Disappearing Discounts: Hedge Fund Activism in Conglomerates

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Abstract

Hedge fund activism removes the diversification discount in targeted conglomerate firms. Targeted conglomerates increase investment in segments with better growth opportunities, while reducing each division's over-reliance on their own cash flow relative to their reliance on cash flows from other segments. These improvements are stronger when firms are ex-ante financially constrained, when CEOs are subsequently replaced by outsiders, and when payout is subsequently increased. Refocusing is no more valuable than increasing internal efficiency. The results are not driven by mean reversion. The results are consistent with hedge funds' skill in unlocking the value of internal capital markets in diversified firms.

JEL Classification: G23, G31, G32, G34
Keywords: Conglomerates, corporate governance, diversification, hedge fund activism, internal capital markets, resource allocation

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1 Introduction

Conglomerates are at the center of a long-lived debate in corporate finance, namely whether they are valued less than what their divisions would be worth on a standalone basis, and whether this discount can be attributed to inefficient investment allocations across their divisions (see Lang and Stulz (1994); Berger and Ofek (1995); Shin and Stulz (1998); Rajan, Servaes, and Zingales (2000); Scharfstein and Stein (2000); Lamont and Polk (2002)). Numerous studies dispute whether this observed "diversification discount" may be accounted for by alternative explanations ranging from optimal firm behavior to measurement errors.[1] In this paper, I use hedge fund activism as a unique laboratory to help address this question, by studying *changes* in the diversification discount of conglomerates and their divisional investment allocations in response to activist campaigns.

As external monitors with high-powered incentives, activist hedge funds have been shown to be successful in improving targeted firms along many dimensions, including short-term stock returns, long-term operating performance, productivity, product market outcomes, and innovation (see Brav, Jiang, Partnoy, and Thomas (2008); Boyson and Mooradian (2011); Brav, Jiang, and Kim (2015); Aslan and Kumar (2016); Brav, Jiang, Ma, and Tian (2018)). Based on such findings, I hypothesize that hedge fund activism would have an impact on the diversification discount and internal allocative efficiency of conglomerates if they are ex-ante inefficient as debated in the literature. As sharp external impetus to firms that are unlikely to be correlated with measurement errors in observed metrics of the diversification discount, hedge fund activism is a promising setting to infer the nature of the diversification discount based on changes brought by hedge funds' skill in unlocking the value in conglomerates.

Using schedule 13D filings supplemented with manual Factiva news search to identify hedge fund activism events targeting conglomerate firms, I begin by documenting that ac-

[1] Such explanations include optimal firm behavior (see Matsusaka (2001); Matsusaka and Nanda (2002); Maksimovic and Phillips (2002, 2013); Gomes and Livdan (2004)), reduction in risk and uncertainty (see Mansi and Reeb (2002); Hund, Monk, and Tice (2010)), suboptimal distribution of rents from efficient production outcomes (see Schoar (2002)), or selection and measurement errors (see Whited (2001); Campa and Kedia (2002); Graham, Lemmon, and Wolf (2002); Villalonga (2004a, b); Custódio (2014)).

tivist hedge funds have been increasingly targeting large and diversified conglomerate firms over the past few decades. Next, I employ a difference-in-differences framework to analyze the impact of hedge fund activism on the diversification discount and divisional investment efficiency of conglomerates. I find that the diversification discount disappears after conglomerates are targeted by hedge funds, whereas non-targeted matched conglomerates continue to deteriorate in comparison (see Figure 1). This result is robust to alternative measures of the diversification discount introduced in the literature addressing selection issues and measurement errors (see Custódio (2014); Boguth, Duchin, and Simutin (2018)).

While I document that the diversification discount diminishes with hedge fund activism, a natural question is: What mechanism drives this finding? I show that targeted conglomerates improve the efficiency of their divisional investment allocations. Targeted firms increase investment in divisions with good investment opportunities, and these divisions become less reliant on their own cash flows in funding their investments. As a result, the marginal return on capital becomes more equalized across divisions within targeted firms (see Figure 2). These improvements are stronger for firms that are financially constrained prior to being targeted, and for firms that experience CEO turnovers by outsiders subsequent to being targeted, consistent with ex-ante inefficiencies arising from internal power struggles among divisional managers over limited corporate resources (see Xuan (2009); Ozbas and Scharfstein (2010); Duchin and Sosyura (2013)). Importantly, I find no evidence that these results are driven by corporate refocusing, indicating that the value created by hedge fund activism goes beyond what can be attained by structural reorganization (see Bethel, Liebeskind, and Opler (1998); Dittmar and Shivdasani (2003)). In fact, the effects of hedge fund activism on the diversification discount and internal investment allocation are *at least* equally strong for targeted firms that do not refocus compared to targeted firms that do. The results are robust to a host of alternative specifications of Tobin's q and segment level investment opportunities, mitigating concerns of measurement errors. Overall, the results support the inefficiency-based explanation for the diversification discount, and highlights the positive role of hedge fund activism in improving the internal efficiency of conglomerates.

Although hedge fund activism serves as a shock to targeted firms, they are not exogenous because firms with certain characteristics that are correlated their diversification discounts are likely to be targeted. It is important to note, however, that it is precisely of interest that activist hedge funds should choose targets that have underlying inefficiencies that manifest in a diversification discount, so that their campaigns may add value by resolving such problems. I show that targeted conglomerates have poorer performance (e.g., ROA or sales growth) than their matched counterparts prior to being targeted. Insofar as activist hedge funds do not merely pick such firms that inevitably and automatically revert to their mean without any intervention, such selection is not a confounding factor for this study. Assuring that this is not the case, I find no evidence of mean reversion in the diversification discount that could be driving the effects of hedge fund activism in my sample. The persistence in the effects of hedge fund activism over the subsequent three years after targeting also alleviates concerns that discounted conglomerates may simply have higher future returns regardless of activism (see Lamont and Polk (2001)).

