal returns around divestiture announcements that occurred over the sample period 1996–2016 to compare the wealth effect of divestitures embedded in acquisition processes and the ones that are implemented in isolation. If the value creation were lower when the firm is also engaging in an acquisition, this could mean that the acquirer has weak bargaining power or that divestitures are fire asset sales necessary to complete the acquisition. Such finding would contrast with the efficient profit–maximizing view. On the contrary, if being part of an acquisition process did not affect (or even increased) its wealth creation, then this would be consistent with an efficient restructuring of the assets.

Panel A of Table XII shows the univariate analysis for the event window $(-1, +1)$.²⁹ Overall, in line with the literature (see, e.g., Bates, 2005), we find that divestitures create value, with an average abnormal return of 1.56%. However, despite both types of divestitures are value enhancing for shareholders, the value creation associated with divestitures included in an M&A restructuring program is on average statistically lower than that of divestitures implemented outside of such programs (1.09% vs. 1.60%). While the univariate results hint at a non–profit maximizing behavior for firms that divest within M&A restructuring process, the picture changes rather dramatically when we control for deal and firm characteristics in Panel B. In this multivariate analysis, we regress divestiture announcement CARs on a dummy variable identifying whether the divestiture is related to an acquisition (i.e., the variable is denoted *Acquisition Dummy*) and control for variables known to impact market reactions at divestiture announcement. The acquisition dummy, which captures whether the divestiture is part of an acquisition–centered

²⁹ In an unreported analysis, we find similar results for the event window $(-2, 2)$.

restructuring process, is statistically insignificant (see Column I in Panel B of Table VIII). Moreover, the timing of the divestiture relative to the focal acquisition does not affect this average result, as none of the acquisition dummy variables are significant in Column II. In other words, the value effect of a divestiture included in an M&A restructuring program is comparable to the value effect of a divestiture implemented in isolation. Thus, we do not find evidence that the acquisition weakens the bargaining power of the seller or that these divestitures are fire asset sales, supporting the conclusions of Table III. Therefore, these findings further support that the restructuring firms are taking actions that are consistent with a profit-maximizing view.

[Please insert Table XII about here]

4.7 Alternative Approach to Identify Asset Restructuring Programs

To further assess to robustness of our findings, we rely on the dormant period approach as an alternative method to identify the asset restructuring process (see, e.g., Aktas, de Bodt, and Roll (2013) for a similar approach). To identify the start (and the end) of a new asset restructuring process, we impose a certain number of years without any asset-related restructuring activity (i.e., a dormant period with neither acquisition nor divestiture). We consider both 1-year and 3-year as dormant period. Table 13 reports the results of the dormant period approach.

[Please insert Table XIII about here]

Panel A reports the summary statistics on the asset restructuring programs identified with the dormant period approach. The 1-year dormant period approach leads to the identification of 23,191 asset restructuring programs. The average number of deals (i.e., a deal being either an acquisition or a divestiture) is 1.48, and the corresponding median is 1.00. Out of these 23,191 programs, 11,537 of them include at least a divestiture, 12,666 of them include at least an acquisition, and the number of programs including both divestitures and acquisitions is 1,012. The

3-year dormant period approach, being more restrictive, leads to the identification of less restructuring programs as expected (i.e., 14,859), but with a larger average number of deals included in the program (i.e., 1.82 deals per program on average).

Panel B reports the estimation results of the total CAR regressions. Columns I and II consider the whole sample of restructuring programs identified with the dormant approach (i.e., these are asset restructuring programs with at least one deal, with deals being either an acquisition or a divestiture), while Columns III and IV restrict the sample to programs that include at least one acquisition. Total CAR, here corresponding to the sum of the announcement $CAR(-1,+1)$ of the deals included in the asset restructuring program, is the dependent variable. The results in Table XIII are largely consistent with our initial findings, with divestitures having a positive contribution to the total value created in the asset restructuring program. Therefore, the results with the dormant period approach confirm to a large extent the efficient restructuring hypothesis, with corporate divestitures playing an important role in the unlocking of potential synergies.

5. Conclusion

Focusing on a global sample of relatively large acquisitions, we study the entire acquisition-centered restructuring process and examine all divestitures, including those of the original assets of the acquirer, taking place before and after the announcement of the focal deal. We argue that these divestitures associated to focal acquisitions are not just used to raise financing, but that they are part of a profit-maximizing asset restructuring process to redraw the boundaries of the firm as well.

In support of this efficient asset reorganization hypothesis, we document that acquirers divest more assets when they are larger, more diversified, acquisitive, and have lower market valuation. Furthermore, more than half of these divestitures takes place after the completion of the

focal acquisition, the period that is relatively less sensitive to financing and regulatory needs. Examining the efficiency of the acquisition-driven asset reorganizations, we document that divestitures enhance the value creation associated with acquisitions. We also show that the value contribution of divestitures in acquisition-centered restructuring program is related to the synergistic potential of the focal deal.

We also carry out additional tests to examine whether divesting during an acquisition process weakens the bargaining power of the seller. Comparing abnormal returns for divestitures within and without acquisition processes, we do not observe significant differences after controlling for variables known to affect divestiture CARs. This indicates that these divestitures are neither fire sales nor forced asset sales, assuring that firms do not make sub-optimal decisions when they sell assets around acquisitions. Overall, we find evidence that the acquisition is a catalyst for value-creating restructuring processes and that large companies adopt a dynamic perspective to restructure their assets, with both the buy and sell side being important activities.

