EXOGENOUS SHOCKS AND SURVIVAL POINTS IN MULTIUNIT FIRMS

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ABSTRACT

Building on the literature on performance feedback that emphasizes aspiration levels as an important reference point, we shift the focus to the role of survival points in driving divestiture decisions, arguing that corporate parents may change survival points in response to environmental changes. We predict that a financial crisis in a parent's home country elevates survival points of subsidiaries in host countries, increasing the probability of subsidiary exit. We further investigate how the effect of parent crisis on subsidiary exit is moderated by factors that should influence the extent of survival point adjustments, including the sharing of parent-specific resources and the efficiency of a subsidiary's local market. We test our predictions with panel data on 3,378 foreign subsidiaries of multinational retailers across 157 host countries over 13 years. Our study contributes to the literature by illuminating the dynamics of survival points, which can change over time in response to changes in firms' external environments, providing an improved understanding of the direct and contextual drivers of divestiture decisions.

Keywords: divestitures, survival points, performance feedback, multiunit firms, financial crises.

INTRODUCTION

A key question in the behavioral theory of the firm (Cyert and March, 1963) is how firms respond to performance shortfalls. The literature on performance feedback argues that firms evaluate their performance against specific reference points and explains the various ways firms respond to discrepancies between performance and those reference points. One important reference point is the firm's aspiration level, which represents the desired or target level of performance; these aspirations are shaped by the firm's historical performance and social comparisons to similar firms. Another important reference point is the survival point, or the minimum performance level the organization must achieve to avoid failure. Firms may switch their attention to the survival point rather than the aspiration level when performance is particularly poor. Prior studies have linked performance feedback to a wide variety of firm actions, including R&D spending (Miller and Chen, 2004), acquisitions (Iyer and Miller, 2008),

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new product introductions (Gaba and Joseph, 2013), and major asset investments (Gaba and Greve, 2019).

Implicit in much of the prior literature is an approach that treats reference points as largely outside the current control or influence of firm decision makers. A firm typically cannot choose its past performance level nor the level of performance of its rivals; similarly, the survival point is a seemingly exogenous level "at which performance is so low that the organization fails" (Audia and Greve, 2006: 85). We depart from this approach with an argument that survival has a volitional component, suggesting that the minimum performance level that the organization must achieve to avoid failure (i.e., the survival point) may be a choice of firm decision makers. We further depart from the dominant approach in the prior literature in one other important respect. Consistent with "the emerging literature on performance feedback in multiunit firms" (Sengul and Obloj, 2017: 2527), we focus our theorizing on multiunit organizations, an organizational form which has been suggested by some (e.g., Williamson, 1985) to represent one of the most significant organizational innovations of the last century. The multiunit distinction is theoretically critical because it recognizes that the choice of reference points may occur in an area of the organization other than where the "performance" in performance feedback occurs.

The primary claims in our work are that corporate parents assign minimum acceptable levels of performance to subsidiaries (i.e., the subsidiary survival point) and that parents elect to divest subsidiaries when performance of the subsidiary falls below that level. These claims lead us to argue that events occurring at the parent level can lead to changes in the subsidiary survival point and thereby affect subsidiary exit. Our aim in this research is to explore the theoretical implications of these claims by first linking the occurrence of an exogenous change in the external environment of the parent to subsidiary exit. More specifically, we build from a

prediction that the probability of foreign subsidiary exit increases when a subsidiary's parent is exposed to a financial crisis in the parent home country. This prediction is consistent with prior literature that emphasizes the role of parent distress on subsidiary divestment. But rather than emphasizing how a parent financial crisis (PFC) might affect parent or subsidiary *performance*, we argue that parent exposure to crisis increases subsidiary *survival points*. A PFC represents a threat to the domestic operation of the parent, raising the cost of continuing to allocate resources to support subsidiary operations. In other words, the minimum acceptable level of performance for a subsidiary is larger when parents face a financial crisis. And these increases in minimum acceptable performance mean increased likelihood of subsidiary exit.

To enrich our theorizing, we next examine how the relationship between PFC and subsidiary exit varies across different types of subsidiaries. Expanding on the theorized mechanisms of the main effect of parent shocks on subsidiary survival points, we predict that the relationship between PFC and probability of subsidiary exit is weakened for subsidiaries with parent-specific resources that are closer connected to the core business and for subsidiaries located in countries with less efficient markets. To round out our theoretical model, we examine how the two-way moderators jointly interact. We predict that the negative interaction effect between PFC and resource specificity is attenuated in less efficient markets.

We test our relationships using panel data on 3,378 chains (i.e., foreign subsidiaries) of multinational retailers (i.e., parent firms) across 157 host countries over a 13-year period. Exogenous financial shocks provide a natural experiment that informs our analyses. We focus on parent financial crises at the country level, measured using the systemic banking crises database of Laeven and Valencia (2013). The empirical analyses produce results consistent with our predictions. Foreign subsidiaries are more likely to experience exit when a parent is exposed to a

financial crisis in the home country. The direct effect of parent crisis is attenuated in subsidiaries with greater degrees of parent-specific resources and in less efficient markets (i.e., when there are relatively fewer potential acquirers in the local markets). The three-way interaction effect result supports the multiplicative moderating effects of parent-specific resources and local market efficiency, consistent with our argument that the interaction between PFC and resource specificity depends on local market conditions.

We believe our work offers several contributions to the existing literature. First and most importantly to the performance feedback literature, our work takes an initial step to begin developing theory that explains the determinants of subsidiary survival points. We believe we are the first to highlight that subsidiary survival points may be a choice made by parents, and we argue that one key determinant of this critical reference point is parent-level crisis. Our efforts here contribute to the growing literature investigating performance feedback in multiunit organizations such as multidivisional firms (e.g., Arrfelt, Wiseman, and Hult, 2013; Gaba and Joseph, 2013; Sengul and Obloj, 2017). It is also consistent with work that investigates factors that affect aspiration levels (e.g., Blettner, He, Hu and Bettis, 2015; Luo and Shinkle, 2024), but we focus on the survival point, a reference point whose determinants have been relatively underexplored, especially in the multiunit setting. We argue and demonstrate that our approach is valuable for understanding not only the direct determinants of subsidiary exit but also the contextual factors that serve as moderating influences. An important outcome of our work is to highlight the varying nature of survival points, which can change over time in response to changes in firms' external environments.

Second, we also see our work offering contribution to the divestiture literature, a fundamental choice in corporate strategy. Integrating the divestiture and performance feedback

literatures, our focus on survival points provides a strong complement to prior divestiture literature that has paid a great deal of attention to performance-related effects (see, e.g., Brauer, 2006; Lee and Madhaven, 2010; Feldman and McGrath, 2016 for reviews). A focus on subsidiary survival points is critical to develop a more complete understanding of divestiture decisions in corporate strategy and international business research.

Third, we contribute a different perspective to understanding the role of resource relatedness in multiunit firms in affecting divestiture decisions. Prior literature has largely emphasized how relatedness improves subsidiary performance; we explain how relatedness (represented in our paper by parent resource specificity) can also affect survival points. More specifically, our research leads to some unique insights about the role of relatedness: while prior research has largely discussed the positive aspects of parent-subsidiary relatedness, our work highlights that the relatedness associated with parent-specific resources may also have negative aspects if distressed parents need to quickly free resources via divestitures, as related subsidiaries may be more difficult to sell in times of crisis. This relates to the larger issue in strategic management about the tradeoffs between commitment and flexibility (e.g., Ghemawat and Del Sol, 1998). Committing to higher degrees of relatedness has clear benefits from developing synergies throughout multidivisional organizations; however, this comes at a cost as relatedness reduces divestment flexibility, which can be particularly concerning in times of crisis and uncertainty. Finally, adding evidence to prior work that has examined how shocks propagate throughout multidivisional organizations (e.g., Lamont, 1997), our results suggest that the effects of parent-level shocks are transmitted not just because they affect performance. Shocks also affect how survival points are set throughout the organization.

