Build, Borrow, Buy… or Bail: Divestiture Following M&A Deal Termination

Anthony Gibbs*, Heejung Byun*, Koungjin Lim*

*Mitchell E. Daniels, Jr. School of Business, Purdue University

Abstract

The relationship between divestitures and acquisitions is generally presented in three ways: to free up resources for future acquisitions; to remove redundant parts of a previously acquired firm; or due to underperformance of the combined firm. We propose an additional relationship: if an announced acquisition fails to close, the bidder may pivot to divest resources related to the target firm, particularly under certain conditions. To test this relationship, we augment previous methodological approaches with a novel method: matching successful and unsuccessful bids using the perceived risk of deal failure by using arbitrage spreads between the announced and spot price of the target. Consistent with this argument, we find that bidding firms make more divestitures in sectors related to the target after a failed bid.

Keywords

corporate strategy, divestitures, acquisitions, resource reconfiguration, risk arbitrage

Contact: ragibbs@purdue.edu, byun21@purdue.edu, lim270@purdue.edu

A key area of study in corporate strategy is resource reconfiguration; specifically, a firm developing or accessing additional resources or conversely diverting or divesting the resources it already controls (Feldman, 2020; Helfat & Eisenhardt 2004; Karim & Mitchell 2004; Karim 2006; Vidal & Mitchell, 2015). A useful framework for the modes by which a firm brings in additional resources is the Build, Borrow, or Buy (BBB) framework, which explores the circumstances under which a firm should choose between internal development, strategic partnerships, or mergers and acquisitions (M&A) (Capron & Mitchell, 2009, 2012). Scholars have also explored the methods and motivations for how firms handle resources that are redundant, unnecessary, or no longer sufficiently valuable, whether by redeploying those resources to more productive uses within the firm or divesting of those assets through a selloff or spinoff (Feldman & McGrath, 2016; Feldman & Sakhartov, 2022).

These decisions to either access additional resources or exit through diversion or divestment are not made in isolation, but rather are iterated or alternated as opportunities and threats emerge to tailor a firm's resource position to compete effectively (Karim 2006; Vidal & Mitchell, 2015). Extant literature has largely regarded these two as independent decisions, although scholars have more recently studied the temporal links between them. For example, studies have explored how corporate strategy transactions are utilized in a sequence (Feldman, 2020). Scholars have also noted mechanisms by which strategic alliances can presage acquisitions (Zaheer et al., 2010). Firms may choose to end strategic partnerships or alliances after completing an M&A transaction (Tandon et al., 2023). Alternatively, a firm may divest resources after the conclusion of an M&A deal, either because of redundancy of resources (Capron et al., 2001) or because the combination does not create the value anticipated (Hayward & Shimizu, 2006; Shimizu, 2007).

Resource portfolio dynamics are often conceptualized as a two-staged decision: the focal firm either pursues growth or exit from a given area as the first-stage choice (strategy level), followed by a selection of the specific mode of expansion or contraction (transaction level). For example, assuming a corporate-level decision to invest in growth in a particular product or geographic market, research based on the BBB framework offers predictions or prescriptions for firms choosing the mode of entry (e.g., Borah & Tellis, 2014; Capron, 2016; Cozzolino & Rothaermel, 2018; Lungeanu et al., 2016; Moeen & Mitchell, 2020). For

firms that desire a strategic exit from a given resource position, Feldman and Sakhartov (2022) present a corresponding framework for firms exiting by analyzing when firms choose between resource redeployment or divestiture of existing assets in the area.

While previous research has provided valuable insights into resource portfolio dynamics, there remains a gap in understanding how a firm responds when its chosen mode of reconfiguration fails to materialize. Specifically, we investigate the scenario where a firm announces an M&A deal that ultimately does not close (approximately 10 percent of announced large M&A deals fail to reach execution; Bahreini et al., 2019). When a firm experiences the termination of an intended acquisition, it is intuitive that the firm may pivot to an alternative mode of resource growth, as there is a demonstrated willingness to increase the firm's resource position in that particular industry or product market—indeed, this response would be predicted by the two-stage decision models described above (strategy level decision to grow followed by the transaction level decision of what method of growth to pursue). We argue that if a focal firm's motivation for the failed M&A deal was to fill a strategic gap where it already has invested resources, the firm might choose to exit the current resource position (strategy level) rather than pursue another mode of growth (transaction level). For example, if the firm already holds complementary resources that would have required the intended target resources to create value, it may react to the deal termination by divesting the business that was to receive the acquired resources.

The central premise of the resource and capability-based view of the firm is that superior performance derives from heterogeneous bundles of valuable resources and capabilities (Barney, 1991; Penrose, 1959; Wernerfelt, 1984) as well as the capability over time to effectively manage, grow, and reconfigure such bundles (Agarwal & Helfat, 2009; Helfat et al., 2009). The variation among these bundles of resources and capabilities leads firms to value a given resource differently from one another (Argyres & Zenger, 2012) and the varying levels of value creation achievable with such resources can explain why some firms are willing to offer a premium to secure an acquisition (Wernerfelt, 2011).

We theorize that not only can a focal firm value the desired acquisition target resource more highly than other firms, but also the value of the bundle of resources the focal firm already possesses can be

dependent on whether or not the acquisition is made. The firm may hold some complementary assets that fail to create value or may even destroy value without the keystone resource sought in the acquisition; when the value of the complementary assets on their own is insufficient to allow the focal firm to be competitive in the particular market or is insufficient to overcome the opportunity cost of maintaining them, firms may respond to a terminated acquisition deal by divesting the complementary assets and focusing capital and attention on other areas of the corporation[1].

We test this theoretical prediction using a sample of terminated and completed M&A deals among U.S. public firms between 1984 and 2019. We compare the divestiture activity of firms with a terminated acquisition deal to that of three control groups: *i*) the previous divestiture activity of the focal firm; *ii*) the post-deal divestiture activity of firms that successfully completed similar acquisitions; and *iii*) the divestiture activity of firms in the focal firm's industry that had a comparable propensity to enter an M&A transaction but did not. In addition to propensity score matching and coarsened exact matching procedures used by other scholars in this research area, we introduce an additional measure of deal risk arbitrage to match firms with terminated vs. completed deals. This measure calculates the relative gap between the offer price for the target's shares and the spot market price in the time after deal announcement but before termination/completion. By comparing deals with similar risk of termination, our study leverages quasi-random variation to isolate firm response to deal failure.

We find that following terminated acquisitions, the bidder is more likely to divest units in industries related to the intended target. This increased propensity to divest target-related units after deal failure exceeds that of firms that completed a similar transaction as well as comparable firms not engaged in an M&A deal. The concentration of such divestitures in industries related to the intended acquisition target is consistent with a mechanism of a firm choosing to "bail" after a failed attempt to "buy" the resources of a target firm to address a strategic gap. These findings contribute to the acquisitions and divestiture literature by providing insights and evidence regarding the sequencing of resource portfolio management. They address a theoretical

[1] The response of a firm with a terminated deal to pivot to divestitures may be particularly strong if the missing keystone resource is a "bottleneck resource" (Chang et al., 2022) for the industry. In such cases, the firm may have fewer options for alternative growth, making an exit from its current market position more attractive.

and empirical gap of how firms respond after a failed M&A, as the focus of the available scholarship is on the effects of completed M&A transactions.

THEORY AND HYPOTHESES

Resources and capabilities are key to value creation and having a superior bundle of heterogeneous resources to that of competing firms can be a source of competitive advantage (Penrose, 1959; Wernerfelt, 1984). Moreover, to the extent that a firm can maintain, grow, and manage differentiated and valuable resource positions, it can sustain this advantage (Barney, 1991). In a dynamic competitive environment, firms often need to reorganize or reallocate existing resources, as well as develop or acquire new resources and capabilities to maintain advantage (Eisenhardt & Martin, 2000). This process may be triggered by the recognition of a new opportunity, but also is commonly the result of a salient capability gap (Capron & Mitchell, 2009). In this section, we begin by offering a summary of the Build, Borrow, or Buy framework and resource position exit strategies, which include resource redeployment and divestitures. We synthesize these concepts into a unified resource reconfiguration framework to predict the relationship between terminated acquisitions and subsequent divestiture.

Build, Borrow, Buy…

Capron and Mitchell (2012) argue that to sustain growth, a firm needs to add to its available resources; depending on factors including whether the resource is VRIO, whether the resource is tradable and there is a functioning market for it, and the incentive alignment of potential partners, a firm may choose to internally develop the resource (Build), form a strategic partnership or licensing agreement with another firm that already has access to the resource (Borrow), or purchase the resource or acquire a firm that has access (Buy). The focal firm chooses an approach from the BBB generally based on resources available within the firm; the degree of control needed over the new strategic resource; the availability of counterparties with whom to contract, partner, or acquire; and the extent of incentive alignment/conflict between the focal firm and the counterparty (Capron & Mitchell, 2009; Capron & Mitchell, 2012). While the BBB framework applies in general to attempts to grow the resources of a firm, the BBB decision is especially crucial when there is a strategic gap or a critical complementary resource the focal firm lacks to unlock the value of its other assets.

If we consider a given non-core business within a firm, the BBB framework would be used to choose the mode of growth conditional on the existence or potential existence of a resource that can fill the identified gap (Capron & Mitchell, 2009). Capron and Mitchell (2012) presented this calculation as a decision tree that evaluated in sequence the feasibility of internal development, contracting/licensing, strategic alliance, and acquisition. Such sequencing is sensible because in conditions favorable to all three modes, generally internal development, partnerships, and acquisitions have increasing levels of overall risk. Thus, a well-managed firm choosing to pursue an acquisition may well have done so because it did not have strong resource and capability alignment for internal development (or such resources are allocated to better opportunities within the firm); that there is friction or failure in the strategic factor market to contract for or license the targeted resource; that forming an alliance would not give the focal firm sufficient control over the targeted resource; or that alliances would have significant counter-party risk due to a misalignment of incentives.

If by the end of the decision tree the conditions are also deemed poor for an acquisition, Capron and Mitchell (2012) suggest revisiting the analysis of earlier modes or revising the firm's overall strategy. This recognizes that even though the BBB framework is often depicted as finding the mode of transaction conditional on filling the resource gap, entering, or growing, a fourth option is available to a firm facing a misalignment of resources to the current competitive environment. A firm can choose to Bail, that is, to reallocate or divest itself of the resources whose value is contingent on the missing resource constituting the capabilities gap.

We predict that a pivot to divestiture of related assets will be even more pronounced if a firm attempts an acquisition and the deal does not close. If the focal firm has complementary assets that would have become more valuable with the combination of the intended acquisition, the status quo may not be a viable alternative. As the firm has already attempted to fill the gap through acquisition, this also may signal that a pivot to internal development or strategic partnership/alliance is not appealing or even possible. Therefore, the alternative of divesting the excess complementary assets it holds may be the best option.

…or Bail

Resource redeployment and divestitures are also key tools in managing a firm's resource portfolio (Feldman & Sakhartov, 2022). A firm can choose to reduce resources allocated to a given business within the portfolio by either reallocating them to other businesses (redeployment), selling them to another entity (sell-off divestiture), or exiting by establishing the business as a stand-alone firm (spinoff divestiture). Early scholarship viewed both divestitures and resource reallocation as responses to business failure or to principal/agent concerns such as empire building (Feldman & McGrath, 2016). However, strategic management scholars have long recognized business exit as a key tool in an overall portfolio strategy, whether as part of an iterative search for optimal resource/environment fit (Matsusaka, 2001), a reactive or proactive move based on changing opportunities and threats from technological innovation (Kaul, 2012) or from financial constraints (Lang et al., 1995; Zhou et al., 2011), to take advantage of high trading multiples of pure-play competitors to the spun-off business (Khorana et al., 2011), or to redefine corporate scope before a subsequent acquisition (Bennett & Feldman, 2017).