The central hypothesis of this study that hedge fund activism should affect the value discount and efficiency of conglomerates is grounded not only in the idea that hedge funds could influence firm investment policies directly, but more importantly in the fact that they are often concerned with improving corporate governance. In fact, over one third of hedge fund activism campaigns explicitly state improving governance as their main objectives, while one eighth state operational efficiency as their explicit goal (see Brav, Jiang, Partnoy, and Thomas (2008)).[2] Thus, it is plausible that their successes would alleviate agency problems

[2] An anecdotal example of the objectives and effects of hedge fund activism is the case of Pershing Square Capital Management, a leading activist hedge fund led by Bill Ackman, and Canadian Pacific Railway, a major railroad company in which the hedge fund acquired a 14% stake at the end of 2011. In early 2012, Pershing Square launched an activist campaign, pushing for changes in the company. The complaints were focused on the lack of operating efficiency, low asset utilization, substantial underinvestment, failed acquisitions, and sluggish market share growth. The hedge fund argued that the incumbent CEO and the CEO-friendly board were inept at addressing such problems, and pushed for change of management with the full support of the shareholders of the company. After the new CEO Hunter Harrison and board members chosen by the fund were brought in, significant operational improvements took place, including substantially more investment allocations to segments with high growth opportunities such as intermodal services and the

and intra-firm divisional power struggles often cited as the roots of inefficient capital allocation across divisions within conglomerates (see Servaes (1996); Denis, Denis, and Sarin (1997); Shin and Stulz (1998); Lins and Servaes (1999); Rajan, Servaes, and Zingales (2000); Scharfstein and Stein (2000); Gertner, Powers, Scharfstein (2002); Lamont and Polk (2002); Xuan (2009); Ozbas and Scharfstein (2010); Duchin and Sosyura (2013); Glaser, Lopez-de-Silanes, and Sautner (2013)). For example, hedge funds may indirectly affect the efficiency of internal capital markets by severing CEO-divisional manager ties through CEO turnovers, or by disciplining managers through increased payout of the firm's excess cash (see Brav, Jiang, Partnoy, and Thomas (2008); Klein and Zur (2009); Boyson and Mooradian (2011)). Whichever the underlying mechanism may be, one would expect the efficiency of conglomerates to improve as a result of hedge fund activism, if conglomerates are indeed inefficient prior to being targeted.

By showing that the observed diversification discount and allocative inefficiency in conglomerates largely disappear after they are targeted by activist hedge funds, this paper lends support to the idea that diversified firms are ex-ante inefficient and therefore valued at a discount, providing new insights into the valuations and operations of conglomerate firms. Alternative views in the literature have long challenged this assertion, arguing that the empirically observed diversification discount and internal capital allocations are consistent with optimal firm behavior (see Matsusaka (2001); Matsusaka and Nanda (2002); Maksimovic and Phillips (2002, 2013); Gomes and Livdan (2004)), reduction of risk and uncertainty about the firm's prospects (see Mansi and Reeb (2002); Hund, Monk, and Tice (2010)), suboptimal dissipation of rents from efficient production outcomes (see Schoar (2002)), or selection biases and measurement errors (see Whited (2001); Campa and Kedia (2002); Graham, Lemmon, and Wolf (2002); Villalonga (2004a, b); Custódio (2014)). In the absence of any inefficiency in the way resources are allocated within conglomerates, interventions by activist hedge funds should have little impact on how diversified firms are valued relative

firm's rail network covering North Dakota's Bakken shale region. From September 2011 to December 2014, Canadian Pacific's stock price rose from around \$49 to \$220.

to pure-play firms and how they use their internal resources. To the contrary, I document significant shifts in their relative valuations and resource allocations following activist campaigns, implying that hedge funds view their target companies as inefficient ex-ante.

While the *change* in the diversification discount (i.e., increase in excess q) in response to hedge fund activism is robust to several measures of the discount introduced in the literature, the *level* of the discount varies across these measures. For instance, the ex-ante discount estimated without using information of single segment firms via quantile regressions as suggested by Boguth, Duchin, and Simutin (2018) is neither negative nor large in magnitude. It is therefore possible to interpret the results differently, namely that diversification adds value through the creation of internal capital markets, but that agency problems prevent conglomerates from fully realizing this potential. Several studies indeed show that conglomerate headquarters can engage in "winner picking" strategies (see Stein (1997); Khanna and Tice (2001)). This "bright side" of internal capital market can, for example, help alleviate division level credit constraints and lessen the impact of financial dislocations (see Campello (2002); Cremers, Huang, and Sautner (2011); Gopalan, Nanda, and Seru (2007, 2014); Matvos and Seru (2014); Matvos, Seru, and Silva (2018)), or promote efficient allocation of labor (see Tate and Yang (2015)). Nonetheless, the evidence I present is consistent at the very least with the ability of activist hedge funds in unlocking the value of internal capital markets buried in inefficient target conglomerates.

This study also contributes to the literature on shareholder activism, and hedge fund activism in particular. Earlier studies cast doubt on the effectiveness of activist campaigns in the 1980-1990s carried out by institutional shareholders such as mutual funds and pension funds (see Karpoff, Malatesta, and Walkling (1996); Smith (1996); Wahal (1996); Gillan and Starks (2000)). However, the activism landscape has recently changed with the advent of activist hedge funds. Several papers document positive short-term stock returns and long-term operational improvements from hedge fund activism, such as higher profitability and CEO turnover (see Brav, Jiang, Partnoy, and Thomas (2008); Boyson and Mooradian (2011);

Bebchuk, Brav, and Jiang (2015)). These findings have spurred studies examining the real effects of hedge fund activism on various aspects of corporate activity such as productivity, product market competition, and innovation (see Brav, Jiang, and Kim (2015); Aslan and Kumar (2016); Brav, Jiang, Ma, and Tian (2018)), and the implications for different stakeholders of targets (see Sunder, Sunder, and Wongsunwai (2014)). The impact of hedge fund activism is also largely observed across different countries (see Becht, Franks, Grant, and Wagner (2017)), and has been shown to have preventive spillover effects on non-targeted peer firms as well (see Gantchev, Gredil, and Jotikasthira (2019)). Studies have found that such positive effects are made possible by activist experience and expertise (see Krishnan, Partnoy, and Thomas (2016); Boyson, Ma, and Mooradian (2019)), institutional ownership, trading, and voting (see Norli, Ostergaard, and Schindele (2015); Gantchev and Jotikasthira (2018); Brav, Jiang, Li, and Pinnington (2019)), and private engagements or settlements (see Becht, Franks, Mayer, and Rossi (2009); McCahery, Sautner, and Starks (2016); Bebchuk, Brav, Jiang, and Keusch (2019)).[3] [4] Overall, the evidence in the literature bolsters my motivation for using hedge fund activism to investigate the diversification discount in conglomerates. My findings contribute to this literature by highlighting the real effects of hedge fund activism on an important segment of the economy comprised of large diversified firms, which has long been of key interest in corporate finance.