THEORETICAL BACKGROUND

Divestitures

Understanding the drivers of subsidiary exit is a shared topic of interest to divestiture scholars. Divestitures refer to the process through which a firm disposes of its ownership in a business unit, typically through spin-offs, equity carve-outs, split-ups, or outright sell-offs (Mulherin and Boone, 2000). This process is an important aspect of corporate restructuring aimed at optimizing a firm's business portfolio, improving financial performance, and aligning with strategic goals (Feldman, 2021). These transactions represent a significant portion of overall corporate deal activity. Boston Consulting Group reports[1] over 2,000 divestitures per year with a total value of over 11.5 trillion dollars over the 13-year period from 2010 – 2022. Divestitures represented approximately 47 percent of total overall deal volume over this period.

Much of the early research in this area tended to treat divestitures as simply the mirror image of mergers and acquisitions. However, the maturing of divestiture research has led to it being seen as its own distinct phenomenon with contributions flowing from scholars across disciplines, including strategic management (e.g., Feldman, 2014, 2016; Feldman, Gartenberg, and Wulf, 2018), international business (e.g., Berry, 2010, 2013), and finance (e.g., Schlingemann, Stulz, and Walkling, 2002). Brauer (2006) and Kolev (2016) provide reviews of the extensive literature on divestitures in general. In our study, we focus on divestiture of foreign subsidiaries undertaken by multinational enterprises (MNEs). We follow prior literature (e.g., Hennart, Kim and Zeng, 2008) in defining foreign subsidiary divestment as the liquidation or sale of the assets of a foreign subsidiary by the parent firm (see also Berry, 2013). Scholars have studied antecedents of these transactions at a variety of levels, including parent firm, subsidiary,

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[1] Data available at https://www.bcg.com/capabilities/mergers-acquisitions-transactions-pmi/mergers-acquisitions-activity-by-year

and host country. Meta-analyses of prior work in this area indicate that "financial considerations are a strong determinant of subsidiary survival or divestment" (Schmid and Morschett, 2020: 8). Higher levels of parent performance and higher levels of subsidiary performance, perhaps unsurprisingly, decrease the likelihood of divestment. Factors that contribute to higher financial performance, e.g. parent R&D and advertising intensity, subsidiary-parent product relatedness, and host country economic growth are also associated with variance in divestment likelihood. In our work, we elect to investigate factors that affect foreign subsidiary exit, not through performance-related effects, but rather because they affect the minimum level of acceptable performance determined by the parent. We anticipate that a more complete understanding of foreign divestitures may result from integrating this complementary perspective; this perspective suggests not only a different approach to direct antecedents of exit likelihood, but it also leads to consideration of unique contextualizing influences. Performance feedback theory provides the theoretical foundation for our approach.

Performance Feedback Theory

One of the fundamental questions addressed by the behavioral theory of the firm (Cyert and March, 1963) is how firms make organizational choices. Performance feedback theory (PFT), a key area of research within the behavioral theory of the firm, argues that organizations respond to feedback on their performance relative to certain benchmarks or reference points. One central reference point of comparison is the firm's desired or target level of performance (its "aspiration level"), which is based on historical performance and the performance of peers or competitors. When a firm's realized performance falls short of its aspirations, the firm is likely to engage in problemistic search, an adaptive and goal-oriented process aimed at identifying and implementing solutions to improve performance. As highlighted in reviews of this voluminous

research stream (e.g., Posen, Keil, Kim, and Meissner, 2017), prior studies have linked performance feedback to a wide variety of firm actions motivated to close the performance gap. Performance below aspiration has been linked to increased R&D spending (Miller and Chen, 2004), acquisitions (Iyer and Miller, 2008), new product introductions (Gaba and Joseph, 2013), and major asset investments (Gaba and Greve, 2019) as just a few examples.

Our work sits at the nexus of four sub-streams of the performance feedback literature. The first sub-stream is one that argues that firm "decision makers do not direct their attention to a single reference point" (Audia and Greve, 2006: 85). Decision makers not only focus on achieving aspirations but also pay critical attention to survival points – minimum performance levels required to sustain operations. Survival points mark the boundary between viability and termination. When performance falls close to survival points, firms prioritize actions that ensure short-term survival over actions designed to achieve aspirational goals.

The second sub-stream of PFT literature of particular relevance to our paper is work that examines the determinants of reference points; this is a relatively small area of the literature in comparison to the clearly dominant approach in the PFT literature, which is to examine the effects of performance shortfalls relative to aspiration. As one example in this sub-stream, Hu, He, Blettner, and Bettis (2017) demonstrated how feedback consistency affected relative attention to either the historical or social aspiration. Similarly, Luo and Shinkle (2024) investigated how aspects of the environmental context (munificence, dynamism, and complexity) affected whether firms paid more attention to its past performance or social group comparison when forming aspirations. We share an interest with these studies in understanding factors that affect reference points, but we focus on the survival point rather than the aspiration level.

The third sub-stream of PFT that informs our work is a growing research area that examines the outcomes of performance feedback in multiunit firms. Understanding how PFT operates in multiunit firms is particularly crucial given the amount of economic activity being conducted in these firms. As just one example, nearly three-quarters of US firm sales occur in multiunit firms (US Census Bureau, 2017). Research in this stream has linked subsidiary performance below aspiration to decisions such as the allocation of capital from parents (Arrfelt, Wiseman, and Hult, 2013), new product introduction by subsidiaries (Gaba and Joseph, 2013), and imposition of governance controls by parents (Sengul and Obloj, 2017). Studies also suggest that parent-level performance relative to aspiration is associated with subsidiary-level decisions (Gaba and Joseph, 2013).

A handful of papers constitute the fourth and final sub-stream of literature relevant to our research; this research area investigates the relationship between parent-level performance relative to aspiration and subsidiary divestiture. For example, Kuusela, Keil, and Maula (2017) argued that substantial parent performance issues lead firms to consider divestiture of subsidiaries in order to free resources. Vidal and Mitchell (2015) show that divestiture activity is affected by both high and low extremes of performance relative to a firm's historical aspirations. We share the interest in divestiture but investigate how parent crisis relates to subsidiary exit via causal pathways other than a realized change in performance relative to aspirations.

To summarize commonalities and differences in our approach relative to the prior performance feedback theory literature, we share a multiunit perspective and the general view that exit (or divestiture in the multiunit setting) occurs when subsidiary performance falls below a survival point. Key differences include our focus on survival points rather than aspiration levels and more specifically our interest in factors that affect the determination of subsidiary

survival points. This focus leads us to explain firm choices via effects on survival points rather than via effects on performance. We turn next to the development of specific hypotheses about survival point-related factors that affect subsidiary exit decisions in multinational firms.

HYPOTHESIS DEVELOPMENT

We begin our theorizing by discussing how an exogenous event with negative implications experienced in the home country of a parent increases the probability of foreign subsidiary exit. Our prediction there is consistent with prior performance feedback studies that have described divestitures as a form of resource-freeing organizational change (Kuusela, Keil, and Maula, 2017). While that work tied resource-freeing change to decreases in parent performance, we argue that crisis is associated with subsidiary exit because of increases in subsidiary survival points, beyond any effects on exit due to changes in parent performance. We next highlight the conditional nature of this direct effect. Our two-way moderation arguments explain how the exit-related effect of changes in subsidiary survival points driven by negative events in other parts of the organization depends on subsidiary and local market characteristics. More specifically, we will explain that the relationship between PFC and probability of subsidiary exit is weakened in subsidiaries with parent-specific resources and in subsidiaries located in countries with less efficient markets. We conclude with a three-way moderation argument.

Parent Financial Crisis

Crises in general represent "transient perturbations whose occurrences are difficult to foresee and whose impacts on organizations are disruptive and potentially inimical" (Meyer 1982: 515). Vaaler and McNamara (2004) similarly define crises as short periods of unanticipated and unfavorable shifts in the external environment faced by organizations.

Managers typically view these unanticipated and unfavorable shifts as threatening (Wan and Yiu, 2009), spurring action in an attempt to reduce potential negative outcomes from the crisis events.