While the literature streams of resource redeployment and divestitures have tended to be separate, recent work has explored the tradeoffs in choosing one or the other as a means of exiting a business (Feldman & Sakhartov, 2022). In this vein, a Bail framework could be considered as a complement to the BBB framework in that it is a second-stage choice of action given a first-stage choice to exit.

There are often many different potential worthwhile projects in which to invest a firm's capital and attention. Choosing to exit one business can be valuable because it frees up resources and managerial attention. Additionally, there is a different potential value in the transaction mode decision of exit. When resources in the exiting business are related to those needed in other units, they can be redeployed to areas within the firm with more potential for growth (Lieberman et al., 2017). When pure-play competitors of the exiting business are trading at high multiples of their fundamentals, a spinoff or equity carve-out could leverage the beneficent capital markets to unlock value for current shareholders (Khorana et al., 2011). When the exiting business represents complementary assets to another firm due to its heterogeneous bundle of resources, the premium it may be willing to pay (Wernerfelt, 1984) could make selloff the most valuable form

of exit. Applied to our context, if a firm is holding excess complementary assets, has attempted an acquisition that fails to close, and believes resource position-exit is the next best option, conditions where the complementary assets are not easily or profitably redeployed elsewhere in the organization should be where we find the strongest effect of a pivot to divestiture.

Divestiture after Failed Acquisition

Thinking of resource reconfiguration decisions as a combined ranked list that includes both growth options as well as exit options may be even more valuable in understanding how a firm may pivot if an attempted transaction fails. For example, if a firm attempts an acquisition that does not successfully close, the alternative may be to try another form of resource growth, or to stick with the status quo. In this paper, however, we explore cases where the focal firm is more likely to pivot to divest the focal business intended to absorb the target.

Our context is a firm that has a resource position with a strategic gap. The resources the firm currently has deployed in this focal business are missing a complementary resource. More specifically, we are interested in cases where the firm possesses resources in non-core businesses that, without the addition of the missing complementary resource, are not sufficiently valuable to justify the capital allocation and corporate focus they require.

Examples of this condition could be when the resources could be shifted to an area of higher growth within the firm, when the multiples of the focal firm are capping the potential for the bidder's non-core business to trade at the higher multiples of comparable pure-play businesses, or when another firm may be better positioned to leverage value from the business (perhaps due to possessing a bottleneck resource (Chang et al., 2022).

If the missing complementary resource were obtained, the focal business would be more valuable to hold internally than to redeploy or divest. The new complementary resource would act as a keystone, unlocking the latent value and making the focal business sufficiently competitive. When a firm attempts to bolster a business with an acquisition, we assume that the expected payoff of the "Buy" transaction mode to be higher than that of "Build" or "Borrow." This could be because the other two modes are infeasible (e.g.,

the firm does not have development capabilities or cannot find a counterparty willing or able to partner) or because the perceived costs such as time to develop or risk of incentive misalignment of potential partners are too great.

When the attempted acquisition fails, the focal firm is generally faced with a shock to expected payoff from this transaction mode. This could be because of multiple reasons for deal failure, such as a higher competing bid from another firm, inability to get regulatory approval for the deal, or a material change to the underlying economics of the transaction. When facing such deal failure, a firm may try a different form of growth, but we hypothesize that a substantial number of firms will choose to divest the focal business instead.

If we think of resources within a non-core business of the bidder (the focal business) that has potential synergy with the core business of the target, industry relatedness between the focal business and the target's core business serves as a proxy for the relative likelihood that the focal business was to be the beneficiary of the intended incoming target resources (as opposed to the bidder's core business or the bidder's other non-core businesses that are not the focal business). For example, if a bidder with a core business of pharmaceuticals and a non-core focal business in cosmetics targets a cosmetics business for acquisition, the bidder's focal would be more likely to be the anticipated beneficiary of synergies than if the target was from a less related industry. This is important because our theory is not that a bidder with a terminated acquisition will be more likely to divest resources across the entire organization, but rather will focus divestitures on exiting the focal business specifically.

Hypothesis 1: The bidder will be more likely to divest units in industries/sectors related to the intended target firm after an announced deal is terminated.

Moderators to the Baseline Hypothesis

After a failure in the preferred mode of resource reconfiguration (in this case acquisition), a firm should pivot to the transaction mode with the next highest expected value. While H1 provides a direct test of whether there are more target area divestitures after an acquisition failure, we should expect this primarily under conditions where divestiture is likely to be the second-best choice on the priority list. These conditions provide us with additional testable implications. We should expect fewer pivots to divestiture when the

context favors a higher expected value for an alternative, as that mode would then rank higher in preference and become the second-best choice above divestiture. We explore the following moderators for the main effect that would affect the likelihood of a firm pivoting to an alternative mode, such as i) resource redeployment, ii) acquisition, iii) internal development, and iv) alliance, as a substitute for divestiture. The first of these is the resource similarity across the focal firm's operating segments, which can indicate the relative cost and benefit of resource redeployment within the firm.

Related diversification can provide economies of scope by allowing the sharing of complementary resources across product markets when such resources have more capacity than can be fully utilized by one of the firm's businesses (Montgomery, 1994). In addition to these intra-temporal economies of scope, firms can achieve inter-temporal benefits of scope by "redeploying resources and capabilities between related businesses" (Helfat & Eisenhardt, 2004). Resource relatedness is key to redeployability not only because the redeployed resource would have a better fit (and thus create more value) to the destination business, but also because relatedness reduces the costs of redeployment (Sakhartov & Folta, 2014). Value tends to be higher and adjustment costs lower when redeploying resources between similar businesses within a firm, so the greater such similarity, the more attractive resource redeployment is as a second-choice pivot after acquisition failure than divestiture[2].

Hypothesis 2: Resource similarity between the bidder's operating segments reduces the likelihood of a target-related divestiture after deal termination.

Firms may have some capability to produce desired resources in-house even when choosing to engage in an acquisition for similar resources. However, this raises the question of why the firm was attempting to grow through M&A if it already had the resources for internal development. A plausible explanation would be that an acquisition may give a firm faster speed to market than would internal development (Lee & Lieberman, 2010). Alternatively, the firm may anticipate that acquiring the technology or tacit knowledge of the target

[2] We anticipate that proximity between the bidder's core and non-core businesses could make the status quo more appealing due to intra-temporal synergies, thereby decreasing the likelihood that the non-core business is a excess complementary resource to begin with. For the purposes of this theory, we assume the value of the status quo to be below the next best option.

would be less costly than developing commensurate tacit knowledge internally (Puranam & Srikanth, 2007). The focal firm may favor acquisition more than internal development as a way of limiting rival access to key resources or to increase the firm concentration in the focal market (Moatti et al., 2015).

Capron and Mitchell (2009) describe a continuum from a small capability gap (which favors internal development of the desired capability) to a large capability gap (which favors acquisition of the desired capability). Even when the focal firm has attempted an acquisition, the smaller the capability gap, the more likely internal development is to be seen as the next best option. In terms of the model above, the cost of internal development would be lower given a better fit of the current resources available for such development. The similarity between the core resources of the bidder and the core resources of the target could indicate the bidder's capacity to internally develop the new resource/capability as an alternative to a successful acquisition (Capron & Mitchell, 2012). We, therefore, anticipate observing a pivot to divestiture after failed acquisition to be less likely the more similar the bidder and target's core resources, as a pivot to internal development could be more attractive.

Hypothesis 3: Resource similarity between target and bidder reduces the likelihood of a target-related divestiture after deal termination.

Similar to the other moderators, when conditions are more conducive to a strategic alliance, we should expect fewer pivots to divestitures after a failed M&A transaction because the bidder may instead pivot to a strategic alliance as an alternative means of accessing desired resources or capabilities. The literature on strategic alliances has extensively documented that firms can build capabilities in managing alliances over time (Anand & Khanna, 2000; Kale & Singh, 2007; Villalonga & McGahan, 2005). As a firm gains more experience in finding, forming, and managing alliances, the cost and difficulty of pursuing an alliance to access new resources are reduced. Firms develop routines and processes that enhance their ability to efficiently and effectively manage alliances. This improved alliance management is reflected in their general alliance experience and can lead to better outcomes and lower coordination costs in future alliances (Anand & Khanna, 2000; Reuer et al., 2002). In addition, as firms engage in more alliances, they develop networks and relationships within their industry and related sectors. This expanded network reduces the search costs

associated with finding suitable alliance partners, particularly within the target industry of interest (Gulati, 1999; Powell et al., 1996). These improvements in alliance management capabilities and reduced search costs effectively lower the overall cost of strategic alliances. Consequently, with increasing alliance experience, a firm is more likely to pivot towards forming a strategic alliance rather than opting for divestiture following a failed acquisition attempt.

Hypothesis 4: Alliance experience of the bidder reduces the likelihood of a target-related divestiture after deal termination.

METHODS

Data

Our sample is drawn from U.S. public firms undertaking an M&A transaction between 1984 and 2019, as well as other U.S. public firms operating in the same period (for the formation of the control group of firms that did not undertake a transaction, but were similarly "at risk" to do so). Firm accounting and stock information is drawn from the CRSP/Compustat merged dataset available from the Wharton Research Data Service (WRDS). Information on M&A and divestiture transactions is drawn from the Thomson/Refinitiv's SDC Mergers and Acquisitions dataset on the WRDS platform. Strategic alliance information is drawn from the SDC Joint Ventures and Alliances dataset. The source for the reasons for deal termination and the proposed exchange ratio of stock and/or cash for each transaction was provided by Factiva.

The sample is an imbalanced panel with firms entering in the first year listed in the Compustat dataset and exiting either when the firm is de-listed (e.g., when a firm is liquidated, acquired, or taken private) or in 2019. All continuous variables are winsorized at the 1st and 99th percentile. The observation level is at the firm-year. During the time period of 1984 and 2019, there were 2,733 acquisition bids announced and resolved where both the bidder and target were publicly traded companies. Of these bids, 446 were terminated and the remaining 2,287 resulted in completed acquisitions.[3] After restricting the sample to firms involved in at least one of these transactions and omitting observations with missing data, 9,698 firm-year

[3] It is important to note that our sample includes only transactions between publicly listed U.S. firms. Additionally, the mode of payment for the focal deal must be cash only, stock only, or a combination of cash and stock, as Deal Arbitrage Risk (DAR), which is crucial for our identification strategy, can only be accurately calculated for these types of transactions.

observations remain for the first difference models used below; 19,685 firm-year observations remain for the difference-in-differences models comparing firms with successful M&A; and 17,867 firm-year observations remain in the models comparing a matched pseudo sample of firms not undertaking M&A. Descriptive statistics can be found in the appendix (Tables A2-A4).

Identification Strategy

The primary threats to causal identification in this study relate to the endogenous choices of both engaging in a certain deal and then subsequently engaging in a divestiture. There should be many unobserved factors in the endogenous process of making these decisions; in this context, such endogeneity creates the potential for selection bias and omitted variable bias.

We begin with an assumption that a vast majority of firms do not announce an acquisition deal with the intention of the deal being terminated. Once the bidder and target have reached an agreement on the deal terms and publicly announced the transaction, in nearly all cases the bidder anticipates that the deal is more likely to be completed than to be terminated (Boone & Mulherin, 2007). Not only are deals that reach completion five times more prevalent than terminated deals in our sample period, but there are also significant costs, reputational risks, and legal restrictions that make entering an agreement in bad faith unappealing. There are sunk costs of time and money from the search for a target, the due diligence process, and negotiations (Officer, 2003); potentially substantial breakup fees; and/or the risk that the shareholders of the target firm may be able to leverage the legal system to force deal completion.

However, even if a bidder expects when entering a deal agreement that it will probably be completed, assuming that a deal failure is an exogenous event is too strong. There are systematic differences between firms that could affect both likelihoods of a failed transaction as well as subsequent divestiture patterns. Selection bias could arise because a firm that would put forward bids more likely to be terminated may also be a more likely to engage in divestitures due to factors unrelated to the focal deal's termination.