Appendix A. Variable Definitions

Unless explicitly mentioned otherwise, Thomson Reuters' Worldscope is the data source for financial- and accounting-related variables, Thomson Reuters' Datastream for market-related variables, and Thomson One Banker for transaction-related variables and equity/debt issues.

Dependent variables

Acquisition (Divestiture) CAR: Cumulative abnormal return for the acquiring (divesting) firm over the 3-day event window (-1, +1) around the announcement day of the focal deal (divestiture). The abnormal return is computed using a market model with parameters estimated over the estimation period (-240, -41) with respect to the announcement day. We employ the local index (datatype LI) as market index (Source: Datastream).

Total CAR: It corresponds to the acquisition CAR plus the sum of the divestiture CARs in the acquisition-centered restructuring process.

Independent variables of interest:

Divestiture: Binary variable that takes the value of 1 if the acquirer has done at least one divestiture during the acquisition process (i.e., from one year before the announcement to one year after the completion of the focal deal), 0 otherwise.

Divestiture Pre: Binary variable that takes the value of 1 if the acquirer has done at least one divestiture in the year before the announcement of the acquisition, 0 otherwise.

Divestiture Interim: Binary variable that takes the value of 1 if the acquirer has done at least one divestiture in the period between the announcement and completion of the focal deal, 0 otherwise.

Divestiture Post: Binary variable that takes the value of 1 if the acquirer has done at least one divestiture in the year following the completion of the focal deal, 0 otherwise.

Acquisition: Binary variable that takes the value of 1 if the considered divestiture is related to a focal deal, 0 otherwise.

Acquisition Pre: Binary variable that takes the value of 1 if the considered divestiture is related to an acquisition process and implemented in the pre-announcement period.

Acquisition Interim: Binary variable that takes the value of 1 if the considered divestiture is related to an acquisition process and implemented in the interim period.

Acquisition Post: Binary variable that takes the value of 1 if the considered divestiture is related to an acquisition process and implemented in the post-closing period.

Firm variables

Capex: Capital expenditures divided by total assets.

Cash holding: Cash reserves divided by total assets.

Debt issue dummy: Binary variable that takes the value of 1 if the firm has issued debt in the form of loan or bond during the acquisition process (i.e., from one year prior to the announcement to one year after the completion of the focal deal), 0 otherwise.

Debt proceeds: Sum of loan and bond issued during the acquisition process in \$ million.

Diversified: Binary variable that takes the value of 1 if the firm is active in more than one business segment, 0 otherwise.

Dividend payer: Binary variable that takes the value of 1 if the firm paid cash dividends in the year before the deal, zero otherwise.

Equity issue dummy: Binary variable that takes the value of 1 if the firm has issued equity during the acquisition process (i.e., from one year prior to the announcement to one year after the completion of the focal deal), 0 otherwise.

Equity proceeds: Equity issued during the acquisition process in \$ million.

Excess price margin: Following Massa and Gaspar (2005) and Peress (2010), the price–cost margin (PCM) is defined as operating profits (before depreciation, interest, special items, and taxes) over sales (if data are missing, we use operating income). *Excess price margin* corresponds to the difference between the firm’s PCM and the PCM of its industry. The industry PCM is the value–weighted average PCM across firms in the industry where the weights are based on market share and industries are defined using two–digit SIC code.

Leverage: Total debt divided by total assets.

Market value: Market capitalization of the equity of the firm.

R&D: Research and development expenses divided by total assets.

ROA: EBITDA divided by total assets.

Serial acquirer: Binary variable that takes the value of 1 if the firm has made other acquisitions in the 3–year period before the announcement of the focal deal, 0 otherwise.

Size: Log(total assets in \$ million).

Tobin’s Q: Market value of the equity plus total debt divided by total assets.

Industry variables

Herfindhal index: Sum of squares of the market shares of all firms in a given year, country and two–digit SIC code industry, where market share is defined as sales of the firm divided by the sum of the sales in the industry.

M&A liquidity: It measures the liquidity of the M&A market in the industry of the acquiring firm in a given year. It is computed as the sum of acquisitions in a given year, country, and two–digit SIC code, divided by the sum of total assets of all firms in the same country and two–digit SIC code.

Deal Characteristics

Cross border: Binary variable that takes value of 1 if the target and the acquirer are from different countries, 0 otherwise.

Cross industry: Binary variable that takes value of 1 if the target and the acquirer are from different industries, 0 otherwise Industries follows the Fama–French 49–industry classification.

Public target: Binary variable that takes value of 1 if the target of the focal acquisition is a publicly listed firm, 0 otherwise.

Relative size: Value of the focal deal divided by the market value of the acquiring firm from the last fiscal year before the deal announcement.

Stock (Cash): Binary variable that takes value of 1 if the method of payment in the focal deal is fully stock (fully cash), 0 otherwise.

Country Variables

Banking development: Domestic credit to private sector by banks as percentage of the corresponding GDP (Source: World Bank WDI).

Stock market development: Market capitalization of listed domestic companies as a percentage of the corresponding country GDP (Source: World Bank WDI).