Financial crises can have substantial impact on economic activity and firm outputs. During the Asian Financial Crisis from 1996 to 1998, for example, GDP per capita fell in amounts ranging from 25% in the Philippines to over 50% in Indonesia. Malaysia, South Korea, and Thailand saw decreases in the 30% to 40% range.[2] These GDP declines clearly suggest that a multinational firm headquartered in one of these countries is likely to experience meaningful revenue decreases in its home-country operations following a crisis. These shocks may also indirectly affect foreign subsidiaries of the firm, resulting in reduced performance in those subsidiaries. For example, reductions in parent support may require subsidiaries to curtail capital investments or marketing expenditures that could have supported increases in sales. These declines in subsidiary revenue would be associated with higher probability of subsidiary exit per the divestiture literature reviewed above. Here, however, we argue that parent financial shocks increase the probability of subsidiary exit even after controlling for changes in subsidiary performance, i.e., shocks are associated with changes in subsidiary survival points. We focus on financial shocks that are localized to the parent and examine how they might trigger exit at the level of foreign subsidiaries.

Consider the position of the parent of the multinational enterprise (MNE). A fundamental role of the parent is capital allocation (see Busenbark et al. (2017) and Sengul, Almeida Costa, and Gimeno (2019) for reviews). The portfolio of an MNE includes both domestic and foreign operations vying for capital to fund current operations and growth initiatives. Parents may address this demand via both internally generated capital and capital from external providers.

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[2] Data from World Economic Outlook Database April 2024, available at www.imf.org.

The opportunity cost of capital used in foreign subsidiaries is the forgone benefit of using that capital to support domestic operations or to offset external borrowing. We anticipate that when the parent faces a financial crisis in its home country, this opportunity cost increases. Most notably from a capital allocation perspective, parent financial crises reduce external capital available to support investment in domestic operations. As just one example, around half of a sample of approximately 4,000 Asian firms indicated they faced credit constraints in borrowing from domestic banks during the Asian Financial Crisis (Jiangli, Unal, and Yom, 2008). Parent decisions on how to allocate internal capital become increasingly salient as internal funds are critical to support "essential operational and investment activities to counter the adverse effect of credit supply contractions" (Akbar et al., 2017: 567).

The substantial credit constraints associated with a financial crisis in the home country of the parent represent a threat to the heart of the multinational enterprise. We argue that the threat to the organization's core creates a significant incentive to withdraw capital from foreign subsidiaries and re-allocate it to domestic operations to address the threat. In other words, the opportunity cost of using capital in *foreign* subsidiaries increases as the benefit of allocating internal capital to support *domestic* operations becomes more important. Accordingly, parents search across their subsidiaries to evaluate possible opportunities to liquidate foreign subsidiaries to raise capital for the core, home-country business. This perspective is consistent with prior research providing clear indications that multinational companies exhibit a preference for their home country operations, so called "home country bias," relative to foreign subsidiaries. For example, Belderbos, Leten and Suzukie (2013) found that firms allocated a higher share of their global R&D activities to their home countries, relative to what would be expected based on the general attractiveness of various countries for multinational firms' R&D activities.

We anticipate that the survival point of a focal foreign subsidiary is defined at least in part by the opportunity cost of using capital to support the operation of the subsidiary. When the costs to support the subsidiary's operations are higher (e.g., when it becomes more important to use capital to protect home country operations), the parent will demand a higher level of minimum performance in order to continue its support. Accordingly, we expect that subsidiary survival points increase when a crisis occurs in the parent home country. The performance of some subsidiaries will not meet these increased survival points leading to exit, and a clear benefit of such an exit is that it generates capital to help support domestic operations. In sum, if financial crises in the home country increase foreign subsidiaries' survival points because they spur the need to reallocate capital to the threatened home country operations, then such crisis events should enhance the probability of foreign subsidiary exit, beyond any potential effects on exit due to changes in parent or subsidiary performance.

> *Hypothesis 1: Parent financial crisis is positively related to the probability of foreign subsidiary exit.*

Moderating Effects

As briefly mentioned above, we anticipate that the effect of PFC on probability of subsidiary exit depends on the increase in survival points of foreign subsidiaries. We next highlight two important resource-related explanations associated with variance in the extent to which survival points might increase in response to PFC.

Parent-specific resources. We predict that a substantial contributor to differing effects of crisis on subsidiary exit across an MNE's various foreign subsidiaries is the presence of parent-specific resources in subsidiaries. Resource specificity refers to the degree to which a resource's value is contingent upon its particular use within a given context, as opposed to generally

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valuable across multiple contexts. Resources with high specificity are tailored to the unique needs or processes of a particular use case. For example, an MNE parent may have developed a set of firm-specific organizational practices, routines, and procedures that it shares with a subsidiary as part of its development. Similarly, unique brands and marketing strategies may be shared between parents and subsidiaries.

We argue that the relationship between PFC and subsidiary exit is weaker in subsidiaries with parent-specific resources first because the divestiture of subsidiaries of this type will be more costly. Use of parent-specific resources in subsidiaries suggests the existence of synergies between the parent and the subsidiary. Indeed, a foundational justification for the existence of multinational enterprises argues that they exist because of their superior skills in transferring and exploiting resources within the firm compared to transfers through external markets (Buckley and Casson, 1976; Morck and Yeung, 1991). Prior work has considered a wide variety of resources and capabilities that might be shared by parents across the firm's subsidiaries. As just one example, Fang, Wade, Delios, and Beamish (2007) discussed how the success of international diversification depends on how effectively subsidiaries use knowledge developed by the parent. Consistent with this view, much of the prior literature has homed in on the synergies realized at the subsidiary level; however, other literature reflects the fact that synergies may also be realized within the home operations of the parent. For example, Frost, Birkinshaw, and Ensign (2002) argued that subsidiaries may become centers of excellence with superior capabilities that may be leveraged in other parts of the firm. To the extent that operating a subsidiary creates economic benefits realized in other parts of the organization, such as the parent's home operations, divesting that subsidiary results in greater cost (i.e., the loss of the value of synergies at the parent level) relative to divesting a subsidiary without these synergies

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(de Figueiredo, Feldman, and Rawley, 2019). This issue should be even more salient to a parent during a crisis as the loss of synergies could further destabilize operations at a time when the parent is least able to deal with such destabilization. Accordingly, we predict the effect of PFC on foreign subsidiary exit will be weakened in subsidiaries with parent-specific resources.

A second reason that resource specificity attenuates the main effect of crisis on subsidiary exit is associated with the lower benefits associated with sale of parent-specific subsidiary resources. Resource specificity lowers the value of resources to an outside purchaser (i.e., the salvage value of the resources). Imagine, for example, machinery that is highly customized to the particular work routines and complementary technology of a specific parent. This machinery would be substantially less valuable to an outside purchaser without access to the complementary assets of the parent. In contrast, general machinery would be similarly valuable whether used by the focal subsidiary or an outside purchaser. Parents experiencing crisis should be less likely to prioritize sale of a foreign subsidiary with low salvage values relative to one where salvage values are higher. This prioritization allows parents to reallocate more financial capital to home country operations, increasing their ability to buffer negative effects (e.g., credit constraints) of a financial crisis in the home country.

We focus here on brand as a quintessential parent-specific resource. First, sharing a brand can provide a number of synergistic benefits to parents. It allows parents to benefit from marketing-related economies of scale. Subsidiaries with the same brand can serve as experimental settings where parents can test new approaches related to the brand and transfer knowledge back to parent operations. Some of these brand-related complementarities may be particularly important during a crisis. To the extent that managers of same-brand subsidiaries have more relevant knowledge or feel closer connections to the parent, their support may be

especially valuable in helping parents react effectively to the threat from a crisis. Second, the specificity of a brand reduces its salvage value. Brands are deeply woven into the fabric of an organization's culture, processes, and values. A wide variety of firm operations, from product development to customer service, align with and reinforce brand identity. A brand's value is partly derived from custom-built assets and practices, such as tailored marketing strategies, unique customer service protocols, and proprietary technologies. An outside purchaser would lack this deep-rooted understanding and alignment, making it challenging to maintain the same level of brand value. A valuable brand may also be supported by strong relationships with customers based on trust, consistent quality, and emotional connection. These relationships are built over time through repeated positive interactions and experiences that are unique to the holder's specific practices. Even if a parent firm would be willing to sell businesses with parent-specific resources, an outside firm, unfamiliar with the nuances of these established relationships, would face significant challenges in replicating the same level of loyalty and trust, thereby reducing the willingness to pay of a potential resource purchaser.