The rest of the paper is organized as follows. In Section 2, I describe the data and sample used for this study. In Section 3, I analyze the effects of hedge fund activism on conglomerate firms. Finally, I conclude in Section 4.

[3]However, it is not always the case that hedge fund activism succeeds. Boyson and Pichler (2019) document that targets often fight back, leading to negative market reactions and worse operating performances when activists do not counter-resist such hostile resistance.

[4]In many cases, the returns to hedge fund activism are also attributable to financial strategies. Notably, activist hedge funds play an important role in the market for corporate control by facilitating acquisitions of their targets at favorable terms (see Greenwood and Schor (2009); Boyson, Gantchev, and Shivdasani (2017); Jiang, Li, and Mei (2018); Corum and Levit (2019)).

2 Data and Sample Overview

2.1 Data

2.1.1 Conglomerates

The sample of conglomerates and their industry segments is constructed from the Compustat business segment files. FASB No. 14 and SEC Regulation S-K require firms to report audited footnote information for business segments whose sales, assets, or profits comprise more than 10% of the firm's consolidated totals. In June of 1997, FASB No. 14 was superseded by FASB No. 131, under which firms are required to report such segment data insofar as "it is used internally for evaluating segment performance and deciding how to allocate resources to segments". The Compustat segment database reports segment information based on this requirement.[5] I start by requiring firms to have positive assets and sales greater than or equal to $10 million, and segments to contain complete information on net sales, identifiable total assets, capital expenditures, operating profit or loss, depreciation, and SIC code. I exclude firms with financial (SIC codes 6000 to 6999) or governmental (SIC codes 9000 to 9999) segments.

I follow standard screening procedures in the literature to deal with well known data issues in the Compustat segment files (see Berger and Ofek (1995); Shin and Stulz (1998); Billett and Mauer (2003)). To address the issue that firms may not fully allocate accounting items across reported segments, I require the sum of segment sales (assets) to be within 1% (25%) of firm totals, after which I apply a multiple to explicitly allocate unallocated sales, assets, capital expenditure, and cash flow. In addition, to minimize the effects of firms reorganizing their segments over time, I require the following ratios not to exceed one: segment net capital expenditure (gross capital expenditure minus depreciation) to segment assets, other segment net capital expenditure to other segment assets, segment sales growth,

[5] To ensure that the reporting requirement change does not affect the results of the paper, I redo the analysis using the sample period beginning with the fiscal year 1998 so that all variables use data strictly after the change occurred. The results are virtually unchanged.

segment cash flow to segment assets, and other segment cash flow to other segment assets. Finally, to ensure a sample of truly diversified firms, I require firms to have at least two segments serving different 2 digit SIC industries and further exclude firms in which the segments with the smallest and largest sales are in the same industry.[6]

2.1.2 Hedge Fund Activism

The sample of hedge fund activism events are identified using Schedule 13D filings (i.e., beneficial ownership reports) submitted to the SEC, complemented with a manual search of Factiva news archives for media coverage on conglomerate firms targeted by activist hedge funds. Section 13(d) of the 1934 Securities Exchange Act stipulates that investors who (1) own more than 5% of a voting class of a company's equity securities *and* (2) intend to influence control of the issuer must disclose the amount and intent of ownership within 10 days of acquiring such a stake. The investor can file a shorter 13G filing in lieu of a 13D in the absence of the intent to control, which implies that a Schedule 13D filing meaningfully indicates an active intervention to follow. 13D filers are narrowed down to hedge fund managers based on the identity descriptions of the reporting entities. I then supplement the 13D sample with a list of hedge fund activism events identified by a comprehensive Factiva news search for all firms in the Compustat conglomerate sample described above. The sample of hedge fund activism events targeting conglomerate firms covers the period from 1994 to 2014.

Table 1 summarizes the sample of hedge fund activism events. Over time, Panel A shows that there is pro-cyclical variation amid a gradual upward trend in hedge fund activism targeting conglomerate firms, in terms of the number of targeted firms and campaigns, and also

[6]While I focus on the implications of industrial diversification in this paper, the literature has shown that geographical (i.e., global) diversification also leads to similar conglomerate discounts (see Denis, Denis, and Yost (2002)). In the Appendix, I show that the baseline result of this paper (i.e., the effect of hedge fund activism on the diversification discount) holds similarly for conglomerates that are only industrially diversified and for those that are both industrially as well as geographically diversified, indicating that geographical diversification neither amplifies nor dampens the effect of hedge fund activism on industrial conglomerates (see Table A.2).

the average target's asset size. During the sample period, there are 137 unique conglomerate firms targeted by 148 activist campaigns. While the number of events are smaller compared to previous studies, they are economically significant. Targeted conglomerate firms have on average \$2.3 billion in total assets and 2.7 industry segments, adding up to \$346 billion in targeted assets over the entire sample.[7] Panel B shows the industry distribution of targeted firms. The largest number of targeted conglomerates are manufacturing firms, with consumer nondurables, telecommunications, and chemical product industries representing important portions of the sample as well.

2.2 Measurement

2.2.1 Diversification Discount

Measuring the diversification discount has been a fundamental challenge in the conglomerates literature (see Whited (2001); Villalonga (2004a, b)). Instead of trying to directly correct for measurement errors, I use hedge fund activism as external shocks to explain *changes* in the diversification discount of conglomerates, under the assumption that such measurement errors should not be correlated with *within-firm* variation in activist targeting. Nonetheless, I employ a number of different methods identified in the literature to measure the diversification discount to ensure the results of the analysis are robust to correcting for measurement errors.