GDP growth: GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (Source: World Bank WDI).

GDP per capita (ln): GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources (Source: World Bank WDI).

Employment Protection Proxies

Bargaining coverage: Total number of employees covered by collective (wage) bargaining agreements divided by all wage and salary earners with the right to bargain in employment, adjusted for the possibility that some sectors or occupations are excluded from the right to bargain (removing such groups from the employment count before dividing the number of covered employees over the total number of dependent workers in employment); it ranges from 0 to 1 and is time–varying (Source: ICTWSS).

EPL: It corresponds to the Employee Protection Law Index, which measures the strictness of regulations that an employer must follow in order to dismiss an individual worker with a regular contract; it ranges from 0 to 6 and is time–varying. (Source: OECD).

Union density: Net union memberships divided by all wage and salary earners in employment; it ranges from 0 to 1 and is time–varying (Source: ICTWSS).

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Table I. Acquisition and Divestiture Activity by Year

Panel A reports the mean and median value (in \$ million) of the focal acquisition and related divestitures by year. The focal acquisitions included in the sample are announced over the 1996–2016 period. They have a relative size larger than 5 percent and are control transactions, with the acquirer owning less than 20% ownership before the deal and at least 90% after. Panel B reports summary statistics on divestiture (i.e., dummy variable identifying if a divestiture is associated with a focal deal), acquisition value with and without divestiture, and on the value of the divestitures in the acquisition process (in \$ million and in proportion relative to the value of the focal deal). *Pre* refers to divestitures taking place before the announcement of the focal deal. *Interim* identifies divestitures implemented between the announcement date of the focal deal and its completion date, and *Post* divestitures after the completion date of the focal deal.

Panel A. Acquisition and Divestiture Value by year

Year	Acquisitions			Divestitures		
	Mean	Median	N	Mean	Median	N
1996	453.03	143.74	205	102.76	17.00	59
1997	438.85	136.63	249	77.83	28.00	78
1998	641.96	140.70	283	153.55	39.02	78
1999	1327.24	169.70	342	116.11	34.00	105
2000	1177.02	178.40	385	180.42	34.29	103
2001	885.69	163.54	243	284.59	30.96	78
2002	724.32	146.67	211	186.49	23.50	58
2003	450.83	141.96	238	80.23	35.52	42
2004	738.96	165.89	279	186.19	54.51	66
2005	928.55	186.00	325	157.55	25.00	93
2006	827.44	188.91	382	174.12	47.50	76
2007	848.66	177.00	475	374.48	35.23	107
2008	960.78	181.59	280	155.42	50.00	48
2009	1225.60	213.95	227	161.34	42.86	40
2010	793.45	210.00	343	261.11	35.25	48
2011	859.98	222.71	355	229.61	70.60	60
2012	718.76	200.78	364	237.92	70.00	36
2013	696.46	210.55	287	123.65	48.50	18
2014	1149.19	215.73	452	1220.80	138.13	75
2015	1296.18	241.20	503	464.95	160.00	72
2016	1188.97	250.00	417	322.21	157.90	59
Total	912.61	186.00	6,845	262.03	40.00	1,399

Panel B. Summary Statistics

Variable	Mean	Median	Min	Max	N
Divestiture	12.80%	0.00%	0.00%	100.00%	6,845
Acquisition Value – without divestiture	681	174	50.00	52,178	5,969
Acquisition Value – with divestitures	2,492	376	50.00	101,476	876
Divestiture Value	418	59	0.02	18,134	876
Divestiture Value / Acquisition value	32.83%	13.06%	0.00%	136.27%	876
Divestiture Pre	5.83%	0.00%	0.00%	100.00%	6,845
Divestiture Interim	2.07%	0.00%	0.00%	100.00%	6,845
Divestiture Post	7.54%	0.00%	0.00%	100.00%	6,845
Divestiture Value – pre	397	38	0.03	18,134	399
Divestiture Value – interim	414	79	0.03	7,426	142
Divestiture Value – post	290	59	0.02	7,008	516
Div. Value / Acquisition value – pre	19.95%	8.75%	0.00%	57.97%	399
Div. Value / Acquisition value – interim	5.14%	7.90%	0.00%	7.90%	142
Div. Value / Acquisition value – post	23.40%	11.33%	0.02%	73.10%	516

Table II. Summary Statistics

The table presents summary statistics for the considered acquisitions samples. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. The sample period is from 1996–2016. The last two columns report the p -values of the difference in mean and median tests. N is to the number of observations. NA denotes cases for which the median test does not compute the chi-square test statistic because of the empirical distribution of the variable.