To address this threat to inference, we first control for observable factors about the bidder, the target, and their industries such as sales growth rates, profitability, capital investment intensity, leverage, diversification, and others detailed in the following section. These factors could plausibly affect both the

willingness to enter a risky deal as well as divestiture patterns. We also include fixed effects at the transaction and year levels to mitigate the impact of idiosyncratic aspects of specific deals or macro-economic effects (including the overall regulatory environment in a given year).

The control variables we selected are common in the literature, but we do not assume that these capture all confounding effects that are potentially observable. Our solution is a novel empirical technique for this context, which is a key empirical contribution of this work. We utilize a coarsened exact matching (CEM) model (Iacus et al., 2012) as other scholars studying M&A transactions have done, but we include deal-arbitrage risk (DAR) as a matching factor.

DAR is based on the relationship between the announced deal price per share of the target's stock and the spot price in the secondary equity market for those same shares. When an acquisition transaction is announced, the bid price exceeds the market price for the target company shares, representing the bid premium offered to current investors. Between a deal announcement and the closing date of the transactions, the target company shares can be traded on the secondary equity market. During this period, other investors who believe the transaction will close may be interested in buying the stock in anticipation of receiving the bid price at the closing date. As the spot price increases from this bid pressure, current shareholders who expect the deal may be terminated are more inclined to sell their shares. The spot price of the target shares usually gets closer to the bid price, but will not reach all the way to that level because of the risk of termination. The marginal investors in these periods are often short-term investors with a strategy of deal-risk arbitrage. They will buy or short-sell according to whether they believe the spread between the offer price is too large or small relative to the risk that the deal will be terminated. The DAR is the ratio of the spread at a given point in time over the original spot price of the target stock just before the deal was announced.

Such arbitrage markets usually have enough trading volume to support the assumption that they are relatively efficient. Assuming these arbitrage specialists have adequate capital and are highly motivated to make an accurate prediction, this should be a direct measure of deal risk that incorporates not only publicly available information, but also the private information it is possible and worth such specialists acquiring.

To capture other heterogeneous characteristics beyond those captured by the DAR, following Feldman (2016) we incorporate total assets, total sales, net income, and market capitalization as additional matching criteria alongside DAR when comparing terminated and completed deals. Appendix Tables A5 and A6 show that the means and standard deviations of these matching variables are balanced after applying the Coarsened Exact Matching (CEM) technique. Our assumption is that when a CEM model includes DAR as well as these major observables, terminated deals are matched with completed deals *that had similar riskiness of termination* ex ante.

We do not argue that the termination of an M&A transaction is exogenous in all cases—bidders can in some circumstances choose to terminate a deal directly or take actions that result in termination. The argument above is that bidders overwhelmingly do not *enter* the transaction with the intention of terminating the transaction. It is the changes in circumstances during the transaction period that either cause the deal to fail outright (e.g., financing issues or regulatory disapproval) or provide the bidder with new information and an opportunity to exit (e.g., a material breach of the agreement by the target). By matching firms on major observables and DAR, we are trying to isolate exogenous shocks to the cost or feasibility of an acquisition. We are assuming that a firm would not willingly choose to increase its cost to get the same benefit (owning the target company) after an agreement has been reached, therefore any increase in the acquisition cost or feasibility should be predicated by an exogenous change in external circumstances or the actions of another entity. Additionally, we include the reasons for deal failure as control variables to account for unobservable factors arising from such endogeneity.

The empirical approach described above seeks to compare a firm that experiences deal termination to an otherwise similar firm with a completed but otherwise similar deal. However, an alternative explanation still remains: what if firms that pursue M&A in a given period have a lower propensity to make divestitures compared with firms that are not pursuing M&A at the time? If this is true, then perhaps firms with a terminated deal are simply 'returning to baseline' rates that they would have had if they had not engaged in a transaction at all. We address this alternative explanation by using propensity matching to synthesize a control group of firms that are equally 'at risk' of announcing an M&A deal as the focal firm was, but which did not

announce such transactions. This pseudo-sample is used as a proxy for the unobserved counterfactual of if the focal firm with a terminated deal had not entered the deal in the first place.

Estimation Method

Our initial models use a Poisson regression by quasi-maximum likelihood (QML) with fixed effects (Hausman et al., 1984) for several reasons: our outcome is a count variable, new divestitures undertaken (e.g., Berry, 2010; Kaul, 2012; Vidal & Mitchell, 2015); QML Poisson standard errors are consistent even if the distribution of our dependent variable is negative binomial or Poisson (Azoulay et al., 2010); QML Poisson is not constrained by the assumption of equal conditional mean and variance; and QML standard errors are robust to arbitrary patterns of serial correlation (Wooldridge, 2010), and hence are immune to severe serial correlation problems (in the context of a difference-in-differences estimation) highlighted by Bertrand, Duflo, and Mullainathan (2004). We cluster the standard errors by deal to account for over-dispersion and thereby correct confidence intervals, for all regressions.[4]

We initially take a first-difference model to capture the main effect and the moderating effects (shown in Equation 1),

$$E(y_{it}) = \exp\begin{Bmatrix} \beta_0 + \beta_1 \cdot Post_{it} + \beta_3 \cdot Moderator_{it} \\ +\beta_3 \cdot Post_{it} \cdot Moderator_{it} + \delta X_{it} + \rho_i + \gamma_t + \varepsilon_{it} \end{Bmatrix} \quad (1)$$

where y_{it} is the outcome variable of interest, the number of divestitures, for bidder i in year t, β_0 is the intercept, $Post_{it}$ is an indicator variable that takes the value of one for the years following the deal termination year. β_3 represents the post-divestiture change in alignment of moderating variables of interest: *Relatedness to Acquisition Target*, *Resource Similarity between Bidder's Businesses*, and *Alliance Experience of Focal Firm*. X_{it} is a vector of covariate controls for bidder *i* in year *t*. The regression model includes deal fixed effects ρ_i and year fixed effects γ_t, and $\varepsilon_{it}$is the error term.

The second approach uses difference-in-differences (diff-in-diff) models to compare the treatment group to a control group of firms whose acquisition transactions were successfully completed. Equation 2 presents the base diff-in-diff model,

[4] We also test our predictions using general OLS estimations, which yield similar results (Appendices A8 and A9).

$$E(y_{it}) = \exp\begin{Bmatrix} \beta_0 + \beta_1 \cdot [Treat_i \cdot Post_{it}] \\ +\beta_2 \cdot Post_{it} + \delta X_{it} + \rho_i + \gamma_t + \varepsilon_{it} \end{Bmatrix} \quad (2)$$

where β_1 identifies the main treatment effect, $Treat_i \cdot Post_{it}$, and β_2 captures the impacts for a bidder that completes its deal. In the supplemental tables of the appendix, we enhance the basic difference-in-differences model by including more flexible econometric specifications to capture potential pre-trends as well as the potential for such pre-trends to be non-parallel between the treatment and control groups (Appendix Table A12).

We acknowledge that the varying timing of M&A deal terminations in our sample may lead to heterogeneous treatment effects. To understand how these effects differ among comparison groups, we use Stata's BACONDECOMP package. This tool helps us examine the weights attributed to each comparison group, enhancing our interpretation of treatment effects across different data segments. The results indicate that our findings are primarily driven by comparisons with never-treated or not-yet-treated groups, which are considered appropriate comparison groups (Appendix Table A10). For robustness, we also utilize Stata's CSDID package to implement the Callaway and Sant'Anna (2021) estimator for difference-in-differences (CSDID) models with multiple time periods. This approach helps mitigate bias by avoiding the 2x2 difference-in-differences design, which compares late-treated units with earlier-treated ones (Appendix Table A11). Our results remain robust under the CSDID estimation.

Variables

The variables used in this study are detailed below and summarized in Appendix Table A1.

Outcome Variable

Target-Related Business Divestitures. Our primary outcome variable is the number of divestitures the focal firm undertakes each year in industries/sectors related to the intended target firm. Proximity is measured by the two-digit standard industrial classification (SIC) code. For example, if the four-digit SIC code of the target's business is 2833, then this measure is the number of divestitures the focal firm makes of businesses with a two-digit SIC code of 28 in a year. Divestitures include selloffs and spinoffs (Bergh et al., 2008; Feldman et al., 2016).

For robustness, we conduct several additional analyses. We examine overall annual divestitures of the focal firm and test our results using one-, three-, or four-digit SIC codes. Recognizing that SIC-based measures may not fully capture the potential relatedness of the divested business relative to the intended target, we also employ alternative relatedness measures. For example, oil-refining (SIC 29) and chemical (SIC 28) businesses are classified as unrelated according to the two-digit SIC code classification, when in fact they are related (Fan & Goyal, 2006). To address this limitation, we utilize the 1997 Bureau of Economic Analysis (BEA) capital flow table for measuring tangible asset-based relatedness and the Bureau of Labor Statistics (BLS) occupational profile table for human capital-based relatedness. These datasets have been widely used to measure resource similarity between markets or industries (Chang, 1996; Dickler & Folta, 2020). They allow us to compare resource relatedness across all possible pairs of three-digit SIC codes. Using these datasets, we calculate the relatedness of the divested business to the intended target firm and identify Highly and Lowly Target-related Business Divestitures. If the relatedness level of a divested business is higher than the median of those undertaken prior to the focal divestment, it is classified as a *Highly Target-related Business Divestiture*; otherwise, it is classified as a *Lowly Target-related Business Divestiture*. This approach provides a more nuanced understanding of the relationship between divested businesses and target firms. Our results are robust to the use of different time frames in measuring relatedness. While we do not report these results in detail here, they are available upon request.

Explanatory Variables

Failed Acquisition Bid. Treat is a binary variable with a value of one if the focal firm's focal deal has or will be terminated (*i.e.*, the firm is part of the treatment group). *Post-Termination* is a binary variable with a value of one for all years after the event date. The event date is the termination date for the treatment group and deal close date for the control group.

Moderator Variables

Relatedness to Acquisition Target. To assess business relatedness, we construct three resource similarity measures. The first, *Relatedness to Acquisition Target (Technological Asset-Based)*, adapts Schildt, Keil, and Maula's (2012) method to measure technological overlap using patents filed five years prior to deal announcement. This yields an index (0-1) of patent portfolio similarity. The second measure, *Relatedness to Acquisition Target (Tangible*

Asset-Based), utilizes the 1997 BEA capital flow table to compare tangible resource similarities across three-digit SIC code pairs. For the third measure, *Relatedness to Acquisition Target (Human Capital-Based)*, we employ the BLS occupational profile table to assess similarities in human capital requirements across industries.

Industry-level Resource Redeployability. This measure assesses how easily a focal firm's corporate assets can be redeployed within its industries. We adapted the method of Kim and Kung (2017) to develop a measure of asset redeployability using the 1997 Bureau of Economic Analysis (BEA) capital flow table. First, we compute the asset-level redeployability score, which is the sum of the weights of industries that use the asset among the 123 industries listed in the BEA table. Next, we calculated the industry-level redeployability index by taking the value-weighted average of each asset's redeployability score within an industry. Finally, we constructed the measure for each firm as the value-weighted average of the industry-level redeployability indices across the business segments in which the firm operates. Firms in industries with higher redeployability tend to exhibit higher recovery rates and are more actively involved in asset sales (Kim & Kung, 2017).

Resource Similarity between Bidder's Businesses. This measure is designed to capture adjustment costs within a firm. While the previous redeployment measure evaluates how well the focal firm's assets can be redeployed in different industries, this measure assesses how efficiently the firm can reallocate its resources within itself. Following the approach of Dickler and Folta (2020), we again use two datasets: The BEA data are used to calculate similarities in the use of tangible resources across industries; the BLS data are used to calculate similarities in the types of human capital used across industries. The BEA data are used to calculate similarities in the use of tangible resources across industries; the BLS data are used to calculate similarities in the types of human capital used across industries. Single segment firms have a value of zero for this variable.