Following early studies (see Lang and Stulz (1994); Berger and Ofek (1995)), I start by computing the conglomerate firm's diversification discount as its *Excess* q, which is the difference between the firm's Tobin's q and its synthesized q' imputed from the standalone q of each of its segments, where segment q is approximated by the average q of single segment firms in the same 2 digit SIC industry as the segment.[8] The conglomerate firm's imputed q'

[7] The sample of hedge fund activism in Brav, Jiang, and Kim (2015) includes 368 firms with \$1.1 billion on average in total assets. The sample used in Brav, Jiang, Ma, and Tian (2018) covers 553 firms with average total assets of \$0.7 billion.

[8] The results throughout the paper are robust to approximating segment q with either the median or asset-weighted average q of single segment firms in the same industry

is then computed as the weighted average of its segment qs, where segment assets are used as weights. The intuition of this approach is to use the conglomerate's imputed q' as an estimate of what the "sum of each part" would be worth if each segment were its own entity instead of the firm's division. The difference between the conglomerate's q and q' would then capture the value added or discounted due to the internal allocation under conglomeration.

While this "chop-shop" approach has been used routinely in the diversification literature to overcome the issue that divisional segments do not have market values, it is subject to biases arising from measurement errors around Tobin's q (see Whited (2001)). First, observable measures of Tobin's q can diverge from marginal q, the unobservable measure of investment opportunities implied by standard intertemporal models of investment. For example, goodwill accounting in mergers and acquisitions may induce a downward bias in q for acquisitive conglomerates, resulting in an upward bias in the magnitude of the diversification discount (see Custódio (2014)). Following Custódio (2014), I adjust q for this goodwill accounting bias by subtracting goodwill from book assets, and use this to compute *Goodwill Adjusted Excess q*. The results throughout the paper are robust to using this alternative Excess q variable.

Setting aside potential biases in q itself, there is an additional source of measurement error coming from the fact that divisional segments of conglomerates may not be comparable to single segment firms in the same industry, even if their qs are measured accurately. In other words, the reliance on single segment firms may introduce a bias in imputed q', and thus in Excess q as well. Boguth, Duchin, and Simutin (2018) introduce a new method to address this issue that inverts the "chop-shop" approach and does not rely on single segment firms. Each year, a cross-sectional quantile regression is run without intercept, fitting conglomerate qs onto their divisional sales exposure to each of the 10 Fama-French industries. The coefficients from these regressions produce annual estimates of the median q for conglomerate divisions in each industry. I use this method to compute another alternative measure of Excess q, henceforth denoted as *BDS Excess q*.

To ensure robustness throughout the paper, I analyze the effect of hedge fund activism on the diversification discount in conglomerates using each of the three measures described above: *Excess Tobin's q*, *Goodwill Adjusted Excess q*, and *BDS Excess q*. It is important to note again, however, that the approach of focusing on the changes in conglomerates around the external impetus of hedge fund activism helps interpret the diversification discount and internal allocative efficiency unencumbered by measurement errors.

2.2.2 Segment Investment Efficiency

A related and equally difficult challenge in studies of internal capital market efficiency has been the measurement of segment investment opportunities and cross-divisional investment subsidies. For example, using lagged Tobin's q to explain current investment by a division suffers from the same measurement error in segment q described above. In my analysis of the impact of hedge fund activism on segment investment efficiency, I use as measures of segment investment opportunities the average Tobin's q of single segment firms in the same industry adjusted for goodwill accounting (see Custódio (2014)). As an alternative, I also use segment sales growth to avoid measurement of segment q altogether. These measures are lagged by one year and then used to classify segments as having above or below average - or alternatively highest or lowest - investment opportunities compared to other segments within the same firm. To mitigate concerns of measurement errors, I use a combination of these different approaches in my tests looking at whether segments with higher q or sales growth receive more investment allocations.

To measure the extent of cross-divisional subsidies, I follow the convention of the literature and use the sensitivity of segment investments to the segment's own cash flow and to cash flows from the firm's other segments (see Lamont (1997); Shin and Stulz (1998); Campello (2002)). The issue with this approach is that the sensitivity coefficients can be biased if segment cash flows are correlated with unobserved investment opportunities or with observed proxies of investment opportunities measured with error (see Whited (2001);

Chevalier (2004)). To minimize this bias, I orthogonalize segment cash flows with respect to observed metrics of investment opportunities, such as segment sales growth, q, and segment industry-by-year fixed effects. Specifically, I denote $SegmentCFR$, or segment cash flow residual, as the residual from the following regression:

$$SegmentCF_{i,j,t} = \beta \cdot SalesGrowth_{i,j,t} + \gamma \cdot q_{i,j,t} + \theta_t + SegmentCFR_{i,j,t} \tag{1}$$

where $SegmentCF_{i,j,t}$ is segment j's cash flow scaled by firm i's total assets in year t, $SalesGrowth$ is the segment's sales growth, q is the segment's q based on the Boguth, Duchin, and Simutin (2018) quantile regression method, and θ_t denotes segment industry-by-year fixed effects. $SegmentCFR$ is the residual segment cash flow, representing "wind-fall" cash flows to the segment in a given year. The residual cash flows from the firm's other segments can then be written as follows.

$$OtherSegmentCFR_{i,j,t} = \sum_{-j} SegmentCFR_{i,j,t} \tag{2}$$

$SegmentCFR$ and $OtherSegmentCFR$ are then used to measure how reliant segment investments are to cash flows generated in different parts of the firm. In particular, I focus on how different the investment-cash flow sensitivities are with respect to different sources of cash flows. For firms with well-functioning internal capital markets unencumbered by divisional frictions, divisions with good (bad) investment opportunities should be made less (more) financially constrained so that they are less (more) reliant on incremental cash flows, regardless of which divisions generate those cash flows. To test whether hedge fund activism improves the functioning of internal capital markets in conglomerates, I estimate the changes in these investment-cash flow sensitivities around hedge fund activism and examine whether they become more equalized.