In sum, subsidiaries possess a bundle of resources made up of both general and specific resources, and we predict this mix moderates the exit-related effect of parent financial crisis. We anticipate that the effect of PFC on subsidiary survival points is attenuated in subsidiaries with parent-specific resources because exit-related costs from loss of synergies will be higher and benefits from resource value recoverability lower in subsidiaries with greater levels of parent-specific resources, such as a parent brand, meaning that a PFC is less likely to trigger subsidiary exit.

Hypothesis 2: The positive relationship between parent financial crisis and probability of foreign subsidiary exit is weaker in subsidiaries with parent-specific resources (e.g., the parent brand)

Local market efficiency. An important contributor to our arguments about the effect of PFC on survival points is the role of a possible sale of subsidiary resources; however, it is important to acknowledge that local markets for the sale of subsidiary assets vary in how efficiently they function. Some local markets are quite robust with many potential purchasers who might compete to acquire location-bound subsidiary resources. Other local resale markets are of much lower quality, meaning that asset salvage values are substantially less. The role of asset resale markets in exit decisions was first highlighted at the firm level via the concept of exit barriers (e.g., Caves and Porter, 1977; Harrigan, 1980). As Harrigan (1980: 166) noted "a thin resale market for such assets exacerbates the firm's immobility by offering few outlets for their disposal when the firm wishes to exit." In essence, the firm is willing to continue operations at a lower level of performance due to the lower salvage value. We extend this logic to a foreign subsidiary and argue that variance in the efficiency of resale markets in the subsidiary's host country affects the benefits of selling subsidiary assets in response to a parent financial crisis. When resale markets are less efficient, resource salvage values are lower; parents are therefore less likely to prioritize these subsidiaries for exit.

We focus here on the number of potential purchasers as a key determinant of how well the local asset market functions when a parent elects to sell subsidiary assets. As there are fewer potential purchasers, the focal firm has less ability to realize the full value of its assets. This view is consistent with evidence from merger and acquisition transactions showing that target firm shareholders realize larger gains when there are more bidding firms (Bradley, Desai, and Kim,

1988). Similarly, competition among private equity firms can drive up the prices of leveraged buyouts, benefiting the selling parties (Kaplan and Stromberg, 2009). Firms also appear to negotiate greater rights to the value created in alliances in situations where they have larger numbers of potential partners (Ozmel, Yavuz, Reuer, and Zenger, 2017). In sum, we predict that as there are fewer competing organizations operating in the local market, which represent the most likely purchasers of subsidiary assets, asset value recoverability decreases, resulting in an attenuation of the effect of PFC on exit.

> *Hypothesis 3: The positive relationship between parent financial crisis and probability of foreign subsidiary exit is weaker in subsidiaries located in less efficient (e.g., more concentrated) markets.*

Three-way moderation. Finally, we argue that a multiplicative effect exists between the two above moderators. An important mechanism in our Hypothesis 2 arguments was the difference in salvage value (SV) depending on resource specificity. We argued that $SV_{Non\text{-}specific} > SV_{Specific}$, resulting in survival points being set lower in subsidiaries with parent specific resources. More specifically, the key driver in the Hypothesis 2 argument is the salvage value difference (SVD) of assets across the two types of subsidiaries, depending on the parent specificity of their resources: $SVD = (SV_{Non\text{-}Specific} - SV_{Specific})$. In Hypothesis 3, we argued that local market efficiency also affected salvage value. Here, we combine those explanations to argue that the *difference* in salvage values (SVD) arising from parent resource specificity also depends on how well the local asset market functions.

At the limit, imagine a totally non-functional market, e.g., one with no buyers willing to purchase subsidiary assets. In this market, parents can realize zero salvage value, and there is no difference in the recoverability of general and specific assets because nothing can be sold.

Recoverability differences emerge as markets become at least partially functional; this increase in functionality increases the salvage value of all resources, but the benefit is less for specific resources because a portion of the value of specific resources remains non-recoverable. Recoverability differences are greatest in fully functioning markets; these markets foster recovery of 100 percent of salvage value of non-specific resources while a portion of the value of firm-specific resources remains non-recoverable. This indicates SVD is a function of local market quality (LMQ): $SVD = LMQ \times (SV_{Non-specific} - SV_{Specific})$. In other words, the salvage value difference highlighted in Hypothesis 2 grows as the local market increases in efficiency. The difference is small in less efficient markets and large in more efficient ones. Accordingly, we expect that the moderating influence of parent-specific assets on the effect of PFC will be negligible in poorly functioning markets, while in well-functioning markets, the moderating influence will be particularly strong. Figure 1 depicts this argument.

> *Hypothesis 4: The negative moderating effect of parent-specific resources on the positive relationship between parent financial crisis and probability of subsidiary exit is attenuated when markets are less efficient (e.g., more concentrated) in the subsidiary's location.*

METHODS

Sample and Data

The empirical setting of this study is the global retail industry. We focus on retail chains in host countries (i.e., foreign subsidiaries) that are part of the worldwide largest retail multinationals (i.e., parent firms). This context is attractive for testing the theory for several reasons. First, because retailers focus on operating fixed assets (stores) that require continuous investment (e.g., lease payments), the context is well-suited for examining how temporary

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shocks in the home market might raise the opportunity costs of investing financial capital in foreign subsidiaries. Second, the context is appropriate for examining whether a foreign subsidiary uses the parent firm's brand name, as an important indicator of parent resource specificity. Although each retail chain consists of stores with the same brand name, there is substantial heterogeneity among retail chains in whether they operate under the parent firm's brand name. For example, Sweden-based clothing retailer 'H&M Group' operates in many international markets its core chain 'H&M' alongside its clothing chain 'COS'. Third, because a chain's assets are largely location bound, the context allows us to focus on potential buyers of a foreign subsidiary's assets in the local market.

The data were obtained from the Edge Retail Insight database (formerly Planet Retail), which covers both publicly- and privately-held retail firms. This includes data on three levels: the corporate (firm), country, and chain-country level. Based on Edge Retail Insight's ranking lists of the worldwide largest retail firms in 1997 and 2010, we obtained annual panel data on all retail chains in foreign countries (i.e., outside of the parent firm's domestic country) for the period between 1997 and 2010. The risk set in our survival analysis includes all retail chains that began operations in a host country after 1997. Once a retail chain entered a host country, it remains in the risk set until its year of exit or 2010, the last year in our panel data.[3] This resulted in a starting sample of 25,286 chain-host country-year observations from 3,979 retail chains in 164 host countries operated by the leading 198 multinational retailers between 1998 and 2010. The inclusion of explanatory variables (described below) resulted in a final sample of 19,203 chain-host country-year observations from 3,378 retail chains in 157 host countries. These retail

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[3] Edge Retail Insight provides comprehensive coverage of chain-country data from 1997 onwards. Including chains only if they entered a host country after 1997 eliminates left censoring. All chain-countries that survived until 2010 are right censored.

chains (foreign subsidiaries) were part of the worldwide largest 188 multinational retailers (parent firms) between 1998 and 2010. In the following, the variables use the abbreviated term 'subsidiary' to refer to a 'foreign subsidiary'.

Dependent Variable

Subsidiary exit is an indicator variable equal to "1" if a parent firm completely discontinues operations of a retail chain within a host country between 1999 and 2009, and "0" otherwise. Once a chain exited from a host country, it was removed from further consideration.

Independent Variable

Exogenous shocks to a parent's domestic operations are measured by using information from the systemic banking crises database that lists the start and end years of banking crises at the country level between 1970 and 2011 (Laeven and Valencia, 2013).[4] *Parent financial crisis (PFC)* is an indicator variable equal to "1" for the years in which the home country of a parent firm was exposed to a systemic banking crisis between 1998 and 2010, and "0" otherwise. Retail firms strongly rely on both credit supply and consumer demand—two factors that are usually adversely affected by systemic banking crises (e.g., Giroud and Mueller, 2019). Because retail multinationals typically generate a high sales percentage in the home country (e.g., Oh, Sohl, and Rugman, 2015), domestic banking crises should provide an appropriate measure to capture meaningful financial shocks to parent retailers that might spur action by forward-looking managers to reduce potential negative outcomes for the domestic operations.