Alliance Experience of Focal Firm. Prior literature has shown that alliance experience increases the propensity to engage in subsequent alliances (Villalonga & McGahan, 2005). This measure represents recent experience the focal firm has had with strategic alliances. It is measured as the natural log of the total number of strategic alliance transactions (+1) within the five years prior to the observation year of the focal deal.

Controls

This study uses a variety of controls including *Business Size*, *Profitability*, *Capital Expenditures*, *Financial Leverage*, *Diversification*, *Bankruptcy Risk*, *Acquisition Experience of Focal Firm, Divestiture Experience of Focal Firm,* and *Industry Growth*. Please see Table A1 of the supplemental appendix for a description of how these controls are calculated.

Fixed Effects. We include fixed effects for the acquisition deal and year, and standard errors are clustered at the acquisition deal level.

Deal Arbitrage Risk (DAR). Matching on the riskiness of the acquisition deal is designed to account for the non-randomness of M&A terminations. Prior literature in finance argues that once a deal is announced, merger arbitrageurs attempt to predict the probability of the deal being approved and how long it will take to finalize the deal, by engaging in costly information acquisition (Larcker & Lys, 1987). The calculation of the DAR is $\frac{Cash+(ER)*Bidder\ Stock\ Price_t - Target\ Stock\ Price_t}{Cash+(ER)*Bidder\ Stock\ Price_t}$, where *Cash* is the amount of cash offered as part of the purchase price, *ER* is the deal exchange ratio (i.e., the number of shares of the bidder's common stock offered to the target's shareholders for one share of the target's common stock), and t is the time at which the DAR is measured. Note that for all cash deals, the value of *ER* becomes zero and for all stock deals, the value of *Cash* becomes zero. For matching models, we only include deals that are either all cash, all stock, or a combination of cash and stock. Deals using other types of consideration are omitted. While different time periods after deal announcement but before deal termination/close could be used as the value for *t*, our main specifications use one day after deal announcement. Our results are robust to the use of DAR measured at several different times (e.g., one month after announcement, six months after announcement, or the median time between announcement and resolution). Figures 1a and 1b compares the average deal risk spread of completed vs. terminated firms. These figures show that the DAR is quite useful as a proxy for the risk that a deal will be terminated before completion. Additionally, we present the validation of DAR in Table A14 of the supplemental appendix. Table A14 provides the results of an OLS regression analysis, illustrating the relationship between DAR and the probability of M&A deal termination. Tables A5 and A6 of the appendix compare the pre- and post-matched samples, in relation to their DAR and other variables.

[Insert Figures 1a and 1b about here]

There are three different samples representing the three different control populations (focal firm pre-termination, other firms with successful M&A, and pseudo-sample control firms). Summary statistics and cross-correlation tables for each sample are included in the appendix.

Failure Reasons. By collecting and examining deal termination announcements from Factiva, news articles, the SDC database, and SEC filings, we identified the reasons for the termination of each focal deal. Based on this information, we constructed four indicators for failure reasons. While failure reasons do not need to be included as controls in most specifications (as deal fixed effects already remove the variation caused by deal termination reason), we provide an additional table in the appendix (Table A7) that provides regression coefficients for each of the following reasons for termination: *Target Issues* if the deal was terminated due to problems with the target firm revealed during due diligence, or due to the target's good or bad news; *Bidder Issues* if the deal was terminated due to the bidder's financing issues or bad news; *Regulatory Intervention* if the deal was terminated due to intervention by government bodies (e.g., the Federal Trade Commission) during the deal transition; or *Other Reasons* if the deal was terminated for reasons not covered by the above categories.

RESULTS

This study analyzes the relationship between M&A deal termination and subsequent divestiture activity. The main results for Hypothesis 1 are found in Tables 1 and 2 as well as Figure 2. Table 1 presents the results of a Poisson estimator within a first difference model comparing divestiture activity within firm before and after M&A deal termination. The coefficient of interest (in bold and highlighted with an outline) can be interpreted as deal termination leading to a 0.487 increase in the log of the expected count of subsequent divestitures in industries related to the target business. The mean of this sample is 0.08 target-related divestitures per year, so the magnitude of this increase relative to the mean would be 0.05 divestitures per year or approximately a 63 percent increase in such activity.

It is worth noting that this effect does not extend to a general increase in overall divestiture activity, as there is no substantial effect on divestiture activity in industries unrelated to the target business (Table 1,

Column 2). This builds confidence that firms are not responding to deal termination out of a generalized pressure for action, but rather that the divestitures spurred are more likely to be strategically complementary to the resources of the target firm.

Table 2 presents the results of a difference in differences model using coarsened exact matching. The outcome variable is again divestiture count using a Poisson estimator, so the coefficients of interest can be interpreted as a change in the binary variable of *post-termination* leading to a change in the natural log of the number of target-related divestitures per year. Columns 1 and 3 compare firms with a terminated M&A deal to CEM-matched firms (including matching on deal risk) with an M&A deal that successfully closed. Columns 2 and 4 use a pseudo sample as a comparison group comprised of firms matched to be similar on observables and equally likely to have entered an M&A deal as the treated firms, but that did not actually engage in an M&A deal in the given year. The leftmost columns (1 and 2) present the hypothesized relationships of deal termination leading to target-related divestitures; the rightmost columns (3 and 4) show that this effect is not driven by an overall increase in divestiture activity generally, as target-unrelated divestitures do not seem to be affected. Figure 2 offers a graphical depiction of the results against firms with successful M&A.

As with the first difference model, the results of the difference in differences models show positive, economically significant estimates of the effects predicted by Hypothesis 1. Because the mean of *Target-Related Business Divestitures* in the sample for columns 1 and 3 is 0.09, the coefficient of interest of 0.539 (the predicted increase in the natural log of divestiture count) represents an increase of 0.06, or approximately 71 percent of the sample mean of target-related divestitures. The mean of *Target-Related Business Divestitures* in the sample for columns 2 and 4 is 0.08, the coefficient of interest of 0.643 represents an increase of 0.07, or approximately 90 percent of the sample mean of target-related divestitures. Thus, both models show strong and consistent effects supportive of Hypothesis 1.

[Insert Figure 2 and Tables 1, 2, and 3 about here]

Table 3 presents the results pertaining to the potential moderators of the relationship between deal termination and divestiture presented in Hypotheses 2, 3, and 4. These hypotheses predicted that the effect of

deal termination leading to greater target-related divestiture activity would be weaker when conditions were conducive to a pivot to a different resource reconfiguration method—resource redeployment for Hypothesis 2 (measured three different ways), internal development for Hypothesis 3 (measured three different ways), and alliance activity for Hypothesis 4. The point estimates of interest are the interaction effects in bold that are outlined. Each of these point estimates is negative, which is directionally as hypothesized. However, the estimates for human capital specifically have fairly large standard errors. Nevertheless, the magnitude of the other estimates is large and standard errors small for *Relatedness to Acquisition Target; Industry-level Resource Redeployability; Resource Similarity Between Bidder's Businesses;* and *Alliance Experience of Focal Firm*, consistent with Hypotheses 2, 3, and 4. Figures 3a to 3g illustrate the average marginal effect of *Post-Termination* interacted with the moderator variables based on the estimates in Table 3.

[Insert Figures 3a, 3b, 3c, 3d, 3e, 3f, and 3g about here]

To visually depict the robustness of our main result to a variety of specification choices, we include Figures A1a and A1b in the supplemental appendix. These figures are specification maps (King et al., 2021) of the coefficient of interest and accompanying confidence intervals for Poisson and OLS estimations across iterated specification choices. The specification choices iterated include: *i*) Model Type (First Difference; Difference in Differences), *ii*) Matched Control Group (M&A Completed Firms; Pseudo-Sample Firms), *iii*) Definition of "related" industry (SIC2; SIC3; SIC4; or continuous measures using relatedness of tangible assets or human capital), *iv*) Time period of the outcome variable (1-3 years; 1+ years; 3+ years), and *v*) Matching Covariates[5]. Our findings are also consistent when we include *Alliances Undertaken in Target Industry* (a measure of the relative attractiveness of alliance as an option to pivot) and *Acquisitions Undertaken in Target Industry* (a measure of the relative attractiveness of other potential acquisition targets)[6] as controls variables across all Poisson and OLS models (The results are available upon request).

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[5] As noted, we select *Total Assets, Total Sales, Net Income, Market Value*, and *DAR* as our matching covariates. However, we acknowledge that there is flexibility in choosing these covariates. For instance, Chen and Feldman (2018) include Tobin's Q, ROS, and Diversification, while Zhang and Tong (2021) add Ln(Total Assets) and R&D Intensity to their analyses. Our results remain robust even when using these alternative sets of matching variables.

[6] We follow the method used by Chakrabarti and Mitchell (2013) to construct the two variables. These variables are measured as the natural log of the total number of strategic alliances or acquisition transactions (+1) by firms other than the focal firm in the target industry from the focal year to two years after. The results remain robust to the use of different time windows (e.g., from the year prior to the focal year to the year after the focal year).

The results are robust to these specification choices, as well as the choice of control variables included in the models. The results are sensitive to the omission of year and deal fixed effects, becoming indistinguishable from no effect in some models if such fixed effects are not included. Considering the endogenous choices and unobserved heterogeneity between firms, specific deals, and the macroeconomic factors in a given year, we believe models including deal and year fixed effects to be more informative than naïve models. In addition to Poisson estimators, we conducted robustness tests using OLS estimators and Callaway and Sant'Anna Difference in Differences estimators with two dependent variables: the binary variable of target related business divestitures and the natural log of the total number of target-related business divestitures (+1). We used Stata's CSDID package to implement the Callaway and Sant'Anna (2021) estimator for difference-in-differences models with multiple time periods. Additionally, we conducted a Bacon Decomposition analysis to explore the distribution of treatment effects across different segments of our data. The main results are robust to such a choice of estimator, and while some moderator estimates had larger standard errors, the coefficients of interest remained directionally consistent with the results of the Poisson estimations shown above (Appendix Tables A8-A11). As our theory is most relevant to diversified firms, we also tested restricting the sample to solely diversified firms, with consistent results (Appendix Table A13).

Supplementary Analysis: Failure Reasons

While the reasons for deal termination are important to understanding the resource dynamics driving managerial choices, in our specifications, variation explained by the reason for deal termination is removed via deal-level fixed effects. To explicitly assess the impact of termination reasons, we incorporated first-difference regressions in Appendix Table A7, including deal-level fixed effects but also including an interaction term between the failure reason and *post* to estimate the effect of a given failure reason. While there is no evidence of a single failure reason completely accounting for the observed increase in target-related divestitures following termination, it is particularly notable that terminations due to bidder problems, including financing issues and adverse news about the bidder, demonstrate a positive and significant moderating effect. This finding is consistent with our theory that divestitures following M&A deal

terminations are significant, especially under conditions where the bidder's resource base is involved. In scenarios where the bidder is holding complementary resources that are crucially dependent on successful deal closure, they may find it particularly challenging to secure or develop another keystone resource after the attempted deal falls through.

DISCUSSION

> *You have a certain cost structure in the areas you are expanding that you anticipate to be supported by this new growth in the business through acquisition. When the deal falls through and that growth doesn't materialize, then suddenly, you have to decide what to do with those costs, investments, and organizational structure. This might mean bringing in assets from another source, trying to reallocate assets to spur organic growth, or divesting the lower performing assets and restructuring.*
>
> --Practitioner interview

In this study, we have empirically tested whether firms that experience deal termination of an attempted M&A transaction respond by making divestitures related to the target business. The main empirical contributions of the paper are twofold. First, we provide empirical support for M&A deal termination to be an antecedent of divestitures. Of particular note is that target-related divestitures not only increase over the firm's own baseline and over that of other comparable firms, and such divestiture activity is higher than that of similar firms whose deals were *completed*. This is noteworthy because it has been well established in the literature that after completing an M&A deal a firm tends to engage in more divestiture activity (Moschieri & Mair, 2008). The finding is that when a deal fails, not only is target-related divestiture activity increased, but it plausibly is even higher than it would have been had the deal gone through.