	All Acquisitions			Acquisitions with Divestitures			Acquisitions without Divestitures			P -value	
	Mean	Median	N	Mean	Median	N	Mean	Median	N	Mean	Median
<i>Firm Characteristics</i>											
ROA	10.78%	12.33%	6,609	12.61%	13.21%	849	10.51%	12.10%	5,760	0.00	0.00
Leverage	21.07%	18.47%	6,837	24.17%	23.02%	874	20.61%	17.62%	5,963	0.00	0.00
Cash Holding	18.60%	11.41%	6,836	13.21%	7.80%	874	19.39%	12.00%	5,962	0.00	0.00
Dividend Payer	57.51%	100.00%	6,693	67.94%	100.00%	867	55.96%	100.00%	5,826	0.00	NA
Total Assets (\$m)	2,900	614	6,842	7,140	1,726	875	2,278	553	5,967	0.00	0.00
Market Value (\$m)	3,103	735	6,845	7,427	1,482	876	2,468	675	5,969	0.00	0.00
R&D	2.49%	0.00%	6,842	2.28%	0.19%	875	2.52%	0.00%	5,967	0.13	0.00
Capex	6.12%	4.03%	6,792	6.59%	4.57%	871	6.05%	3.92%	5,921	0.03	0.00
Tobin's Q	2.36	1.64	6,838	1.98	1.54	875	2.42	1.66	5,963	0.00	0.00
Diversified	66.09%	100.00%	6,845	79.68%	100.00%	876	64.10%	100.00%	5,969	0.00	NA
Serial Acquirer	30.40%	0.00%	6,845	52.63%	100.00%	876	27.14%	0.00%	5,969	0.00	0.00
Excess Price Margin	-0.11	0.00	6,303	-0.07	0.00	842	-0.11	0.00	5,461	0.06	0.48
<i>Industry Characteristics</i>											
Herfindhal Index	0.30	0.18	6,647	0.32	0.20	872	0.30	0.18	5,775	0.12	0.07
M&A Liquidity	0.07	0.02	6,646	0.08	0.03	871	0.07	0.02	5,775	0.20	0.02
<i>Deal Characteristics</i>											
Stock	19.49%	0.00%	6,845	14.04%	0.00%	876	20.29%	0.00%	5,969	0.00	0.00
Cash	29.38%	0.00%	6,845	32.99%	0.00%	876	28.85%	0.00%	5,969	0.01	0.01
Relative Size	0.96	0.30	6,845	0.75	0.26	876	0.99	0.30	5,969	0.00	0.03
Cross Border	30.85%	0.00%	6,845	35.27%	0.00%	876	30.21%	0.00%	5,969	0.00	0.00
Cross Industry	60.83%	100.00%	6,845	59.59%	100.00%	876	61.02%	100.00%	5,969	0.42	NA
Public target	25.61%	0.00%	6,845	36.64%	0.00%	876	23.99%	0.00%	5,969	0.00	0.00
<i>Country Characteristics</i>											
Stock Market Dev.	1.13	1.15	6,507	1.19	1.25	860	1.12	1.14	5,647	0.00	0.00
Banking Dev.	0.84	0.59	6,222	0.80	0.57	815	0.84	0.60	5,407	0.00	0.04
GDP Growth	3.16	2.86	6,601	2.91	2.86	870	3.20	2.86	5,731	0.00	0.62
GDP per Capita (ln)	10.40	10.68	6,601	10.59	10.70	870	10.36	10.68	5,731	0.00	0.38
EPL	0.82	0.09	5,468	0.81	0.09	828	0.82	0.09	4,640	0.66	0.70
Union Density	0.21	0.14	6,109	0.21	0.14	855	0.21	0.14	5,254	0.82	0.22
Bargaining Coverage	0.25	0.15	5,040	0.26	0.15	741	0.25	0.15	4,299	0.33	0.35
<i>Value creation</i>											
Acquisition CAR (-1, 1)	2.34%	1.07%	6,845	1.73%	0.74%	876	2.44%	1.12%	5,969	0.03	0.12
Divestiture CAR (-1, 1)				1.07%	0.56%	876					
Total CAR (-1, 1)	2.52%	1.19%	6,845	3.03%	1.84%	876	2.44%	1.12%	5,969	0.14	0.03

Table III. Wealth Effects associated with Acquisition-centered Restructuring Programs

The table presents the coefficient estimates of OLS regressions where the dependent variable is the 3-day CAR around the acquisition announcement in the first three columns, and the *total CAR* (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs) in the last three columns. The specifications control for time, industry, and country-level fixed effects (FE). Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. ***, **, and * indicate significance at the 1%, 5%, and 10%, respectively.