Moderating Variables

Parent-subsidiary same brand. The variable *Parent-subsidiary same brand* is an indicator equal to "1" if a parent retailer shares its brand name with a retail chain, and "0"

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[4] A link to the systemic banking crises database can be found at:
https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Systemic-Banking-Crises-Database-An-Update-26015.

otherwise. This includes name additions if the parent brand is still included in the chain's brand name. For example, France-based 'Carrefour Group' operates a portfolio of retail chains including the chains 'Atacadao', 'Carrefour Contact', 'Carrefour Express', 'Carrefour Market', and 'Proxy'. In this example, *Parent-subsidiary same brand* is coded "1" for 'Carrefour Contact', 'Carrefour Express', and 'Carrefour Market', whereas it is coded "0" for 'Atacadao' and 'Proxy'. Information on the brand names of parent retailers and those of their retail chains is provided by Edge Retail Insight. The *Parent-subsidiary same brand* variable is time invariant, allowing us to empirically identify how preexisting resource specificity (i.e., prior to the PFC) moderates the effect of PFC on subsidiary exit.[5]

 Local submarket concentration. As a measure of how efficient the host country market is for selling subsidiary assets, we calculated its concentration ratio. The bargaining power of potential acquirers of subsidiary assets should be greater if the local resale market is more concentrated, decreasing the potential for resource value recoverability. *Local submarket concentration* is the Herfindahl-Hirschman index (HHI) of concentration based on sales by all domestic and foreign retail chains in the Edge Retail Insight dataset operating in a given submarket (i.e., store format) in a given country and year.[6] We standardized this variable to facilitate interpretation of the interaction terms.

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[5] Put differently, the *PFC × Parent-subsidiary same brand* interaction effect is identified because it is unlikely that parents anticipate a future parent financial crisis when they choose whether to use their brand name for a new foreign subsidiary. As described below, we use two econometric methods for the estimation (a linear probability model (LPM) and a complementary log-log model). The main effect of the *Parent-subsidiary same brand* variable is estimated in the complementary log-log regressions and absorbed by the inclusion of subsidiary fixed effects in the LPM.

[6] The Edge Retail Insight database reports the store format of a given retail chain (e.g., convenience store, supermarket, hypermarket, department store, or wholesale club). As an example, the chain '7-Eleven' uses the convenience store format and the chain 'Macy's' the department store format. Store formats differ according to physical properties such as store size, location, and function (e.g., Levy and Weitz, 2009) and should largely determine the local target market for a retail chain's assets.

Control Variables

To isolate the theorized mechanisms around changes in subsidiary survival points in explaining subsidiary exit in response to PFC, we control for several other factors at the subsidiary, parent, and host country level that could impact subsidiary exit.

Subsidiary controls. At the subsidiary-host country-year level, we include a control variable for subsidiary performance relative to aspirations. Following prior research (e.g., Chen and Miller, 2007; Sengul and Obloj, 2017), we measured a subsidiary's historical aspiration level by using its past performance. We then computed *Subsidiary performance – historical aspirations* as the difference between a subsidiary's current performance (in year t) and its past performance (in year t -1).[7] We used sales as our performance measure (e.g., Luo and Shinkle, 2024; Kim, Cunningham, and Joseph, 2023), which is a fundamental indicator of performance in the retail industry (e.g., Gielens and Dekimpe, 2001; Levy and Weitz, 2009).[8] We also control for a focal subsidiary's size (*Subsidiary size*) with the natural logarithm of the subsidiary's number of outlets, lagged by one year. We include two additional control variables that may affect subsidiary exit: *Subsidiary age* is the number of years since a focal subsidiary entered the host country, starting in 1998 (we also include the squared term *Subsidiary age²* to account for potential nonlinear effects of age on exit) and *Subsidiary sales/ total parent sales* is the ratio of subsidiary sales to the parent firm's total sales (to capture the relative importance of the subsidiary in parent sales performance), lagged by one year (Gaba and Joseph, 2013).

Parent controls. At the parent-year level, *Parent performance – historical aspirations* is as defined above but measured at the level of the parent retailer, *Parent public firm* is an

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[7] In robustness checks, we (i) spline the variable at zero to allow for separate slopes for performance above and below aspirations, (ii) use the exponentially weighted moving average to compute historical aspiration levels, and (iii) include another control variable for *Subsidiary performance – social aspirations*.

[8] We used the natural logarithm of current and past sales to reduce skewness.

indicator equal to "1" for the years in which the parent retailer is reported in the Compustat North America or Global database, and *Parent product (international) diversification* is the sales-based entropy index of diversification across four-digit standard industrial classification (SIC) codes (countries), lagged by one year (Palepu, 1985).

      Host country controls. At the host country-year level, *Local GDP per capita* is the natural logarithm of gross domestic product (GDP), *Local GDP per capita growth* is the percentage change of GDP per capita from the prior to the current year, and *Local financial crisis* is an indicator equal to "1" for the years in which the host country was hit by a systemic banking crisis during our sample period. We obtained information on local GDP per capita and GDP per capita growth from the World Bank and on local financial crises from the systemic banking crisis database (Laeven and Valencia, 2013).

Estimation Methodology

      Our objective is to estimate the effect of parent firm exposure to a financial crisis in the home country on the probability of foreign subsidiary exit, and how this effect may vary with (precrisis) resource specificity and foreign market efficiency. In discrete time (one year in our dataset), the hazard is the probability of subsidiary exit in a given year, given that the subsidiary did not already exit. Two different discrete-time hazard models are used to estimate how the hazard for a given subsidiary over discrete time intervals depends on explanatory variables: a linear probability model (LPM) and a complementary log-log model. Because our specifications include two-way and three-way interactions, we use the LPM in the main analysis to facilitate interpretation of the estimated effects. The LPM also allows us to include subsidiary fixed effects to account for time-invariant differences across foreign subsidiaries (and their parent firms). Our specifications also include year fixed effects to account for global macroeconomic conditions

and trends. To assess the robustness of our findings, we then estimate a discrete-time proportional hazard model with complementary log-log structure, as described in the robustness checks section.[9] To correct for potential dependence among the observations from the same subsidiary, all regressions are estimated with robust standard errors clustered at the subsidiary level.

RESULTS

Table 1 reports the summary statistics and correlation matrix. As indicated in Table 1, 2.47% of the observations are subsidiary exits (i.e., 474 exit events) and 37.7% are parent financial crises.[10] Table 2 presents multivariate regression results from the LPM for the probability of subsidiary exit. Results of control variables are largely consistent with prior divestment research (see, e.g., Brauer, 2006; Lee and Madhaven, 2010; Feldman and McGrath, 2016 for reviews). For example, we find that larger and better performing subsidiaries are less likely to exit, and that the probability of country exit tends to decrease with subsidiary age (e.g., Berry, 2013). We also find that higher parent performance relative to aspirations decreases the probability of subsidiary exit, which is consistent with prior performance feedback research showing that greater performance shortfalls relative to aspirations increase the frequency of divestitures (Kuusela et al., 2017).

Insert Tables 1 and 2 about here

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[9] The discrete-time proportional hazard model is used because the year of country exit is observed but not the exact month or day (Allison, 1982). In unreported analysis, we also estimated a Cox continuous time proportional hazard model and found substantially similar results.

[10] Table 1 also shows that 14.3% are local financial crises. Systemic banking crises occur relatively more frequently in developed countries than in developing countries (Laeven and Valencia, 2013). Because most parent firms are located in developed countries, while many of their foreign subsidiaries operate in developing countries, observations are significantly more affected by home country crises than by host country crises.