The second key empirical contribution is the novel method of using the risk of deal failure as a way to match successful and unsuccessful M&A transactions. Using CEM as a tool of identification is common in studies of M&A-related phenomena given the inherent unobservable endogenous processes. Including deal risk in this matching improves the fit of successful and unsuccessful M&A transactions as a proxy counterfactual for one another. Arbitraging the deal risk spread on announced deals is a fairly common trading strategy of many investment firms, which lends credence to this spread being a reasonable measure of the market's judgment of the likelihood of deal failure.

The main theoretical contribution of this paper is the exploration of a significant but previously unexplored antecedent to divestiture activity: the termination of an attempted M&A transaction. This is

interesting because the common view of divestitures (and resource redeployment) is focused on it as a tool to "shed misaligned or obsolete resources and business" (Karim & Capron, 2016). As a tool of retrenchment, divestitures can not only be used to leave a failing business, but can proactively free up resources to focus on future growth in other areas by narrowing the firm's scope (Bennett & Feldman, 2017). A clear example of this would be firms divesting some parts of the target after an acquisition to limit redundancy and the extent of unrelated diversification (Villalonga & McGahan, 2005). Guided by these mechanisms, intuition would suggest that after an M&A deal termination, a firm would either return to the status quo or attempt growth through another mechanism (internal development, partnership, or another acquisition attempt). Because the firm has signaled the intention to grow in the target resource area, it would not seem scope narrowing would be necessary. Additionally, since the target was not actually acquired if the deal is terminated, there would be no redundancies or unrelated pieces of the target to necessitate divestment.

We propose conditions under which firms experiencing M&A deal termination might pivot to divestiture. If the focal firm currently holds value-contingent resources complementary to the intended target's resources but not sufficiently value creating on their own, then a terminated deal does not only perpetuate a strategic gap; the focal firm remains with resources, a cost structure, and perhaps already an organizational structure in place that anticipated the keystone resource being brought in. When this acquisition fails to materialize, the animus for building or maintaining that resource position may vanish. In such cases, it is reasonable to expect the firm to pivot towards exiting that position instead of reverting to the status quo.

Our research aims to integrate resource position exit strategies, such as divestitures or resource redeployment, with the Build, Borrow, or Buy framework, thereby responding to the call for a more holistic resource reconfiguration framework (Vidal, 2021; Villalonga & McGahan, 2005). While scholars have explored resource growth and resource exit and the sequencing of these activities, the frameworks used are often based on a two-stage decision process, with the first stage being the decision to grow or exit followed by the second stage choice of transaction mode. By thinking of resource reconfiguration as a menu of options simultaneously considered and prioritized, we aim to better match a framework with how corporate leaders

can view long-term resource planning. While this distinction may not be meaningful in analysis of one-off transactions, it introduces new theoretical insights into the dynamics of resource reconfiguration over multiple time periods. As scholars respond to the call for more research on the strategic use of resource redeployment and divestitures (Feldman & McGrath, 2016), our goal is to promote even more explicit connections between all the forms of resource reconfiguration as an integrated phenomenon.

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FIGURE 1a
Relative Risk Spread of Terminated vs. Completed Deals
Up to Completion/Termination Date

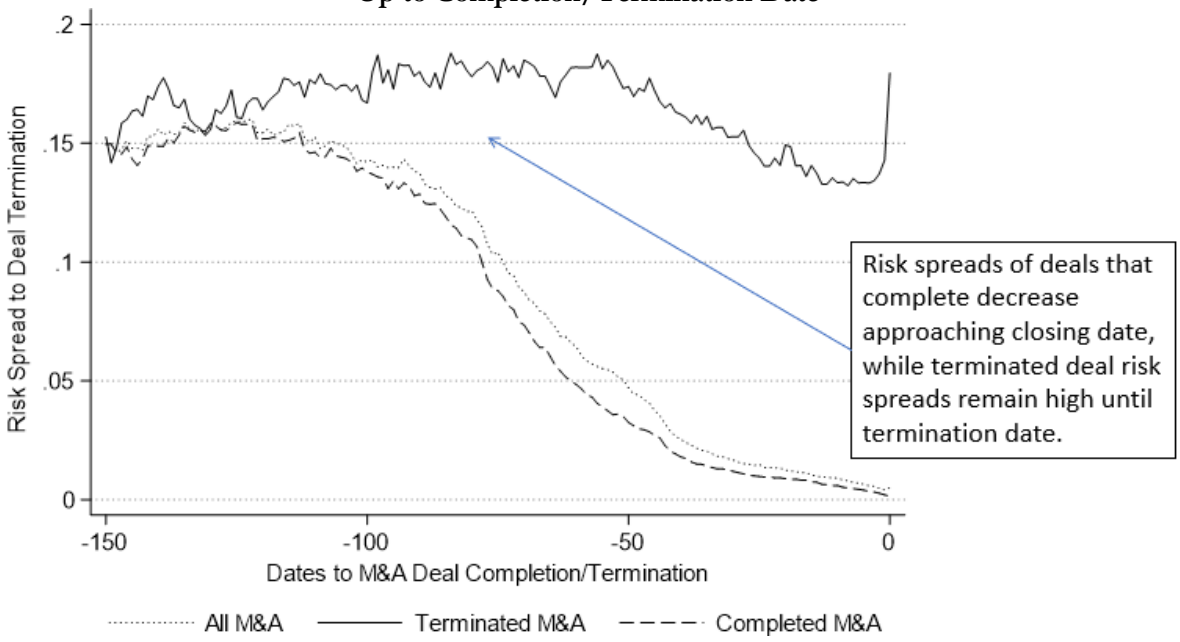

FIGURE 1b
Relative Risk Spread of Terminated vs. Completed Deals
Before and After Deal Announcement Date

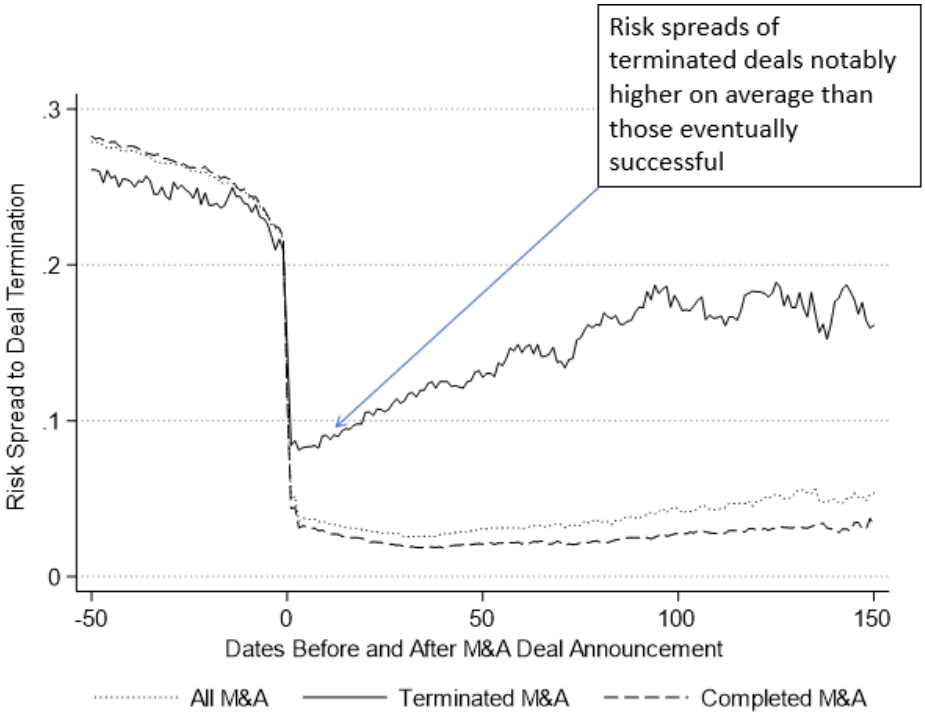

FIGURE 2
Diff in Diff Results with CEM vs. Successful M&A Firms (left) and Pseudo Sample (right)

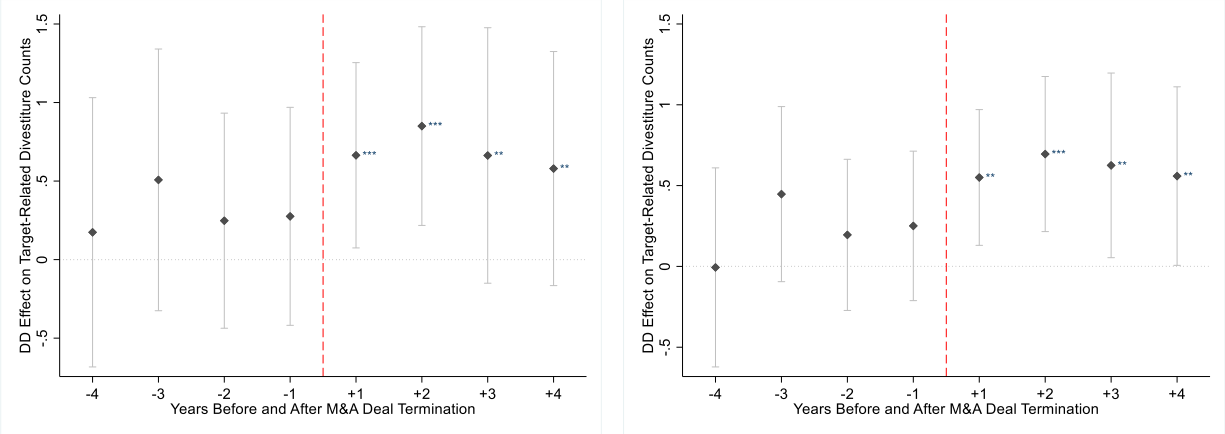

FIGURE 3a: Interaction Between Post-Termination and Relatedness to Acquisition Target (Technological Asset-Based)

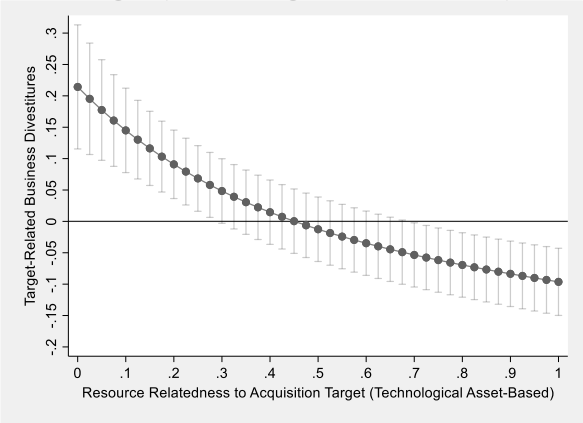

FIGURE 3b: Interaction Between Post-Termination and Relatedness to Acquisition Target (Tangible Asset-Based)

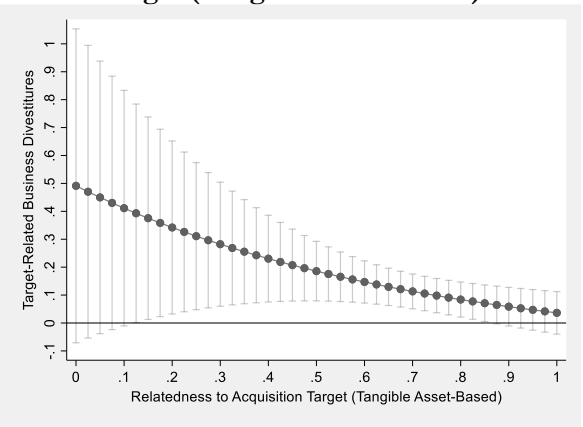

FIGURE 3c: Interaction Between Post-Termination and Relatedness to Acquisition Target (Human Capital-Based)