2.3 Sample Overview

I merge the conglomerate and hedge fund activism data sets to construct the main sample used in this study. The sample consists of conglomerate firms targeted by activist hedge funds and a set of control conglomerates that are matched to targeted firms by propensity score matching. I match each targeted conglomerate firm in year t with a non-targeted conglomerate firm in the same 2-digit SIC industry from the same year, that has the nearest propensity score estimated using log firm size, Tobin's q, profitability (ROA), all measured at $t-1$, and the change in ROA between $t-3$ and $t-1$ to account for the pre-targeting performance decline in targeted firms. These are variables identified as the strongest predictors of hedge fund activism, and are used by the literature for matching targeted firms with control firms as well (see Brav, Jiang, Ma, and Tian (2018)). The activism event year for the targeted firm, t, is assigned as the "pseudo-event" year for the matched firm. For each conglomerate firm, I retain annual observations for five years before and after the year of the activism or pseudo event ($t-5$ to $t+5$).

Table 2 provides a statistical summary of the main sample characterizing targeted and matched conglomerate firms. All of the reported characteristics are winsorized at the 1% extremes. Panel A presents the mean, standard deviation, 25th, 50th, and 75th percentile values for each firm characteristic for targeted and matched conglomerate firms over the entire sample period. Panel B further reports the means of the firm characteristics for targeted and matched firms as well as their differences and t-statistics over sub-periods before and after activism events (or pseudo-events for matched firms).

Conglomerate firms, both targeted and matched, are large and positively skewed in asset size and market capitalization. Prior to activism events, targeted and matched firms are similar in age (30 vs. 29 years), capital expenditures (both 6% of total assets), cash holdings (10% vs. 11% of total assets), Tobin's q (both 1.4), ROA growth (both close to zero over three years), and the numbers of business segments (2.7 vs. 2.8) and industries in which they operate (both 2.3). In particular, their capital expenditures and cash holdings remain similar after the events, implying that the main empirical results of this paper are not driven by changes in firm level access to cash and overall investments following expansions imposed by activism.

Given the large and skewed nature of conglomerate firm size and the limited capacity of hedge funds to scale up, there remain some ex-ante differences between targeted and matched conglomerates in the same year and industry even after propensity score matching. For example, targeted conglomerate firms are smaller than matched firms prior to targeting with an average asset size (market capitalization) of $2.4 billion ($1.7 billion), whereas matched firms have average assets (market capitalization) of $10.5 billion ($6.2 billion). Targeted firms are also more levered compared to matched firms. However, these ex-ante differences in size and leverage persist after targeting, indicating that the main results are not driven by differential changes in these variables. Nonetheless, I control for firm size in all of the regression analysis.

On the other hand, several performance variables exhibit significant differential changes between targeted and matched conglomerates around hedge fund activism, indicative of improvements in internal efficiency. For example, while there is no difference in Tobin's q or ROA growth before activism events, targeted firms have significantly higher q (1.5 vs. 1.3) and less sluggish ROA growth afterward (zero vs. -1%). Furthermore, while targeted firms have lower levels of profitability compared to matched firms prior to being targeted, measured by ROA (3% vs. 5%), sales growth (7% vs. 10%), and cash flows (13% vs 15% of total assets), this gap is effectively closed after they are targeted.

Prior to activism events, targeted and matched conglomerates have similar numbers of business segments and industries. However, targeted conglomerates have greater internal dispersion across their divisions according to firm level Herfindahl-Hirschman (HHI) indices of segment sales (0.6 vs. 0.8). After being targeted, the difference between targeted and matched firms in their segment sales HHI is smaller (0.7 vs. 0.8), indicating that targeted firms become less internally diversified. This is more consistent with increased efficiency on the intensive margin rather than with refocusing on the extensive margin. While targeted firms have marginally fewer segments after being targeted (2.6 vs. 2.9), they still operate in a similar number of industries as do matched firms (2.3 vs. 2.4).

Panel C of Table 2 summarizes the number of activist hedge funds in the sample, and the concentration of their campaign activities. In total, there are 90 hedge funds targeting the 137 conglomerate firms over our sample period, and the HHI index of fund level targeted assets (number of targets) is 0.08 (0.03). These numbers indicate that conglomerate activism is dispersed within our sample and not driven by a dominant hedge fund targeting many firms.

3 Results

3.1 Hedge Fund Activism and the Diversification Discount

3.1.1 Difference-in-Differences (DID) Framework

I begin the empirical analysis by studying the impact of hedge fund activism on the diversification discount of targeted conglomerate firms. The sample employed in this part of the analysis comprises firm-year level observations covering the sample period from 1991 to 2017 and 274 unique conglomerate firms, consisting of targeted and matched conglomerate firms only. The observations span five years prior and subsequent to the year of each activism event (or pseudo-event for matched firms).

On this sample, I run the following difference-in-differences (DID) regression at the firm-year level:

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t} \quad (3)$$

where i and t denote firm and year. The dependent variable, $Excess\ q_{i,t}$, measures the conglomerate firm's diversification discount as the difference between the firm's q and its q'

imputed from its segments, where segment q is approximated as the average q of single segment "pure-play" firms in the same 2 digit SIC industry as the segment. As described in the previous section (see Section 2.2.1), I employ three alternative measures of q to ensure that the results are not driven by measurement error in q or the use of single-segment firms: The baseline *Excess Tobin's q* measure is based on the conventional Tobin's q; *Goodwill Adjusted Excess q* adjusts q for the accounting of goodwill in book assets following Custódio (2014); *BDS Excess q* uses model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). For each measure, I compute the discount either as $q - q'$ or $log(q/q')$.

$Treat_i$ is a firm level dummy variable equal to one if the conglomerate firm is a target of hedge fund activism, and zero otherwise. $After_{i,t}$ is a firm-year level dummy variable which indicates whether the observation is within five years ($t+1$ to $t+5$) after an activism event (for targeted firms) or pseudo-event year (for matched firms). $Controls_{i,t-1}$ denotes a set of firm-year level control variables including the logarithm of market capitalization and firm age. ϕ_i and θ_t are firm and year (or industry-by-year) fixed effects, respectively. Standard errors are adjusted for clustering at the firm level. The key coefficient of interest in Equation 3 is β_1 associated with the interaction term $Treat_i \times After_{i,t}$, which captures the differential change in the diversification discount of targeted firms after activism events, as compared to matched firms. The results from this regression are reported in Table 3.