Column (1) tests the main effect of PFC discussed in Hypothesis 1. It shows that a PFC enhances the probability of country exit by a foreign subsidiary ($\beta = 0.024$, $p < 0.001$), providing support for Hypothesis 1. Other things equal, a PFC enhances the probability of subsidiary exit by 2.4 percentage points. This corresponds to an increase of 97.2% in the probability of country exit, relative to the sample mean of the probability of country exit. Column (2) estimates the moderating effect of parent resource specificity, as elaborated in Hypothesis 2. The coefficient of the PFC variable is positive and significant ($\beta = 0.043$, $p < 0.001$) and the coefficient of the PFC variable interacted with the parent-subsidiary same brand variable is negative and significant ($\beta = -0.036$, $p < 0.001$), indicating that the positive effect of PFC on the probability of country exit by a foreign subsidiary is attenuated if the parent shares its brand with the subsidiary. Thus, the evidence is consistent with Hypothesis 2. In terms of effect sizes, when a parent does not share its brand with a foreign subsidiary, a PFC enhances the probability of subsidiary exit by 4.3 percentage points. In contrast, a PFC enhances exit probability by only 0.7 percentage points when a parent shares its brand with a subsidiary. Column (3) tests Hypothesis 3. The coefficient of the PFC variable is positive and significant ($\beta = 0.024$, $p < 0.001$) and the coefficient of the PFC variable interacted with the local submarket concentration variable is negative and significant ($\beta = -0.010$, $p < 0.001$). This indicates that the positive effect of PFC on the probability of subsidiary exit is attenuated if a focal subsidiary's local submarket is more concentrated, providing support for Hypothesis 3. To elaborate, when local submarket concentration is at the mean, a PFC enhances the probability of subsidiary exit by 2.4 percentage points. When local submarket concentration is low (mean – 1 standard deviation (SD)), a PFC enhances the probability of exit by 3.4 percentage points. In contrast, when concentration is high (mean + 1 SD), a PFC enhances the probability of exit by only 1.4 percentage points.

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Finally, the three-way interaction effect predicted in Hypothesis 4 is tested in Column (4).

Results show that when local submarket concentration is low (mean – 1 SD), the difference in

exit probability between a different brand and a same brand subsidiary in response to a PFC is

5.0 percentage points (i.e., 5.6 for a different-brand vs. 0.6 for a same-brand subsidiary); when

concentration is at the mean, this difference decreases to 3.1 percentage points (i.e., 4.0 vs. 0.9);

and when concentration is high (mean + 1 SD), the difference in exit probability further

decreases to 1.2 percentage points (i.e., 2.4 vs. 1.2). This suggests that, in response to a PFC, the

difference in survival point increases between same-brand and different-brand subsidiaries

diminishes with the degree of local submarket concentration, arguably because the difference in

resource value recoverability between these types of subsidiaries diminishes with market

inefficiency. Put differently, the negative moderating effect of parent-subsidiary same brand on

the PFC-exit relationship is attenuated by the degree of local submarket concentration, as

indicated by the positive and significant coefficient of the *PFC* variable interacted with both the

Parent-subsidiary same brand and *Local submarket concentration* variables ($\beta = 0.019$, $p <$

0.001). Thus, our results support Hypothesis 4. To elaborate, the negative moderation effect of

parent-subsidiary brand sharing is attenuated by 1.9 percentage points with each increase in local

market concentration by 1 SD.

Robustness Checks

A series of robustness checks (to be added) provide further support for our interpretation

of the results. For example, Table A1 in the Appendix reports results from the complementary

log-log model (using the cloglog command in Stata 18), providing additional support for

Hypotheses 1 to 4.

DISCUSSION

The literature on performance feedback has advanced knowledge of a wide range of firm actions. A wealth of research supports the view that firms interpret their performance relative to reference points; the deepest part of this literature demonstrates that performance below aspiration is seen as a problem spurring firm decision makers to engage in problemistic search and adopt actions designed to close the performance gap. Our study complements this prior literature by shifting the focus to the role of subsidiary survival points in multiunit organizations. We argue that parents will make different divestiture decisions about subsidiaries even if those subsidiaries have similar performance levels. This is because parents might change levels of minimum acceptable performance, i.e., survival points, differently across their subsidiaries over time. To illuminate this effect, our empirical analyses demonstrate an association between parent financial crisis and subsidiary exit, after controlling for parent and subsidiary performance relative to aspirations. Further, our analyses indicate that the relationship between PFC and subsidiary exit is weakened in subsidiaries with parent-specific resources and for subsidiaries located in countries with less efficient local resale markets. Finally, we demonstrate that the moderating effect of resource specificity is further influenced by local market efficiency.

Theoretical Implications

Our work has clear implications for performance feedback theory. Focusing on survival points and highlighting the multiunit setting suggests some important ways of extending PFT. Our theory highlights the varying nature of survival points, which may change as firms experience changes in their external environments. Relatedly, we emphasize that the level of minimum acceptable performance that defines the survival point is something that is not exogenously given but may be chosen by firm decision makers. We argue and demonstrate that

the survival point for a focal subsidiary may be influenced by events that occur in other parts of the organization. More specifically, we contend that a key determinant of this critical reference point is parent-level crisis. These efforts provide additional evidence about the importance of investigating performance feedback in multiunit organizations (e.g., Arrfelt, Wiseman, and Hult, 2013; Gaba and Joseph, 2013; Sengul and Obloj, 2017).

Our arguments also illuminate an interesting insight about the effect of crises in multinational enterprises. One might initially expect that a negative event in one part of the organization, such as a financial crisis, would cause a parent to withdraw capital from that area and re-allocate it to another area of the organization where the threat is unlikely to have negative effects. We argue and demonstrate that this initial intuition is not accurate when a crisis threatens the home country operations of the parent. Consistent with prior work showing that parents preference home country operations (e.g., Belderbos et al., 2013), our work suggests that parents view a home crisis as a threat to the core of the organization raising the opportunity costs of allocating capital to foreign subsidiaries. Accordingly, the likelihood of subsidiary exit increases when a parent faces a crisis in its home country.

Our study also provides significant contributions to the literature on corporate divestitures. By integrating the performance feedback and divestiture literatures, we offer a more nuanced understanding of the factors that influence exit decisions within multiunit firms. More complete understanding of divestiture decisions requires that researchers take into account survival point-related effects alongside performance-related determinants of divestiture, which has been the focus of prior research in this area (e.g., Kuusela et al., 2017; Vidal and Mitchell, 2015). Our work further highlights the dynamic nature of survival points, which we argue are not fixed but can change in response to external shocks outside of the control of the firm.

Our emphasis on subsidiary survival points is also important because it suggests consideration of a different set of contextual factors that affect how strongly divestiture determinants might operate. Arguing that PFC affects divestiture likelihood because of subsidiary survival points leads to a different set of moderating mechanisms than if one were arguing PFC affect divestiture likelihood because of effects on subsidiary performance. We demonstrate this with our integration of both resource specificity and local market efficiency into our theoretical model; this effort adds richness and depth to the understanding of survival point-related determinants of subsidiary exit. Our insights here are related to the work of Lieberman, Lee, and Folta (2017). Both our work and theirs are interested in how recoverability of resource value affects firm scope decisions. Their work, however, focuses on the potential for internal redeployment of non-financial resources, while our work addresses situations in which such redeployment is not a viable option. When a parent needs financial capital to deal with a shock in the home market, resource value recoverability requires transacting in the external market, and we explain the role of parent specificity of resources and local market efficiency under these conditions. Taken together, our work and theirs complements and extends prior work that has focused more on the synergy-related effects of resource specificity. By considering both synergies and resource value recoverability mechanisms, our theorizing provides a more nuanced and complete picture of why specificity of resources moderates the relationship between parent stress and subsidiary exit.

Our arguments and findings related to the presence of parent-specific resources in subsidiaries implies that relatedness, often viewed as beneficial due to synergy creation, also plays a crucial role in reducing the likelihood of divestiture in times of financial distress. This dual role of relatedness highlights the complexity of resource allocation decisions and

underscores the importance of considering both performance and survival point dynamics in strategic decision-making. Our research also extends the current understanding of the role of host country market efficiency in divestiture decisions. Greater local market concentration reduces the likelihood of exit associated with parent financial crisis. This suggests that the local market context is crucial in determining the impact of external shocks on divestiture decisions, providing a new lens through which to view the strategic management of multinational firms. This insight is further supported by our arguments and findings that local market concentration mitigates the moderating effect of parent-specific resources.