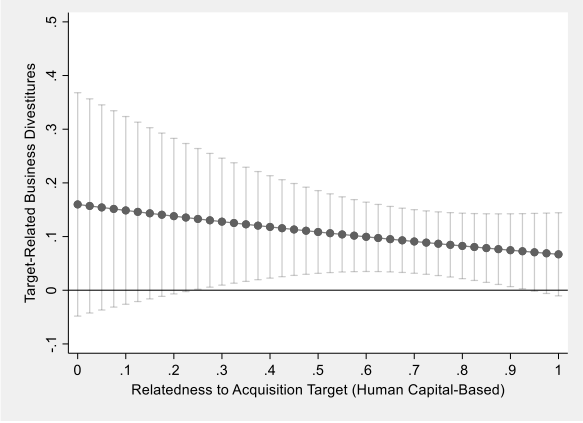

FIGURE 3d: Interaction Between Post-Termination and Industry-level Resource Redeployability

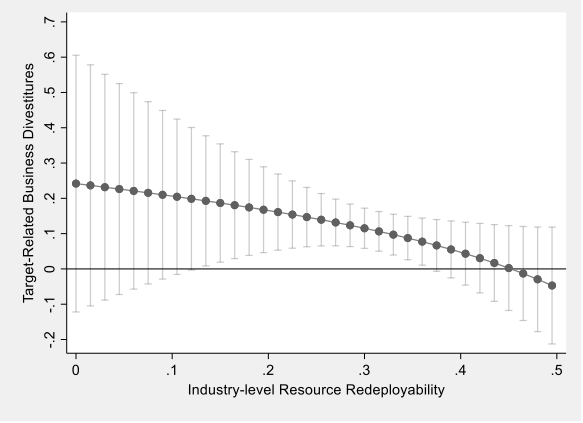

FIGURE 3e: Interaction Between Post-Termination and Resource Similarity between Bidder's Businesses (Tangible Asset-Based)

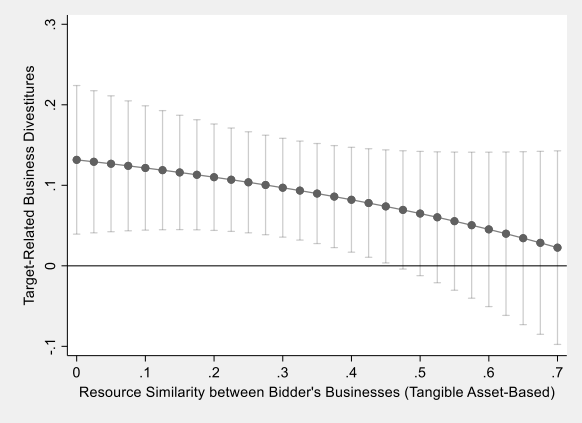

FIGURE 3f: Interaction Between Post-Termination and Resource Similarity between Bidder's Businesses (Human Capital-Based)

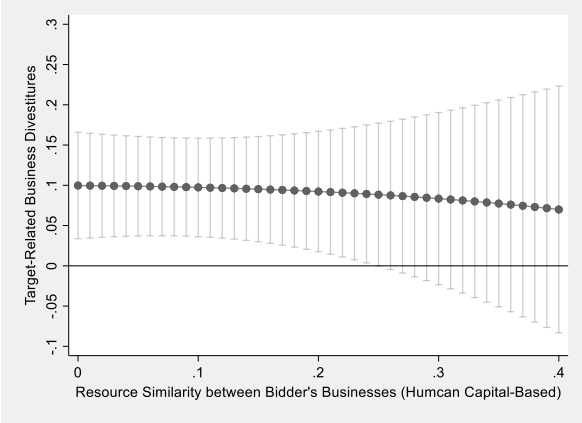

FIGURE 3g: Interaction Between Post-Termination and Alliance Experience of Focal Firm

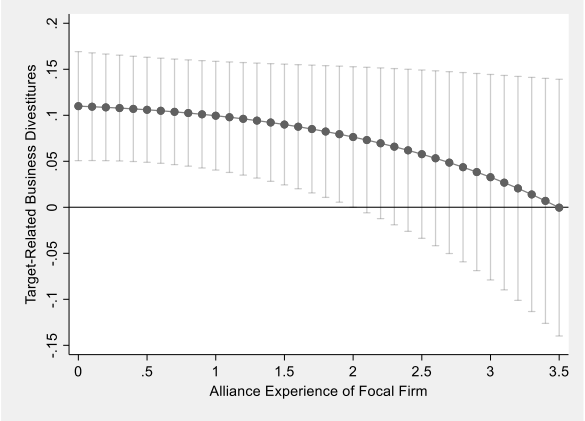

TABLE 1: First Difference Results

	Dependent Variables (Count)	
	Target-Related Business Divestitures	**Target-Unrelated Business Divestitures**
	(1)	**(2)**
Post-Termination	**0.487*** **	0.096
	(0.158)	(0.144)
Controls	Yes	Yes
Deal FE	Yes	Yes
Year FE	Yes	Yes
Pseudo R2	0.270	0.280
Log Likelihood	-2255	-3288
Wald chi2	107.2	87.73
Observations	5,377	6,125

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used.

***, **, and * Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE 2: Diff in Diff Results with CEM (including deal risk for columns 1 and 3)

	Dependent Variables (Count)			
	Target-Related Business Divestitures		Target-Unrelated Business Divestitures	
Sample:	**CEM Firms with Successful M&A**	**CEM Pseudo Sample**	**CEM Firms with Successful M&A**	**CEM Pseudo Sample**
	(1)	**(2)**	**(3)**	**(4)**
Post-Termination	0.087	-0.260	0.136	0.173
	(0.122)	(0.266)	(0.136)	(0.241)
Treat × Post	**0.539*** **	**0.643** **	0.047	0.112
	(0.180)	(0.294)	(0.155)	(0.253)
Controls	Yes	Yes	Yes	Yes
Deal FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Pseudo R2	0.238	0.265	0.290	0.450
Log Likelihood	-5163	-3316	-7328	-5533
Wald chi2	209.7	123.3	146.8	93.04
Observations	11,895	8,056	13,412	10,352

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used.

***, **, and * Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE 3: Moderation Results (First Difference)

	Dependent Variables (Count)						
	Target-Related Business Divestitures						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Post-Termination	0.885***	1.329***	0.705**	1.850***	0.798***	0.554***	0.717***
	(0.177)	(0.381)	(0.342)	(0.554)	(0.248)	(0.180)	(0.187)
Post × Relatedness to Acquisition Target	**-1.961*** **						
(Technological asset-based Measure)	(0.461)						
Post × Relatedness to Acquisition Target		**-1.109** **					
(Tangible asset-based Measure)		(0.511)					
Post × Relatedness to Acquisition Target			**-0.334**				
(Human capital-based Measure)			(0.420)				
Post × Industry-level Resource Redeployability				**-4.089** **			
(Kim & Kung (2017)'s Measure)				(1.630)			
Post × Resource Similarity between Bidder's Businesses					**-1.015***		
(Tangible asset-based Measure)					(0.527)		
Post × Resource Similarity between Bidder's Businesses						**-0.834**	
(Human capital-based Measure)						(0.675)	
Post × Alliance Experience of Focal Firm							**-0.205*** **
							(0.066)
Industry-level Resource Redeployability				4.464**			
				(2.036)			
Resource Similarity between Bidder's Businesses					1.292***		
(Tangible asset-based Measure)					(0.362)		
Resource Similarity between Bidder's Businesses						1.957***	
(Human capital-based Measure)						(0.502)	
Alliance Experience of Focal Firm	0.229**	0.275***	0.266***	0.256***	0.262***	0.257***	0.379***
	(0.091)	(0.103)	(0.101)	(0.091)	(0.100)	(0.100)	(0.110)
Controls, Deal FE, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.275	0.271	0.270	0.273	0.272	0.272	0.271
Log Likelihood	-2238	-2251	-2254	-2246	-2247	-2248	-2251
Wald chi2	133.4	126.5	110.5	117	153.5	129	112.7
Observations	5,377	5,377	5,377	5,377	5,377	5,377	5,377

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used. Additionally, we note that the resource similarity measures, which were intended as control variables based on data from the year prior to the deal termination, are omitted from the estimations.

***, **, and * Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

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FIGURE A1a: Specification Map of Coefficient Under Different Parameters (Poisson Models)

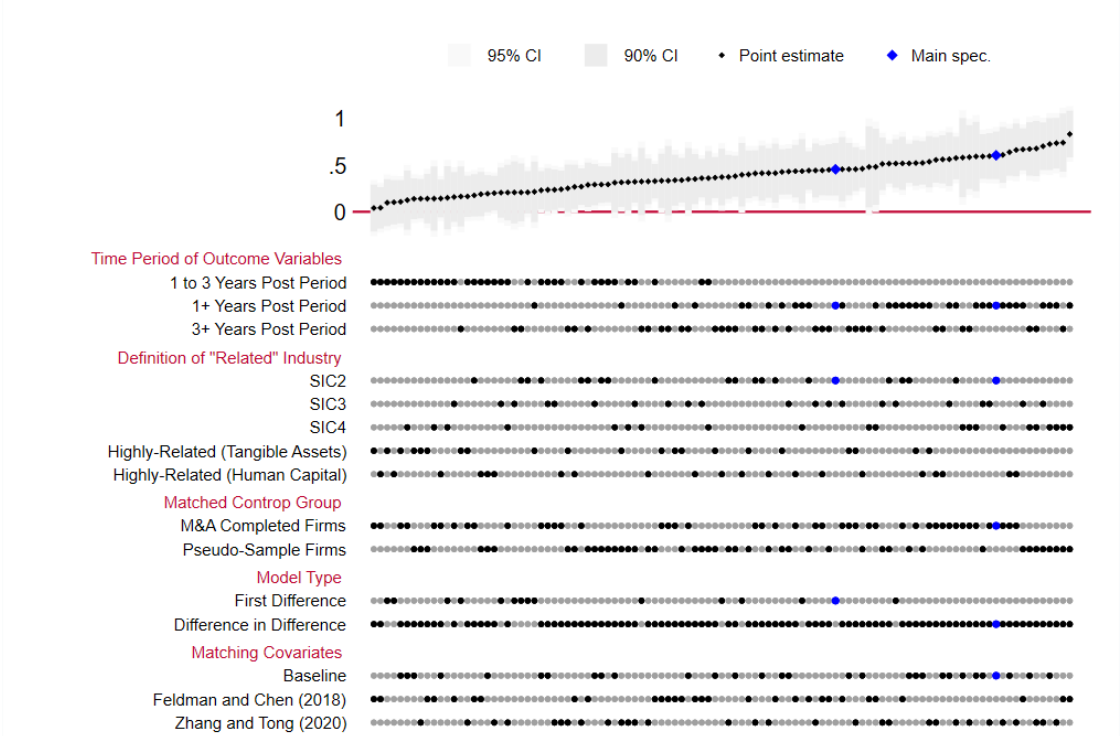

FIGURE A1b: Specification Map of Coefficient Under Different Parameters (OLS Models)