In Panel A of Table 3, I first document univariate comparisons of the average diversification discount between targeted and matched conglomerates, both before and after activism event years (or pseudo-event years), with their standard errors shown in parentheses. The key result consistent across all measures is that there is little difference between targeted and matched firms prior to event years, but there is a much larger and significantly positive difference afterward. The baseline *Excess Tobin's q* measure clearly shows that both targeted and matched conglomerates are valued at a substantial discount compared to the weighted sum of their parts before event years (e.g., $q - q' = -0.09$ and -0.07, respectively), but that this discount is significantly attenuated only for targeted conglomerates after event years (e.g., $q - q' = -0.01$). In contrast, the discount continues and widens for matched conglomerates in the post-event period (e.g., $q - q' = -0.13$). On the other hand, the ex-ante discounts are not immediately obvious in the *Goodwill Adjusted Excess q* or *BDS Excess q* measures, except for $log(q/q')$ in the case of *Goodwill Adjusted Excess q*, in line with Custódio (2014) and Boguth, Duchin, and Simutin (2018) who propose that there is no diversification discount once measurement errors are accounted for. For example, the *BDS Excess q* measure suggests a diversification premium. However, even for these measures, excess q is higher in the post-activism period compared to the pre-event period for targeted conglomerates, while excess q generally declines for matched conglomerates. Even if one takes an agnostic view regarding which measure to focus on, it is clear that there is substantial value that hedge funds are able to add to the conglomerates they target, or losses they are able to help avoid.

Panel B of Table 3 presents the main regression results from Equation 3. There are twelve specifications in total, alternating between different correction schemes for q (e.g., baseline *Excess Tobin's q*, *Goodwill Adjusted Excess q*, or *BDS Excess q*), different ways of expressing excess q (e.g., $q-q'$ or $log(q/q')$), and different fixed effects (e.g., year or industry-by-year fixed effects). For every one of these specifications, the diff-in-diff coefficients on the $Treat \times After$ interaction term is highly positive and significant, ranging from a differential change in excess q as small as 0.12 or 7% to as large as 0.18 or 11%. Eight out of the twelve specifications yield a coefficient on the interaction term that is significant at the 1% level and otherwise significant at 5%. These results strongly suggest that hedge fund activism increases the value of targeted conglomerates relative to their single-segment benchmark, alleviating the diversification discount.

3.1.2 Excess *q* Dynamics around Hedge Fund Activism

To confirm that differences in pre-event trends between targeted and matched firms do not confound the DID regressions, I analyze the year-by-year dynamics of the diversification discount for targeted and matched firms separately by estimating regressions of excess q on yearly dummies. I report the results in Table 4, and also plot the coefficients in Figure 1. Specifically, I run the following regression.

$$Excess\ q_{i,t} = \sum_{k=-3}^{+3} \beta_k \cdot d[t+k]_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t} \tag{4}$$

As in the previous analysis, I use three different versions of the diversification discount (i.e., *Excess Tobin's q*, *Goodwill Adjusted Excess q*, and *BDS Excess q*) as the dependent variable. $d[t+k]_{i,t}$ denote dummy variables indicating whether the firm-year observation is k years from the activism event (or pseudo-event) year t. The coefficients, β_{-3}, ..., β_3, are the slopes on the yearly dummies, together describing the dynamics of excess q from three years prior to the activism event (or pseudo-event) year through three years afterward. As in Equation 3, I include firm size and age as control variables, and also control for firm and industry-by-year fixed effects. Standard errors are adjusted for clustering at the firm level. This regression is run on subsamples consisting of either targeted or matched firms, and the results for both samples are presented side-by-side in Table 4 and Figure 1.

Based on all of the different measures of the diversification discount, Table 4 and Figure 1 show that excess q deteriorates in the years leading up to the activism event year from $t-3$ to $t-1$ for both targeted and matched conglomerates. In the first panel of Figure 1, for example, *Excess Tobin's q* for targeted and matched conglomerates gradually trend downward in parallel. Subsequent to the activism year from $t+1$ to $t+3$, however, there is a clear and abrupt divergence where excess q of targeted firms jump upward over the first year after being targeted and persist at the newly high level in subsequent years. In sharp contrast, excess q of matched conglomerates continue down the deteriorating trend. Similar pre and post-event trends are found for alternative measures of excess q as well. Overall, the parallel pre-event trends mitigate concerns of unobserved differences other than targeting by activist hedge funds that may also be driving the large subsequent divergence in excess q between targeted and matched conglomerates.

Taken together, these results highlight the effect of hedge fund activism in attenuating the diversification discount in targeted conglomerates. In subsequent analysis, I explore potential channels that help explain this key result.

3.2 Segment Investment Efficiency around Hedge Fund Activism

3.2.1 Do Targeted Firms Invest More in Segments with Good Opportunities?

Having established the effect of hedge fund activism on alleviating the diversification discount, next I conduct firm-segment-year level analysis to examine whether hedge fund activism differentially improves the efficiency of investment allocations across divisions within targeted firms as compared to those of matched firms.