Managerial Implications

For managers, our research suggests the importance of realizing that survival points vary across subsidiaries or divisions of multiunit firms, and this variance impacts divestitures, even if subsidiaries are not performing poorly. Subsidiary managers interested in decreasing the likelihood of divestiture should consider factors that cause parent managers to assign lower survival points to divisions. To the extent that they can effectively influence the level at which their survival point is set, this creates a larger survival buffer.

Our work illuminates some interesting perspectives on the value of specific resources from the perspective of managers. At the subsidiary level, developing increasing levels of parent-specific resources has dual positive aspects: they increase the potential for benefits from synergies while also mitigating the likelihood that parent crisis may lead to subsidiary shutdown. At the parent level, however, there is a notable tension. While specific resources are positive in helping improve performance via mechanisms such as parent-subsidiary synergies, higher relatedness also has negative aspects as it reduces the salvage value of resources should an exit become necessary. Whether to locate subsidiaries in markets with more competition has a similar

tension. On the one hand, competition likely degrades performance for the focal subsidiary; on the other, more competitors increase asset salvage value—a benefit that should accrue most robustly when resources are less specific.

Limitations and Future Research

Our work is not without limitations, but in several cases these limitations provide avenues for future research. First, our findings are associated with the specific empirical context of large multinational retailers. Although this setting has a number of attractive characteristics that make it particularly suitable for our study, it would be worthwhile to examine whether our findings generalize to other industries and smaller firms. We anticipate that our theoretical framework would generalize to these other contexts, but it is possible that firms of different size and industries might have different capital allocation dynamics and survival point sensitivities. Second, our performance-related controls in our empirical analyses are revenue-based measures. Although this is consistent with prior performance feedback research (e.g., Luo and Shinkle, 2024; Kim, Cunningham, and Joseph, 2023), it may be that some of the effects that we ascribe to survival points are partially performance related if they affect costs. Although we cannot rule this possibility out, we believe there are several reasons that the possibility is not a substantial concern. We anticipate that effects of a home country crisis are unlikely to have significant effects on a foreign subsidiary's operating costs, making a focus on revenue-based performance metrics particularly appropriate in the retailing industry. Moreover, our moderating arguments, which are related to survival points, should have been unsupported were the main effects capturing performance-related increases in cost. All that said, we see potential to replicate our work in settings where cost-based measures are also readily available.

Perhaps most clearly, we see much potential for future research that broadens understanding of the determinants of subsidiary survival points. Future research could explore how other types of shocks, such as technological disruptions, regulatory changes, or competitive shocks, impact survival points and divestiture decisions. Scholars might also investigate the role of positive shocks. Do positive shocks decrease survival points similarly to how they increase in response to negative shocks? Another potential fruitful avenue is to investigate additional subsidiary-level characteristics associated with differing survival points. For example, might one of the benefits of greater voice (Bouquet and Birkinshaw, 2008) be the ability to demand more favorable survival points from parents? Distance is a concept that has featured in the international business literature, but this research has largely focused on the performance-related effects of distance (e.g., Hutzschenreuter, Kleindienst, and Lange, 2016). Might subsidiary survival points also vary based on distance? Finally, our study highlights the role of market efficiency in moderating the effects of resource specificity. Future research could investigate other contextual factors that might influence this relationship, such as regulatory environments, cultural differences, or the presence of strategic alliances. Understanding these additional contingencies could provide a more comprehensive view of the factors that shape divestiture decisions in multiunit firms through their effects on survival points.

In conclusion, our study sheds light on the dynamic nature of survival points in divestiture decisions, emphasizing the impact of parent-level financial crises and the role of parent-specific resources and local market efficiency. By integrating these factors into our theoretical model, we provide new insights into the strategic management of multiunit firms, a critical issue in both the corporate strategy and international business literatures. These findings

contribute to a deeper understanding of the complex factors that drive strategic exit decisions and

provide valuable implications for both theory and practice.

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TABLE 1
Summary Statistics and Correlations

	Variables	*M*	*SD*	1	2	3	4	5	6	7	8
1.	Subsidiary exit	0.02	0.16	1.00							
2.	Parent financial crisis	0.38	0.49	0.00	1.00						
3.	Parent-subsidiary same brand	0.47	0.50	-0.08	-0.03	1.00					
4.	Local submarket concentration (*z*-score)	0.00	1.00	-0.01	-0.10	0.17	1.00				
5.	Subsidiary performance – historical aspirations	0.18	0.49	-0.14	0.00	-0.03	-0.03	1.00			
6.	Subsidiary size (ln)	2.45	1.79	-0.03	0.03	0.08	-0.14	-0.17	1.00		
7.	Subsidiary age	5.19	2.66	-0.02	0.35	0.14	-0.01	-0.23	0.24	1.00	
8.	Subsidiary age^2	34.01	33.31	-0.02	0.35	0.14	-0.01	-0.18	0.22	0.97	1.00
9.	Subsidiary sales/ total parent sales	0.02	0.05	-0.01	-0.03	-0.01	-0.10	-0.06	0.34	0.04	0.04
10.	Parent performance – historical aspirations	0.06	0.18	-0.05	-0.05	-0.06	-0.02	0.11	-0.04	-0.04	-0.02
11.	Parent public firm	0.58	0.49	-0.01	-0.03	0.15	0.12	-0.05	-0.01	0.06	0.06
12.	Parent product diversification	0.32	0.43	0.11	-0.07	-0.31	-0.05	0.03	-0.14	-0.06	-0.06
13.	Parent international diversification	1.44	0.80	-0.08	0.24	-0.04	-0.07	0.00	0.14	0.03	0.01
14.	Local GDP per capita (ln)	9.62	1.15	0.01	0.07	-0.02	-0.21	-0.05	0.21	0.03	0.02
15.	Local GDP per capita growth	0.02	0.05	-0.01	-0.32	0.00	0.08	0.09	-0.05	-0.10	-0.10
16.	Local financial crisis	0.14	0.35	0.03	0.40	-0.04	-0.11	-0.03	0.12	0.18	0.18

TABLE 1 (Continued)

Variables	9	10	11	12	13	14	15
9. Subsidiary sales/ total parent sales	1.00						
10. Parent performance – historical aspirations	0.11	1.00					
11. Parent public firm	-0.08	-0.10	1.00				
12. Parent product diversification	-0.04	-0.01	-0.07	1.00			
13. Parent international diversification	-0.05	0.02	-0.15	-0.19	1.00		
14. Local GDP per capita (ln)	0.13	0.01	-0.15	0.02	0.08	1.00	
15. Local GDP per capita growth	-0.03	0.05	0.03	0.02	-0.06	-0.28	1.00
16. Local financial crisis	0.08	-0.02	-0.11	0.05	0.10	0.23	-0.29

Note. $N = 19{,}203$ observations. Correlations above $|\,0.02\,|$ are significant at $p < .05$.