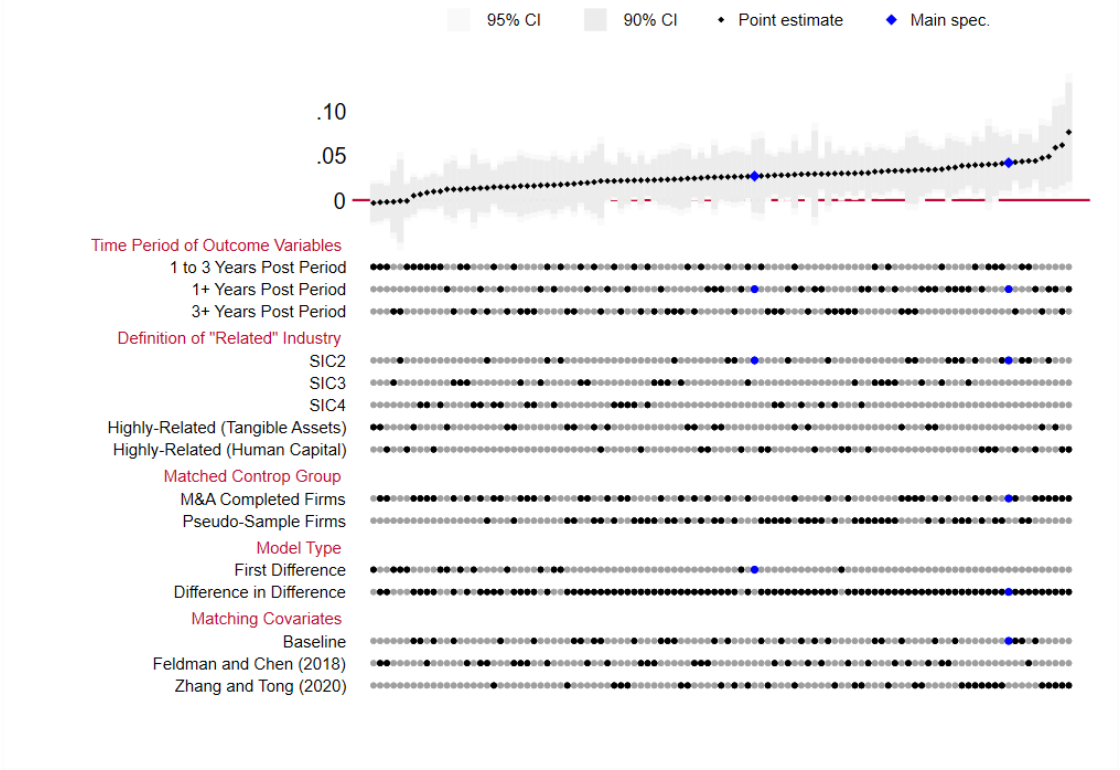

TABLE A1: Summary of Variables

Outcome Variable	
Target-Related Business Divestitures	Count of number of divestitures focal firm undertakes during the year in industries/sectors related to the target firm (SIC2)
Explanatory Variables	
Treatment (or Treat)	1 if focal firm's focal deal has or will be terminated; zero otherwise
Post-Termination (or Post)	1 if focal year is after the year of deal termination; zero otherwise
Moderator Variables	
Relatedness to Acquisition Target (Technological Asset-Based)	The relative overlap of two companies' patent portfolios, based on their patents filed during the five years before the deal announcement (Schildt et al., 2012).
Relatedness to Acquisition Target (Tangible Asset-Based)	Cosine distance of tangible resources between the primary businesses of the bidder and the target firm, calculated using the 1997 Bureau of Economic Analysis (BEA) capital flow table to assess similarities in tangible asset usage across industries
Relatedness to Acquisition Target (Human Capital-Based)	Cosine distance of human capital used between the primary businesses of the bidder and the target firm, calculated using the Bureau of Labor Statistics (BLS) occupational profile table to calculate similarities in the use of human capital across industries
Industry-level Resource Redeployability	This measure assesses how easily a firm's assets can be sold by calculating the proportion of firms or industries using each asset and then averaging these scores across industries, weighted by value (Kim & Kung, 2017).
Resource Similarity between Bidder's Businesses (Tangible Asset-Based)	Weighted distance of tangible resources used across all pairs of industries of the focal firm business segments (Dickler & Folta, 2020)
Resource Similarity between Bidder's Businesses (Human Capital-Based)	Weighted distance of human capital used across all pairs of industries of the focal firm business segments (Dickler & Folta, 2020)
Alliance Experience of Focal Firm	Natural log of total number of strategic alliance transactions (+1) over the five years prior to the focal year. (Also control in Poisson models)
Control Variables	
Target Issues	1 if the deal is terminated due to issues with the target firm unveiled during due diligence, or due to the target's good or bad news
Bidder Issues	1 if the deal is terminated due to the bidder's financing issues or bad news
Mutual Agreement	1 if the deal is terminated by mutual agreement between the two parties
Regulatory Intervention	1 if the deal is terminated due to intervention by government bodies (e.g., the Federal Trade Commission) during the focal deal transition.
Other Reasons	1 if the deal is terminated due to reasons not covered by the above categories
Business Size	Natural log of total assets
Profitability	Earnings before interest and taxes (EBIT) over total assets
Capital Expenditures	Cap Ex over total sales
Financial Leverage	Debt to equity ratio
Diversification	Entropy index of sales by operating segment
Acquisition Experience of Focal Firm	Natural log of total number of acquisition transactions (+1) over the five years prior to the focal year
Divestitures Experience of Focal Firm	Natural log of total number of divestitures transactions (+1) over the five years prior to the focal year
Bankruptcy Risk	1 if Altman's Z is below 1.8; zero otherwise
Industry Growth (Bidder)	Average sales growth rate in the bidder's industry over the three years prior to the focal year
Industry Growth (Target)	Average sales growth rate in the target's industry over the three years prior to the focal year
Additional Matching Variable	
Deal Arbitrage Risk (DAR)	Relative gap between offer price for target and spot price of target's common stock. Main specification is one day after deal announcement, but DAR measured at different times (e.g., one month after announcement) tested for robustness.

TABLE A2: Descriptive Statistics for First Difference Models

Variables	Mean	S.D	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
(1) Target-Related Business Divestitures	0.08	0.42																			
(2) Target-Unrelated Business Divestitures	0.14	0.57	0.17																		
(3) Post-Termination	0.38	0.48	0.13	0.18																	
(4) Business Size	6.11	2.30	0.21	0.26	0.39																
(5) Profitability	0.03	0.42	0.03	0.04	0.00	0.26															
(6) Capital Expenditures	0.09	0.15	0.00	-0.04	-0.08	0.00	-0.33														
(7) Financial Leverage	0.76	2.20	-0.01	0.01	0.02	0.08	0.03	0.05													
(8) Diversification	0.29	0.43	0.06	0.22	0.06	0.30	0.12	-0.09	0.04												
(9) Acquisition Experience of Focal Firm	0.82	0.90	0.20	0.27	0.31	0.48	0.16	-0.14	0.01	0.19											
(10) Alliance Experience of Focal Firm	0.53	0.82	0.18	0.21	0.21	0.38	0.04	-0.05	-0.04	0.04	0.42										
(11) Divestiture Experience of Focal Firm	0.28	0.58	0.26	0.31	0.32	0.43	0.09	-0.05	0.01	0.21	0.45	0.27									
(12) Bankruptcy Risk	0.28	0.45	0.10	0.05	0.19	0.25	-0.06	0.24	0.06	-0.03	0.06	0.06	0.14								
(13) Industry Growth (Bidder)	8.67	12.11	-0.03	-0.07	-0.19	-0.17	-0.06	0.09	-0.01	-0.15	-0.12	0.01	-0.14	-0.04							
(14) Industry Growth (Target)	8.92	13.31	-0.02	-0.07	-0.16	-0.15	-0.03	0.07	-0.01	-0.08	-0.08	0.02	-0.12	-0.05	0.41						
(15) Relatedness to Acquisition Target (Technological Asset-Based)	0.12	0.24	0.03	-0.01	-0.05	0.08	-0.03	-0.03	-0.07	-0.08	0.13	0.21	0.03	-0.06	0.03	0.03					
(16) Relatedness to Acquisition Target (Tangible Asset-Based)	0.65	0.25	0.08	-0.02	-0.04	0.00	-0.07	-0.02	-0.03	0.02	0.01	0.01	0.05	-0.09	-0.04	-0.05	0.16				
(17) Relatedness to Acquisition Target (Human Capital-Based)	0.52	0.30	0.08	-0.07	-0.04	0.05	-0.04	0.13	-0.01	-0.11	-0.05	0.03	0.01	0.11	0.04	0.00	0.22	0.57			
(18) Industry-level Resource Redeployability	0.25	0.16	0.07	0.12	0.30	0.21	-0.09	-0.10	0.00	0.06	0.09	0.10	0.01	0.09	-0.08	-0.10	0.06	-0.02	-0.05		
(19) Resource Similarity between Bidder's Businesses (Tangible Asset-Based)	0.16	0.22	0.12	0.25	0.30	0.38	0.08	-0.13	0.01	0.65	0.33	0.12	0.32	0.06	-0.19	-0.14	0.02	0.03	-0.06	0.41	
(20) Resource Similarity between Bidder's Businesses (Human Capital-Based)	0.03	0.08	0.10	0.11	0.16	0.26	0.03	-0.02	0.02	0.10	0.15	0.08	0.17	0.11	-0.10	-0.08	0.04	0.01	0.09	0.14	0.54

Note. N=9,698. This table lists descriptive statistics for the sample of US publicly-listed firms that terminate M&A between 1984 and 2019. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE A3: Descriptive Statistics for Diff-in-Diff Models CEM vs. Successful M&A Firms

Variables	Mean	S.D	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Target-Related Business Divestitures	0.09	0.44														
(2) Target-Unrelated Business Divestitures	0.16	0.61	0.15													
(3) Treatment	0.50	0.50	-0.02	-0.03												
(4) Post-Termination	0.38	0.49	0.14	0.19	-0.02											
(5) Business Size	6.30	2.29	0.20	0.28	-0.08	0.45										
(6) Profitability	0.04	0.41	0.03	0.05	-0.01	0.02	0.25									
(7) Capital Expenditures	0.09	0.15	0.01	-0.05	0.00	-0.09	-0.04	-0.30								
(8) Financial Leverage	0.73	2.13	0.01	0.02	0.02	0.04	0.07	0.03	0.04							
(9) Diversification	0.31	0.43	0.06	0.21	-0.03	0.09	0.32	0.12	-0.10	0.04						
(10) Acquisition Experience of Focal Firm	0.94	0.94	0.19	0.26	-0.12	0.38	0.52	0.16	-0.15	0.02	0.18					
(11) Alliance Experience of Focal Firm	0.64	0.91	0.17	0.22	-0.13	0.22	0.41	0.04	-0.06	-0.03	0.05	0.43				
(12) Divestiture Experience of Focal Firm	0.31	0.60	0.24	0.32	-0.06	0.35	0.44	0.09	-0.06	0.01	0.21	0.44	0.28			
(13) Bankruptcy Risk	0.28	0.45	0.10	0.05	-0.01	0.24	0.23	-0.08	0.22	0.06	-0.03	0.07	0.05	0.14		
(14) Industry Growth (Bidder)	8.69	11.94	-0.03	-0.06	0.00	-0.20	-0.17	-0.07	0.10	-0.03	-0.14	-0.11	0.05	-0.13	-0.04	
(15) Industry Growth (Target)	9.18	13.43	-0.02	-0.05	-0.02	-0.17	-0.14	-0.04	0.07	-0.02	-0.08	-0.07	0.04	-0.11	-0.05	0.42

Note. N=19,686. This table lists descriptive statistics for the sample of US publicly-listed firms that complete or terminate M&A between 1984 and 2019. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE A4: Descriptive Statistics for Diff-in-Diff Models CEM vs. Pseudo Sample Firms

Variables	Mean	S.D	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Target-Related Business Divestitures	0.08	0.41														
(2) Target-Unrelated Business Divestitures	0.20	1.05	0.16													
(3) Treatment	0.56	0.50	0.10	0.06												
(4) Post-Termination	0.47	0.50	0.06	0.08	-0.02											
(5) Business Size	5.78	2.66	0.21	0.24	0.33	0.23										
(6) Profitability	-0.63	4.12	0.03	0.03	0.13	0.02	0.21									
(7) Capital Expenditures	0.11	0.25	-0.01	-0.03	-0.06	-0.07	-0.08	-0.56								
(8) Financial Leverage	0.67	2.28	0.00	0.05	0.05	0.00	0.12	0.04	0.02							
(9) Diversification	0.26	0.42	0.07	0.24	0.15	0.04	0.39	0.10	-0.09	0.07						
(10) Acquisition Experience of Focal Firm	0.64	0.84	0.22	0.26	0.28	0.25	0.52	0.13	-0.13	0.04	0.23					
(11) Alliance Experience of Focal Firm	0.51	0.83	0.20	0.28	0.12	0.15	0.44	0.06	-0.05	0.00	0.15	0.43				
(12) Divestiture Experience of Focal Firm	0.23	0.53	0.27	0.31	0.16	0.25	0.43	0.07	-0.06	0.03	0.24	0.48	0.32			
(13) Bankruptcy Risk	0.31	0.46	0.07	-0.02	0.02	0.16	0.12	-0.05	0.13	0.00	-0.03	0.04	0.03	0.10		
(14) Industry Growth (Bidder)	8.15	11.83	-0.02	-0.05	-0.02	-0.14	-0.13	-0.05	0.06	-0.02	-0.12	-0.08	0.03	-0.10	-0.07	
(15) Industry Growth (Target)	7.93	12.07	-0.02	-0.04	0.00	-0.16	-0.11	0.00	0.04	-0.01	-0.07	-0.08	0.01	-0.11	-0.06	0.30

Note. N=17,871. This table lists descriptive statistics for the sample of US publicly-listed firms that complete or terminate M&A between 1984 and 2019. All continuous variables are winsorized at the 1st and 99th percentiles.