To do so, I start by testing whether targeted conglomerates invest more in segments with good investment opportunities rather than in less promising divisions, compared to matched conglomerates. Specifically, I run firm-segment-year level regressions of segment investments, further interacting the key explanatory variables from Equation 3 with indicators for whether the segment's investment opportunity ranks high or low within the firm. Estimating the following triple difference regression probes the differential effects of hedge fund activism across segments within targeted and matched firms.

$$\begin{aligned} SegInv_{i,j,t} &= \alpha \cdot Treat_i \times After_{i,t} + \beta \cdot Treat_i \times After_{i,t} \times HighInvOpp_{i,j,t-1} \\ &+ \delta \cdot Treat_i \times InvOpp_{i,j,t-1} + \kappa \cdot After_{i,t} \times InvOpp_{i,j,t-1} + \lambda \cdot After_{i,t} + \tau \cdot InvOpp_{i,j,t-1} \\ &+ \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,j,t} \end{aligned} \tag{5}$$

The subscript j denotes the jth business segment of firm i. $SegInv_{i,j,t}$ is segment j's capital expenditure in year t, scaled by firm i's total assets in year $t-1$ to gauge how much the firm allocates to segment j relative to its other segments. $HighInvOpp_{i,j,t-1}$ is a dummy variable equal to one if segment j's investment opportunity is above firm i's average as of year $t-1$, and zero otherwise. I also estimate Equation 5 replacing this dummy variable with $LowInvOpp_{i,j,t-1}$, $HighestInvOpp_{i,j,t-1}$, or $LowestInvOpp_{i,j,t-1}$, which are indicators for whether the segment has below average, the best, or worst investment opportunity within the firm. Segment j's investment opportunity as of year $t-1$, denoted by $InvOpp_{i,j,t-1}$, is defined in two alternative ways: (i) Segment's q as the average q of single-segment standalone firms in the same 2-digit SIC industry as the segment, adjusted for the accounting of goodwill in book assets following Custódio (2014), or (ii) the segment's sales growth rate. As in Equation 3, $Treat_i$ indicates whether firm i is a targeted firm, and $After_{i,t}$ indicates whether firm i's observation in year t is in the years subsequent to the activism event year (or pseudo-event year for matched firms). Firm market capitalization and age are included as control variables. Firm and industry-by-year fixed effects are included as well. The standard errors are adjusted for clustering at the firm-segment level.

The coefficient of interest in Equation 5 is β, which estimates the effect of hedge fund activism on segment investment separately for segments that have good or poor investment opportunities, relative to other segments of the firm as indicated by α. The other coefficients, δ, κ, and τ in particular, account for permanent differences in allocative efficiency between targeted and matched firms or common trends thereof. The results are reported in Table 5.

Columns 1-4 and 5-8 of Table 5 present results based on segment q and sales growth as proxies for division level investment opportunities, respectively. The first specification shows that targeted conglomerates increase investments in segments with strictly higher than average q by 0.73% more of firm level total assets as compared to matched conglomerates, while all other segments do not increase investments. In fact, the next regression shows that segments whose qs are strictly *below* the firm average invest 0.63% less of the firm's assets compared to all other segments that invest on average 0.42% more out of total assets when the conglomerate is targeted, implying that segments with strictly poor investment opportunities reduce investments. A similar contrast is observed when I compare the highest and lowest

q segments within the firm. Segments with the highest q invest 0.59% more of the firm's total assets, whereas those with the lowest q reduce investments by 0.51% of total assets. The results hold similarly using segment sales growth as an alternative proxy for segment investment opportunities, though it is less clear that poor opportunity segments strictly reduce investments. However, the relative contrast between the changes in investments by divisions with good and bad opportunities are well documented in the results, highlighting improvements in within-conglomerate investment efficiency.

3.2.2 Do Segments of Targeted Firms become Less Constrained?

To examine whether this increased efficiency arises from a more effective allocation of firm level capital across divisions, I further investigate whether divisions of targeted firms become more or less financially constrained. If divisions with better investment opportunities receive more of the firm's capital to invest, and divisions with worse opportunities invest less, one would expect that the targeted conglomerate's divisions would become less constrained overall. To test this hypothesis, I analyze the effects of hedge fund activism on self and cross-division cash flow subsidies of investments by estimating the following firm-segment-year level regression for targeted and matched firms separately (see Fazzari, Hubbard, and Petersen (1988, 2000); Campello (2002)).

$$\begin{aligned} SegInv_{i,j,t} = {} & \alpha_1 \cdot SegmentCFR_{i,j,t} + \alpha_2 \cdot OtherSegmentCFR_{i,-j,t} \\ & + \beta_1 \cdot After_{i,t} \times SegmentCFR_{i,j,t} + \beta_2 \cdot After_{i,t} \times OtherSegmentCFR_{i,-j,t} \\ & + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_{i,j} + \theta_t + \epsilon_{i,j,t} \end{aligned} \tag{6}$$

$SegmentCFR_{i,j,t}$ denotes the "residual" cash flow of segment j of firm i, where I orthogonalize segment cash flows with respect to proxies for investment opportunities using the algorithm detailed in Section 2.2.2. $OtherSegmentCFR_{i,-j,t}$ is the residual cash flows from all other segments of firm i excluding segment j. I then run regressions of segment investment, defined above as $SegInv_{i,j,t}$, on these residual cash flows and also their interaction terms with the $After_{i,t}$ dummy. Since the segment investment and cash flow variables are all scaled by firm total assets, the test provides a dollar-to-dollar comparison of the effects of cash flows that accrue in different parts of the firm. Firm control variables are included as before, and I further control for firm-segment and industry-by-year fixed effects. The standard errors are adjusted for clustering at the firm-segment level.

While the key coefficients, β_1 and β_2, capture whether investment-cash flow subsidies change after activism events or pseudo-events, the α coefficients convey important information as well. Prior to events, a fully integrated internal capital market would imply that α_1 and α_2 are equal, as cash flows would be allocated to divisions in need regardless of the source of cash flows. If divisions are not financially constrained, however, the magnitudes of these coefficients would be small. The role of hedge fund activism in improving internal capital markets would then imply that α_1 and α_2 are unequal, and that β_1 and β_2 are such that $\alpha_1 + \beta_1$ and $\alpha_2 + \beta_2$ are equal but overall smaller in magnitude, as internal capital markets become more integrated and divisions less constrained as a result.