TABLE 2
Linear Probability Model Regression Results

Dependent variable: Subsidiary exit	(1): H1	(2): H2	(3): H3	(4): H4
Parent financial crisis (PFC)	0.024***	0.043***	0.024***	0.040***
	(0.006)	(0.007)	(0.006)	(0.007)
PFC × parent-subsidiary same brand		-0.036***		-0.031***
		(0.005)		(0.005)
PFC × local submarket concentration			-0.010***	-0.016***
			(0.003)	(0.005)
Parent-subsidiary same brand × Local submarket concentration				0.004
				(0.010)
PFC × parent-subsidiary same brand × Local submarket concentration				0.019***
				(0.005)
Local submarket concentration	-0.005	-0.005	-0.001	-0.005
	(0.005)	(0.005)	(0.005)	(0.009)
Subsidiary performance – historical aspirations	-0.049***	-0.049***	-0.049***	-0.049***
	(0.007)	(0.007)	(0.007)	(0.007)
Subsidiary size (ln)	-0.021***	-0.020***	-0.021***	-0.021***
	(0.004)	(0.004)	(0.004)	(0.004)
Subsidiary age	0.021†	0.017	0.020†	0.017
	(0.011)	(0.012)	(0.011)	(0.012)
Subsidiary age^2	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Subsidiary sales/ total parent sales	0.068	0.063	0.065	0.062
	(0.054)	(0.054)	(0.054)	(0.054)
Parent performance – historical aspirations	-0.056***	-0.055***	-0.055***	-0.054***
	(0.014)	(0.014)	(0.014)	(0.014)
Parent public firm	0.008	0.012†	0.009	0.011
	(0.007)	(0.007)	(0.007)	(0.007)
Parent product diversification	0.137***	0.140***	0.136***	0.140***
	(0.024)	(0.024)	(0.024)	(0.024)
Parent international diversification	-0.140***	-0.138***	-0.142***	-0.139***
	(0.014)	(0.014)	(0.014)	(0.014)
Local GDP per capita (ln)	0.023†	0.023†	0.027†	0.025†
	(0.014)	(0.014)	(0.014)	(0.014)
Local GDP per capita growth	0.044	0.041	0.039	0.038
	(0.031)	(0.031)	(0.031)	(0.031)
Local financial crisis	0.009†	0.007	0.006	0.005
	(0.005)	(0.005)	(0.005)	(0.005)
Number of subsidiaries	3,378	3,378	3,378	3,378
Number of observations	19,203	19,203	19,203	19,203

Note. Analysis is at the subsidiary-host country-year level. Robust standard errors clustered at the subsidiary level are in parentheses. *Local submarket concentration* is standardized. Subsidiary and year dummies and constant are included in all regressions but not reported to save space.
*** $p < 0.001$
** $p < 0.01$
* $p < 0.05$
$\dagger$ $p < 0.10$

FIGURE 1
Three-Way Interaction Effect (Hypothesis 4)

Low market concentration (in host country)

Exit probability
(by foreign subsidiary)

Parent-subs. different brand

Parent-subs. same brand

PFC

0   1

High market concentration (in host country)

Exit probability
(by foreign subsidiary)

Parent-subs. different brand

Parent-subs. same brand

PFC

0   1
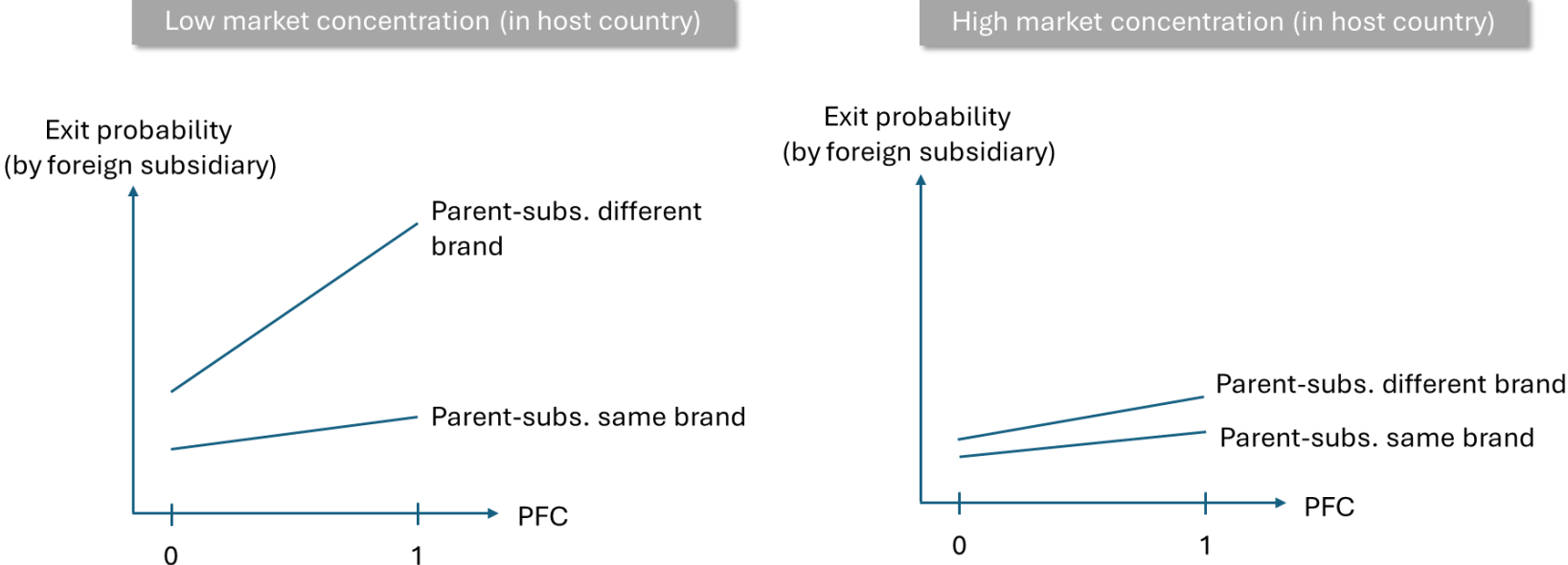
TABLE A1
Complementary Log-Log Model Regression Results

Dependent variable: Subsidiary exit	(1): H1	(2): H2	(3): H3	(4): H4
Parent financial crisis (PFC)	0.569***	0.734***	0.508***	0.620***
	(0.130)	(0.144)	(0.134)	(0.154)
PFC × parent-subsidiary same brand		-0.663**		-0.547*
		(0.242)		(0.252)
PFC × local submarket concentration			-0.252**	-0.299**
			(0.087)	(0.099)
Parent-subsidiary same brand × Local submarket concentration				-0.034
				(0.135)
PFC × parent-subsidiary same brand × Local submarket concentration				0.447*
				(0.226)
Parent-subsidiary same brand	-0.550***	-0.322*	-0.574***	-0.373*
	(0.141)	(0.164)	(0.141)	(0.165)
Local submarket concentration	-0.033	-0.035	0.058	0.050
	(0.049)	(0.049)	(0.063)	(0.070)
Subsidiary performance – historical aspirations	-2.693***	-2.696***	-2.697***	-2.705***
	(0.356)	(0.357)	(0.356)	(0.358)
Subsidiary size (ln)	-0.172***	-0.173***	-0.170***	-0.171***
	(0.027)	(0.027)	(0.028)	(0.027)
Subsidiary age	0.069	0.058	0.067	0.048
	(0.087)	(0.086)	(0.086)	(0.086)
Subsidiary age^2	-0.013†	-0.012†	-0.013†	-0.011
	(0.007)	(0.007)	(0.007)	(0.007)
Subsidiary sales/ total parent sales	0.262	0.261	0.265	0.236
	(0.865)	(0.860)	(0.866)	(0.861)
Parent performance – historical aspirations	-0.092***	-0.092***	-0.090***	-0.089***
	(0.015)	(0.015)	(0.015)	(0.015)
Parent public firm	-0.035	-0.011	-0.024	-0.001
	(0.146)	(0.147)	(0.146)	(0.147)
Parent product diversification	0.047	0.035	0.035	0.017
	(0.196)	(0.194)	(0.195)	(0.192)
Parent international diversification	-0.369**	-0.366**	-0.365**	-0.349**
	(0.115)	(0.115)	(0.115)	(0.117)
Local GDP per capita (ln)	-0.009	-0.007	-0.004	-0.004
	(0.051)	(0.051)	(0.051)	(0.051)
Local GDP per capita growth	0.174	0.161	0.156	0.200
	(1.038)	(1.038)	(1.046)	(1.050)
Local financial crisis	0.292*	0.267†	0.244†	0.221
	(0.140)	(0.142)	(0.142)	(0.143)
Log pseudolikelihood	-1795.06	-1790.98	-1790.89	-1785.56
Wald Chi^2	1356.32***	1377.16***	1378.53***	1429.55***
Number of subsidiaries	2,948	2,948	2,948	2,948
Number of observations	17,646	17,646	17,646	17,646

Note. See Table 2. Parent submarket and country dummies and constant are included in all regressions but not reported to save space (parent submarket and country effects are absorbed by the subsidiary effects in Table 2).
*** $p < 0.001$
** $p < 0.01$
* $p < 0.05$
$\dagger$ $p < 0.10$