	Acquisition CAR			Total CAR		
	(I)	(II)	(III)	(IV)	(V)	(VI)
Divestiture		0.0062*			0.0201***	
		[0.0033]			[0.0042]	
Divestiture Pre			0.0060			0.0171***
			[0.0046]			[0.0061]
Divestiture Interim			0.0154**			0.0116
			[0.0070]			[0.0091]
Divestiture Post			-0.0002			0.0142***
			[0.0039]			[0.0052]
ROA	0.0029	0.0034	0.0029	0.0078	0.0095	0.0090
	[0.0141]	[0.0141]	[0.0140]	[0.0150]	[0.0149]	[0.0148]
Leverage	0.0190**	0.0190**	0.0190**	0.0200**	0.0198**	0.0201**
	[0.0081]	[0.0081]	[0.0081]	[0.0085]	[0.0084]	[0.0084]
Cash Holding	0.0009	0.0012	0.0011	0.0004	0.0014	0.0012
	[0.0107]	[0.0107]	[0.0107]	[0.0112]	[0.0111]	[0.0111]
Dividend Payer	-0.0017	-0.0017	-0.0019	-0.0025	-0.0028	-0.0029
	[0.0030]	[0.0030]	[0.0030]	[0.0032]	[0.0032]	[0.0032]
Size	-0.0078***	-0.0081***	-0.0081***	-0.0073***	-0.0082***	-0.0082***
	[0.0011]	[0.0011]	[0.0011]	[0.0011]	[0.0011]	[0.0011]
Excess Price margin	0.0032	0.0032	0.0032	0.0015	0.0017	0.0017
	[0.0038]	[0.0038]	[0.0038]	[0.0040]	[0.0040]	[0.0040]
Herfindhal	0.0053	0.0053	0.0057	0.0070	0.0071	0.0071
	[0.0059]	[0.0059]	[0.0059]	[0.0061]	[0.0061]	[0.0061]
R&D	-0.0822**	-0.0821**	-0.0830**	-0.0653	-0.0651	-0.0664
	[0.0410]	[0.0410]	[0.0410]	[0.0424]	[0.0423]	[0.0423]
Capex	-0.0137	-0.0141	-0.0136	-0.0043	-0.0056	-0.0048
	[0.0235]	[0.0235]	[0.0235]	[0.0246]	[0.0246]	[0.0246]
Tobin's Q	-0.0023***	-0.0023***	-0.0023***	-0.0024**	-0.0024**	-0.0024**
	[0.0009]	[0.0009]	[0.0009]	[0.0010]	[0.0010]	[0.0010]
Diversified	0.0080***	0.0076***	0.0077***	0.0098***	0.0087***	0.0088***
	[0.0029]	[0.0029]	[0.0029]	[0.0030]	[0.0030]	[0.0030]
Serial Acquirer	0.0024	0.0022	0.0021	0.0016	0.0008	0.0006
	[0.0028]	[0.0028]	[0.0027]	[0.0029]	[0.0029]	[0.0029]
M&A Liquidity	0.0281***	0.0279***	0.0277***	0.0332***	0.0324***	0.0325***
	[0.0104]	[0.0103]	[0.0103]	[0.0113]	[0.0111]	[0.0111]
Stock	0.0026	0.0028	0.0027	0.0018	0.0023	0.0023
	[0.0042]	[0.0042]	[0.0042]	[0.0044]	[0.0044]	[0.0044]
Relative Size	0.0040***	0.0040***	0.0040***	0.0042***	0.0040***	0.0040***
	[0.0011]	[0.0011]	[0.0011]	[0.0012]	[0.0012]	[0.0012]
Cross Border	0.0035	0.0035	0.0036	0.0034	0.0034	0.0034
	[0.0029]	[0.0029]	[0.0029]	[0.0030]	[0.0030]	[0.0030]
Cross Industry	-0.0011	-0.0012	-0.0012	-0.0020	-0.0021	-0.0021
	[0.0025]	[0.0025]	[0.0025]	[0.0026]	[0.0026]	[0.0026]
Public Target	-0.0272***	-0.0274***	-0.0273***	-0.0274***	-0.0282***	-0.0281***
	[0.0030]	[0.0030]	[0.0030]	[0.0032]	[0.0032]	[0.0032]
Country FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes
Adjusted R2	0.081	0.082	0.135	0.073	0.077	0.133
Observations	6,011	6,011	6,011	6,011	6,011	6,011

Table IV. Relative Size of the Focal Deal as a Proxy for Synergistic Potential

The table presents the coefficient estimates of OLS regressions where the dependent variable is the *total CAR* ($-1, 1$) associated with the acquisition–centered restructuring process (i.e., acquisition announcement 3–day CAR plus divestiture announcement 3–day CARs). The first two columns report on the subsample of focal deals with relative size larger than 10%, the middle two columns on relative size larger than 20%, and the last two columns on relative size larger than 33%. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	Relative Size>10%		Relative Size>20%		Relative Size>33%	
	(I)	(II)	(III)	(IV)	(VII)	(VIII)
Divestiture	0.0241*** [0.0050]		0.0316*** [0.0063]		0.0322*** [0.0076]	
Divestiture Pre		0.0184** [0.0074]		0.0242** [0.0096]		0.0257** [0.0119]
Divestiture Interim		0.0189* [0.0111]		0.0212 [0.0140]		0.0197 [0.0172]
Divestiture Post		0.0173*** [0.0062]		0.0238*** [0.0077]		0.0243*** [0.0091]
Controls	yes	yes	yes	yes	yes	yes
Country FE	yes	yes	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes
Adjusted R ²	0.074	0.138	0.080	0.157	0.087	0.171
Observations	4,929	4,929	3,690	3,690	2,768	2,768

Table V. Country Level Employee Protection as an Inverse Proxy for Synergistic Potential

The table presents the coefficient estimates of OLS regressions where the dependent variable is the *total CAR* ($-1, 1$) associated with the acquisition-centered restructuring process (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs). EPL denotes Employee Protection Law index. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively. Panel A reports the specification without country fixed effects.