TABLE A5: Descriptive Statistics for Samples Before and After CEM Matching (vs. Successful M&A Firms)

	Pre-CEM							Post-CEM						
	Failed M&A (Treatment)			Completed M&A				Failed M&A (Treatment)			Completed M&A			
Variables	Mean	S.D	N	Mean	S.D	N	*t*-stat	Mean	S.D	N	Mean	S.D	N	*t*-stat
DAR (at *t-1*)	0.087	0.128	446	0.056	0.105	2,287	-5.53	0.089	0.128	431	0.088	0.129	431	-0.11
Total Assets ($000)	5244	26274	446	9991	29641	2,287	3.15	2129	5890	431	2402	6312	431	0.66
Total Sales ($000)	3339	10858	446	7346	17993	2,287	4.54	1810	4915	431	2065	5336	431	0.73
Net Income ($000)	293	1581	446	678	2027	2,287	3.78	107	593	431	139	673	431	0.75
Market Value ($000)	6452	30441	446	15568	39703	2,287	4.59	2766	11035	431	4049	11685	431	1.66

TABLE A6: Descriptive Statistics for Samples Before and After CEM Matching (vs. Pseudo Sample Firms)

	Pre-CEM							Post-CEM						
	Failed M&A (Treatment)			Completed M&A				Failed M&A (Treatment)			Completed M&A			
Variables	Mean	S.D	N	Mean	S.D	N	*t*-stat	Mean	S.D	N	Mean	S.D	N	*t*-stat
Total Assets ($000)	5244	26274	446	4445	22383	132,165	-0.75	5244	26274	446	5184.6	26270.5	446	-0.03
Total Sales ($000)	3339	10858	446	2645	9206	132,165	-1.59	3339	10858	446	3252.0	10876.8	446	-0.12
Net Income ($000)	293	1581	446	249	1320	132,165	-0.70	293	1581	446	291.2	1580.5	446	-0.02
Market Value ($000)	6452	30441	446	6699	28726	132,165	0.18	6452	30441	446	6899.5	30434.0	446	0.22

TABLE A7: Failure Reason Analysis (First Difference)

	Dependent Variables (Count)				
	Target-Related Business Divestitures				
	(1)	(2)	(3)	(4)	(5)
Post-Termination	**0.524*** **	**0.372** **	**0.477*** **	**0.494*** **	**0.746*** **
	(0.161)	(0.161)	(0.159)	(0.179)	(0.289)
Post × Target Issues	-0.846				
(Due Diligence + Target Good/Bad News)	(1.132)				
Post × Bidder Issues		**1.240*** **			
(Financing Issues + Bidder Bad News)		(0.284)			
Post × Mutual Agreement			0.851		
			(0.784)		
Post × Regulatory Intervention				-0.048	
				(0.340)	
Post × Other Reasons					-0.359
					(0.345)
Controls	Yes	Yes	Yes	Yes	Yes
Deal FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.270	0.272	0.270	0.270	0.270
Log Likelihood	-2253	-2248	-2254	-2255	-2253
Wald chi2	106	184.7	112.1	110.1	112.4
Observations	5,377	5,377	5,377	5,377	5,377

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used. Additionally, we note that the failure reason indicators, which were intended as control variables, are omitted from the estimations.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A8: First Difference Results (OLS)

	Dependent Variables (Ln(Count))	
	Target-Related Business Divestitures	Target-Unrelated Business Divestitures
	(1)	(2)
Post-Termination	**0.015***	0.007
	(0.009)	(0.012)
Controls	Yes	Yes
Deal FE	Yes	Yes
Year FE	Yes	Yes
R-squared	0.233	0.292
Observations	9,698	9,698

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A9: Diff in Diff Results with CEM (including deal risk for columns 1 and 3) (OLS)

	Dependent Variables (Ln(Count))			
	Target-Related Business Divestitures		Target-Unrelated Business Divestitures	
Sample:	**CEM Firms with Successful M&A**	**CEM Pseudo Sample**	**CEM Firms with Successful M&A**	**CEM Pseudo Sample**
	(1)	**(2)**	**(3)**	**(4)**
Post-Termination	0.007	-0.015**	0.018	0.010
	(0.008)	(0.006)	(0.011)	(0.011)
Treat × Post	**0.019***	**0.032*****	-0.006	-0.007
	(0.010)	(0.008)	(0.013)	(0.014)
Controls	Yes	Yes	Yes	Yes
Deal FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
R-squared	0.209	0.243	0.305	0.419
Observations	19,685	17,867	19,685	17,867

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A10: Bacon Decomposition Results

DV:	Target-Related Business Divest			
DV Type:	**Dummy**	**Log(Count)**	**Dummy**	**Log(Count)**
Model:	**CEM (Terminated Deal + Completed Deal)**		**CEM (Terminated Deal + Pseudo Sample)**	
Treat × Post	**0.020***	**0.019***	**0.035*****	**0.032*****
	(0.011)	(0.010)	(0.009)	(0.008)

	Beta	Weight	Beta	Weight	Beta	Weight	Beta	Weight
Timing Groups	**0.062**	**10.57%**	**0.055**	**10.57%**	**0.057**	**11.77%**	**0.047**	**11.77%**
Never vs. Timing	**0.022**	**63.46%**	**0.019**	**63.46%**	**0.065**	**56.65%**	**0.062**	**56.65%**
Always vs. Timing	-0.023	0.02%	-0.004	0.02%	-0.073	0.03%	-0.064	0.03%
Always vs. Never	0.328	0.01%	0.302	0.01%	-0.122	0.01%	-0.060	0.01%
Within (Residual)	-0.009	25.95%	-0.002	25.95%	-0.025	31.54%	-0.025	31.54%

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Given the variation in the timing of M&A deal terminations across our sample, it is crucial to understand how the treatment effects from OLS estimations differ among various comparison groups. To facilitate this analysis, we employ Stata's BACONDECOMP package. This tool helps us examine the weights attributed to each comparison group, thereby allowing us to better interpret the distribution of treatment effects across different segments of our data.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A11: Callaway and Sant'Anna Diff in Diff (CSDID) Results with CEM

DV:	Target-Related Business Divest			
DV Type:	Dummy	Log(Count)	Dummy	Log(Count)
Model:	CEM (Terminated Deal + Completed Deal)		CEM (Terminated Deal + Pseudo Sample)	
	(1)	(2)	(3)	(4)
Treat × Post (ATT)	**0.031****	**0.028****	**0.041****	**0.040*****
	(0.015)	(0.013)	(0.015)	(0.013)
Deal & Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes

Note. Robust standard errors clustered by acquisition deal. We acknowledge that the varying timing of M&A deal terminations across our sample may lead to heterogeneous treatment effects. To address this, we use Stata's CSDID package to implement the Callaway and Sant'Anna (2021) estimator for DID models with multiple time periods. This approach helps mitigate bias by avoiding the 2x2 DID design, which compares late-treated units with earlier-treated ones. However, we note that while Stata's CSDID package provides the average treatment effect on the treated (ATT), it does not offer additional information such as R-squared values or the number of observations.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A12: Diff in Diff Results with Various Time Periods Pre- and Post-Announcement

Sample:	Dependent Variables (Count) Target-Related Business Divestitures					
	CEM Firms with Successful M&A			CEM Pseudo Sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Post-Termination	0.087			-0.260		
	(0.122)			(0.266)		
Treat × Post	**0.539*****			**0.643****		
	(0.180)			(0.294)		
Treat × Pre (-4 to -2 years)		0.214			0.048	
		(0.179)			(0.166)	
Treat × Post (1 to 2 years)		**0.647*****			**0.451*****	
		(0.166)			(0.160)	
Treat × Post (3 to 4+ years)		**0.677*****			**0.407****	
		(0.207)			(0.200)	
Treat × Before Announcement			-0.010			-0.049
			(0.168)			(0.148)
Treat × Negotiation Period			-1.113**			-0.805**
			(0.450)			(0.356)
Treat × Post (1 to 3 years)			**0.349*****			**0.330*****
			(0.121)			(0.124)
Treat × Post (4 to 6 years)			**0.441*****			**0.334****
			(0.167)			(0.155)
Treat × Post (7 to 9 years)			**0.429****			**0.307****
			(0.170)			(0.150)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal & Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.238	0.238	0.238	0.265	0.265	0.266
Wald chi2	209.7	218.5	214	123.3	132.9	128.7
Observations	11,895	11,895	11,895	8,056	8,056	8,056

Note. In Models 2 and 5, the baseline coefficient corresponds to *Treat × Pre (-1 to 0 years)*. In contrast, for Models 3 and 6, the baseline coefficient is *Treat × Before Announcement (-3 to -1 years)*. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A13: Analyses with Diversified vs. Single Business Firms

	Dependent Variables (Count)	
	Target-Related Business Divestitures	
	Non-Diversified Firm (Prior to Deal Announcement)	Diversified Firm (Prior to Deal Announcement)
	(1)	(2)
Post-Termination	0.170	0.085
	(0.178)	(0.160)
Treat × Post	0.348	**0.685*** **
	(0.341)	(0.201)
Controls	Yes	Yes
Deal FE	Yes	Yes
Year FE	Yes	Yes
Pseudo R2	-2321	-2777
Log Likelihood	73.63	154.8
Wald chi2	0.403	0.313
Observations	10,005	9,681

Note. Robust standard errors in parentheses. Standard errors clustered by acquisition deal. Stata's PPMLHDFE command may exclude observations with uniform outcomes, which can result in a different number of observations when a different dependent variable is used.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.

TABLE A14: OLS Regression Results on the Relationship between DAR and the likelihood of M&A Deal Termination

DV:	M&A Deal Termination	
	(1)	(2)
DAR (at *t+1*)	**0.311*** **	**0.259*** **
	(0.082)	(0.078)
	[0.000]	[0.001]
Year FE	Yes	Yes
Bidder Industry FE	Yes	No
Target Industry FE	No	Yes
R-squared	0.067	0.074
Observations	2,733	2,733

Note. DAR is measured on the date following the deal announcement. The dependent variable, *M&A Deal Termination*, takes a value of 1 if the focal deal is terminated, and 0 otherwise. The selection of control variables mirrors that in our main estimation. Robust standard errors in parentheses and P-values in brackets. Standard errors clustered by industries.
***, **, and *Statistical significance based on two-sided tests at the 1%, 5%, and 10% levels, respectively.