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)
Divestiture	0.0285*** [0.0057]		0.0297*** [0.0059]		0.0284*** [0.0057]		0.0300*** [0.0059]	
Divestiture Pre		0.0255*** [0.0085]		0.0272*** [0.0087]		0.0255*** [0.0085]		0.0274*** [0.0087]
Divestiture Interim		0.0107 [0.0119]		0.0097 [0.0124]		0.0107 [0.0120]		0.0096 [0.0124]
Divestiture Post		0.0227*** [0.0071]		0.0240*** [0.0073]		0.0230*** [0.0071]		0.0245*** [0.0073]
EPL	0.0039* [0.0021]	0.0038** [0.0019]	0.0053* [0.0028]	0.0049* [0.0027]				
EPL × Divestiture	-0.0111*** [0.0042]		-0.0153*** [0.0047]		-0.0098** [0.0042]		-0.0140*** [0.0048]	
EPL × Divestiture Pre		-0.0101 [0.0067]		-0.0166** [0.0071]		-0.0088 [0.0066]		-0.0156** [0.0071]
EPL × Divestiture Interim		0.0015 [0.0101]		0.0062 [0.0118]		0.0018 [0.0101]		0.0068 [0.0118]
EPL × Divestiture Post		-0.0115** [0.0052]		-0.0136** [0.0059]		-0.0107** [0.0052]		-0.0128** [0.0060]
GDP Growth	-0.0008 [0.0012]	-0.0009 [0.0012]	-0.0013 [0.0013]	-0.0014 [0.0013]	-0.0014 [0.0015]	-0.0017 [0.0014]	0.0001 [0.0017]	-0.0009 [0.0016]
GDP per Capita (ln)	0.0112** [0.0054]	0.0104*** [0.0018]	0.0122** [0.0062]	0.0112*** [0.0021]	-0.0517 [0.0510]	0.0109*** [0.0021]	-0.1357** [0.0633]	0.0095*** [0.0025]
Stock market development			-0.0010 [0.0060]	-0.0011 [0.0058]			0.0038 [0.0115]	0.0056 [0.0115]
Banking development			-0.0051 [0.0047]	-0.0051 [0.0047]			0.0190* [0.0104]	0.0119 [0.0101]
Controls	yes	yes	yes	yes	yes	yes	yes	yes
Country FE	no	no	no	no	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	Yes	yes	yes	yes	yes
Adjusted R ²	0.069	0.114	0.064	0.107	0.069	0.114	0.062	0.104
Observations	5,023	5,023	4,614	4,614	5,023	5,023	4,614	4,614

Table VI. Sensitivity Test: Divestiture Intensity

The table presents the coefficient estimates of OLS regressions where the dependent variable is the 3-day CAR around the acquisition announcement in the first two columns, and the *total CAR* (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs) in the last two columns. *Divestiture intensity* is defined as the ratio between the dollar value of the divestitures and the value of the acquisition. *Divestiture intensity pre*, *Divestiture intensity interim*, *Divestiture intensity post* capture the intensity of divestitures in the three phases: pre-announcement; interim; and post-completion. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. The specifications control for time, industry, and country-level fixed effects (FE). Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	Acquisition CAR		Total CAR	
	(I)	(II)	(III)	(IV)
Divestiture Intensity	0.0011 [0.0041]		0.0347*** [0.0080]	
Divestiture Intensity Pre		0.0083 [0.0129]		0.0649*** [0.0200]
Divestiture Intensity Interim		0.2434** [0.1092]		0.2330 [0.1487]
Divestiture Intensity Post		-0.0070 [0.0078]		0.0406*** [0.0157]
Controls	yes	yes	yes	yes
Country FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Adjusted R2	0.081	0.134	0.077	0.134
Observations	6,011	6,011	6,011	6,011

Table VII. Sensitivity Test: Market-adjusted CARs

Panel A of the table presents summary statistics for the 3-day market-adjusted CAR around the acquisition announcement, the divestiture announcement 3-day market-adjusted CAR, and the *total CAR* (i.e., acquisition announcement 3-day market-adjusted CAR plus divestiture announcement 3-day market-adjusted CARs). Panel B presents the coefficient estimates of OLS regressions where the dependent variable is the 3-day market-adjusted CAR around the acquisition announcement in the first two columns, and the *total CAR* in the last two columns. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. The specifications control for time, industry, and country-level fixed effects (FE). Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Summary Statistics

	All Acquisitions (N=6,845)		Acquisitions with Divestitures (N=876)		Acquisitions without Divestitures (N=5,969)		<i>P</i> -value	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
Acquisition CAR	2.61%	1.37%	2.00%	0.88%	2.70%	1.44%	0.03	0.06
Divestiture CAR			1.27%	0.71%				
Total CAR	2.83%	1.52%	3.54%	2.08%	2.70%	1.44%	0.05	0.06

Panel B. Acquisition and Total CAR Regressions

	Acquisition CAR		Total CAR	
	(I)	(II)	(III)	(IV)
Divestiture	0.0071** [0.0033]		0.0229*** [0.0043]	
Divestiture Pre		0.0073 [0.0046]		0.0212*** [0.0063]
Divestiture Interim		0.0148** [0.0070]		0.0113 [0.0101]
Divestiture Post		0.0002 [0.0039]		0.0154*** [0.0053]
Controls	yes	yes	yes	yes
Country FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Adjusted R2	0.087	0.151	0.082	0.149
Observations	6,011	6,011	6,011	6,011

Table VIII. Sensitivity Test: Alternative Proxies for Labor Protection

The table presents the coefficient estimates of OLS regressions where the dependent variable is the *total CAR* ($-1, 1$) associated with the acquisition-centered restructuring process (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs). *Proxy* in the specifications refers to the considered country-level labor protection, as indicated in the column header. The considered proxies are *Bargaining Coverage* in the first two columns and *Union Density* in the last two columns, respectively. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	Bargaining Coverage		Union Density	
	(I)	(II)	(III)	(IV)
Divestiture	0.0335*** [0.0068]		0.0246*** [0.0072]	
Divestiture Pre		0.0307*** [0.0107]		0.0076 [0.0124]
Divestiture Interim		0.0056 [0.0141]		0.0096 [0.0168]
Divestiture Post		0.0312*** [0.0086]		0.0287*** [0.0085]
Labor Power Proxy × Divestiture	-0.0463** [0.0186]		-0.0166 [0.0276]	
Labor Power Proxy × Divestiture Pre		-0.0521* [0.0313]		0.0511 [0.0522]
Labor Power Proxy × Divestiture Interim		0.0605 [0.0398]		0.0094 [0.0788]
Labor Power Proxy × Divestiture Post		-0.0620*** [0.0235]		-0.0691** [0.0289]
GDP Growth	-0.0027 [0.0016]	-0.0028* [0.0016]	-0.0002 [0.0014]	-0.0002 [0.0014]
GDP per Capita (ln)	0.0009 [0.0514]	0.0117*** [0.0024]	-0.0035 [0.0316]	0.0109*** [0.0021]
Controls	yes	yes	yes	yes
Country FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Adjusted R ²	0.078	0.124	0.084	0.140
Observations	4,633	4,633	5,508	5,508

Table IX. Sensitivity Test: Controlling for Debt and Equity Issues

Panel A reports summary statistics for equity and debt issues around focal acquisitions (include issues that have occurred within the acquisition period of interest, from one year prior to the announcement, to one year after completion of the focal acquisition). The last two columns report the p -values of the difference in mean and median tests between the two considered subsamples. Debt issue is constructed by summing loan and bond issues. Equity and debt proceeds are in \$ million. Panel B presents the coefficient estimates of OLS regressions where the dependent variable is the *total CAR* ($-1, 1$) associated with the acquisition-centered restructuring process (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs). The models account for equity and debt issues that took place during the restructuring process. EPL denotes Employee Protection Law index. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Summary Statistics

	Acquisitions with Divestitures			Acquisitions without Divestitures			P-value	
	Mean	Median	N	Mean	Median	N	Mean	Median
Equity Issues Dummy	26.71%	0.00%	876	32.57%	0.00%	5,969	0.00	0.00
Debt Issues Dummy	63.70%	100.00%	876	46.42%	0.00%	5,969	0.00	0.00
Equity Proceeds	512.35	178	234	292	115	1,944	0.00	0.00
Debt Proceeds	4,108	975	558	1,536	453	2,771	0.00	0.00
Equity Proceeds Pre	310	112	100	209	83	986	0.06	0.17
Equity Proceeds Int.	508	183	72	304	110	489	0.11	0.09
Equity Proceeds Post	443	138	118	223	97	952	0.01	0.02
Debt Proceeds Pre	2,008	650	336	866	300	1,468	0.00	0.00
Debt Proceeds Int.	3,435	1,008	276	1,337	425	1,235	0.00	0.00
Debt Proceeds Post	1,871	662	358	870	379	1,534	0.00	0.00

Panel B. Total CAR Regressions

	(I)	(II)
Divestiture	0.0200*** [0.0042]	
Divestiture Pre		0.0171*** [0.0061]
Divestiture Interim		0.0115 [0.0091]
Divestiture Post		0.0140*** [0.0052]
Equity Issue Dummy	0.0006 [0.0030]	0.0006 [0.0030]
Debt Issue Dummy	0.0058** [0.0028]	0.0059** [0.0028]
Controls	yes	yes
Country FE	yes	yes
Industry FE	yes	yes
Year FE	yes	yes
Adjusted R ²	0.077	0.134
Observations	6,011	6,011

Table X. Sensitivity Test: Stock as Method of Payment in the Focal Acquisition

The table presents the coefficient estimates of OLS regressions where the dependent variable is the 3-day CAR around the acquisition announcement in the first three columns, and the *total CAR* (i.e., acquisition announcement 3-day CAR plus divestiture announcement 3-day CARs) in the last three columns. Stock is a binary variable that takes value of 1 if the method of payment in the focal deal is fully stock, 0 otherwise. The specifications control for time, industry, and country-level fixed effects (FE). Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

	Acquisition CAR		Total CAR	
	(I)	(II)	(III)	(IV)
Divestiture	0.0066* [0.0035]		0.0209*** [0.0043]	
Divestiture Pre		0.0056 [0.0049]		0.0162** [0.0064]
Divestiture Interim		0.0177** [0.0075]		0.0123 [0.0099]
Divestiture Post		-0.0002 [0.0041]		0.0150*** [0.0053]
Stock	0.0031 [0.0045]	0.0029 [0.0045]	0.0030 [0.0046]	0.0025 [0.0045]
Stock × Divestiture	-0.0032 [0.0101]		-0.0064 [0.0137]	
Stock × Divestiture Pre		0.0037 [0.0132]		0.0071 [0.0208]
Stock × Divestiture Interim		-0.0183 [0.0213]		-0.0068 [0.0252]
Stock × Divestiture Post		-0.0009 [0.0138]		-0.0075 [0.0198]
Controls	yes	yes	yes	yes
Country FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Adjusted R ²	0.082	0.134	0.077	0.133
Observations	6,011	6,011	6,011	6,011

Table XI. Buy-and-Hold Abnormal Returns

This table examines buy-and-hold abnormal returns (BHAR) for our sample firms over the period going from one year prior to the announcement of the focal deal till one year after its completion. The BHAR is computed as follows:

$$\text{BHAR}_i = \Pi(1+R_{i,t}) - \Pi(1+R_{M,t}),$$

where $R_{i,t}$ is the stock return of firm i on day t , and $R_{M,t}$ is the return of the market index on day t . We employ the local index (datatype LI) as market index (Source: Datastream). Panel A reports the summary statistics. The last two columns report the p -values of the difference in mean and median tests between the two considered subsamples. Panel B presents the coefficient estimates of OLS regressions where the dependent variable is the BHAR associated with the acquisition-centered restructuring process. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Summary Statistics

	All Acquisitions (N=6,845)		Acquisitions with Divestitures (N=876)		Acquisitions without Divestitures (N=5,969)		P -value	
	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>	<i>Mean</i>	<i>Median</i>
BHAR	4.68%	1.16%	3.74%	1.46%	4.82%	1.13%	0.27	0.64

Panel B. BHAR Regressions

	(I)	(II)
Divestiture	0.0098 [0.0098]	
Divestiture Pre		0.0161 [0.0140]
Divestiture Interim		-0.0110 [0.0218]
Divestiture Post		-0.0034 [0.0109]
Controls	yes	yes
Country FE	yes	yes
Industry FE	yes	yes
Year FE	yes	yes
Adjusted R ²	0.098	0.116
Observations	6,011	6,011

Table XII. Wealth Creation around Divestiture Announcements

Panel A presents summary statistics on 3-day cumulative abnormal returns around the divestiture announcement. The first two columns report on all divestitures, the middle three columns on divestitures that are within an acquisition-centered restructuring process, and the last three columns on the ones that are not part in an acquisition-centered restructuring process. The p -values of the difference in mean and median tests between the two subsamples are reported within parentheses below the corresponding coefficient in the last two columns. Panel B presents the coefficient estimates of OLS regression where the dependent variable is the 3-day cumulative abnormal return around the divestiture announcements. The specifications include year, industry, and country fixed effects. *Acquisition* is a dummy variable identifying divestitures that are related to an acquisition process. *Acquisition Pre (Post)* identifies divestitures that are related to an acquisition process and implemented in the pre-announcement (post-closing) period. *Acquisition Interim* identifies divestitures implemented in the interim period of an acquisition process. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Summary Statistics

Period	All divestitures (N=17,806)		Divestitures within an M&A Process (N=1,399)			Divestitures not related to an M&A Process (N=16,407)	
	Mean	Median	Mean	Median	N	Mean	Median
All	1.56%	0.36%	1.09%	0.30%		1.60%	0.36%
Pre			1.26%	0.40%	512	(0.00)	(0.62)
Interim			0.65%	0.43%	188		
Post			1.08%	0.19%	699		

Panel B. Divestiture CAR Regressions

	(I)	(II)
Acquisition	0.0011 [0.0021]	
Acquisition Pre		0.0036 [0.0034]
Acquisition Interim		0.0017 [0.0044]
Acquisition Post		-0.0001 [0.0027]
Controls	yes	yes
Country FE	yes	yes
Industry FE	yes	yes
Year FE	yes	yes
Adjusted R ²	0.049	0.049
Observations	13,059	13,059

Table XIII. Dormant Period Approach to Identify Asset Restructuring Programs

The table presents summary statistics and regression results for determinants of wealth creation for asset restructuring programs preceded and followed by 1- or 3-year dormant period. Panel A reports summary statistics for 1- and 3-year hiatus restructuring programs. Panel B presents the coefficient estimates of OLS regressions where the dependent variable is the *total CAR* ($-1, 1$) (i.e., sum of all deal CARs that occurred during the program) associated with the 1-year and 3-year hiatus programs, respectively. EPL denotes Employee Protection Law index. Each model includes the same set of controls as in the baseline models in Table 3, whose coefficients are suppressed for brevity. Variable definitions are in Appendix A. All variables are winsorized at 1% on both tails. Standard errors are clustered at firm level and reported within brackets. The symbols ***, **, and * indicate significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Summary Statistics on Restructuring Programs

	1-year hiatus programs	3-year hiatus programs
Number of restructuring programs	23,191	14,859
<i>Average number of deals per program</i>	1.48	1.82
<i>Median number of deals per program</i>	1.00	1.00
Number of programs with at least one divestiture	11,537	7,798
Number of programs with at least one acquisition	12,666	8,204
Number of programs with divestitures and acquisitions	1,012	1,143

Panel B. Total CAR regressions

	programs with at least one deal		programs with at least one acquisition	
	1-year hiatus (I)	3-year hiatus (II)	1-year hiatus (III)	3-year hiatus (IV)
Divestiture	0.0048** [0.0020]	0.0087*** [0.0033]	0.0235*** [0.0047]	0.0355*** [0.0064]
Controls	yes	yes	yes	yes
Country FE	yes	yes	yes	yes
Industry FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Adjusted R ²	0.030	0.029	0.054	0.055
Observations	16,455	10,016	9,385	5,773