The results reported in Panel A of Table 6 confirm this hypothesis. Ex-ante, I find that conglomerate segments adjust investments much more sensitively to their own residual cash flows than to those accruing in other segments of the same firm, consistent with earlier findings in the literature that internal capital markets are segmented (see Shin and Stulz (1998)). For both targeted and matched conglomerates, as shown in Columns 1-3, the coefficients on $SegmentCFR_{i,j,t}$ are much larger and more significant than those on $OtherSegmentCFR_{i,j,t}$ (i.e., α_1 ranging from 8.32 to 9.16 significant at 1% vs. α_2 ranging from 0.99 to 2.87 significant at 5% or less). F-tests comparing the two coefficients within each sample confirm this discrepancy, as seen from p-values close to zero.

The key results of Panel A are shown in Columns 4 and 5, namely that targeted conglomerates reduce this discrepancy after activism events by lowering segments' reliance on their own cash flows, whereas matched conglomerates make no such changes. For targets, the coefficient on $SegmentCFR_{i,j,t}$ decreases from 10.33 by 6.86. As a result, the sensitivity of a segment's investment to its own cash flow (i.e., $10.33 - 6.86$) is made more equal to its investment sensitivity to other segments' cash flows (i.e., $3.66 - 3.22$). F-tests confirm that $\alpha_1 + \beta_1$ and $\alpha_2 + \beta_2$ are not significantly different for targeted conglomerates (i.e., p-value of 0.27 in Column 4), but remain different for matched conglomerates (i.e., p-value of 0.10 in Column 5). The difference between targeted and matched conglomerate responses to activism is also evident from F-tests comparing coefficients across the two samples. While segments' investment sensitivities to their own cash flows are similar between targeted and matched firms prior to targeting (i.e., p-value for difference in coefficient on $SegmentCFR_{i,j,t}$ between Columns 2 and 3 of 0.40), they diverge afterward where matched firm segments remain more sensitive than targeted firm segments (i.e., p-value for difference in sum of coefficients on $SegmentCFR_{i,j,t}$ and $After_{i,t} \times SegmentCFR_{i,j,t}$ between Columns 4 and 5 of 0.13). In short, Panel A of Table 6 shows that hedge fund activism induces targeted conglomerate segments to become less reliant on their own cash flows compared to segments of matched conglomerates, indicative of the alleviation of division level financial constraints.

A natural question then is whether divisions with good and bad investment opportunities are affected differentially in how their financial constraints are alleviated. To investigate this issue, I augment Equation 6 by further interacting each explanatory variable with a dummy variable, $HighInvOpp_{i,j,t-1}$, which equals one if the segment's investment opportunity is above the firm average and zero otherwise. I employ three measures of segment investment opportunities: (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) segment sales growth, where in the first two methods segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment.

Panel B of Table 6 shows the results from estimating this augmented regression for targeted and matched conglomerate samples separately. Broadly, the results are consistent with those shown in Panel A, in that the sensitivity of segment investment to the segment's own cash flow declines after activism events for targeted firms, but not for matched firms. While the coefficient on the $SegmentCFR_{i,j,t}$ term is positive and significant for both targeted and matched firms, the $After_{i,t} \times SegmentCFR_{i,j,t}$ term is significantly negative and large in magnitude only for targeted firms. It also holds that segments' investment sensitivities to their own cash flows and to other segments' cash flows are equalized after event years for targeted firms, but not for matched firms.

Between segments with high and low investment opportunities, there is no statistically significant difference in the effect of hedge fund activism on segment investment-cash flow sensitivities. The coefficients associated with the interaction terms $After_{i,t} \times SegmentCFR_{i,j,t} \times HighInvOpp_{i,j,t-1}$ and $After_{i,t} \times OtherSegmentCFR_{i,-j,t} \times HighInvOpp_{i,j,t-1}$ are not significant. One potential explanation is a lack of statistical power given that the regression model becomes imposing. However, it is not surprising that hedge fund activism should help targeted conglomerate firms to alleviate financial constraints for all of their divisions: For divisions with good opportunities through internal capital allocations that increase their investments while reducing their reliance on their own cash flows; and for divisions without such opportunities by reducing their investments relative to the good divisions.

It is interesting to note that prior to event years, low opportunity segments of matched firms are relatively less constrained than segments with high opportunities, whereas high and low opportunity segments of targeted firms are both equally and highly constrained (see coefficients on the terms $SegmentCFR_{i,j,t}$ and $SegmentCFR_{i,j,t} \times HighInvOpp_{i,j,t-1}$ in Columns 1-4). This indicates that activist hedge funds target firms with more severe overinvestment and funding problems. I revisit the question of whether ex-ante firm level financial constraints matter for the effectiveness of hedge fund activism in Section 3.3.

3.2.3 Segment Profitability Dispersion around Hedge Fund Activism

To corroborate the findings above, I inspect another prediction that arises naturally from the hypothesis that hedge fund activism leads to optimized internal capital markets, namely that marginal returns on capital should be more equalized across divisions within conglomerates after they are targeted by activists.

I examine this idea in Figure 2. I plot kernel distributions of segment profitability (i.e., ROA) as a proxy for division level marginal returns, before (dotted line) and after (solid line) hedge fund activism events (or pseudo-events) for targeted (left) and matched (right) conglomerates. Segment ROA is demeaned within the firm-year level. The kurtosis coefficients and standard deviations of the distributions are reported in the legends.

Figure 2 illustrates that the dispersion of segment profitability declines for targeted conglomerates after activism events. The standard deviation is reduced from 0.12 to 0.09, while the kurtosis increases from 4.94 to 5.54, indicating a more centered distribution. On the other hand, there is no change in the distribution of segment profitability for matched conglomerates after pseudo-events.

Overall, the results presented above are strongly consistent with targeted conglomerates improving the efficiency of internal capital allocations across their divisions in response to pressure by activist hedge funds.

3.3 Does Hedge Fund Activism Matter More for Financially Constrained Firms?

The main results thus far support the hypothesis that hedge fund activism helps alleviate the diversification discount of targeted conglomerate firms, and that this is achieved through increased efficiency in how investment resources are allocated across divisions within the firm. Several corollaries follow from this hypothesis, and further empirical evidence on these corollaries can help bolster the interpretations of the main findings.

The first is that the effect of hedge fund activism should be more pronounced among financially constrained firms than among unconstrained firms, as the utilization of internal funds would create more value when access to external financing is limited (see Billett and Mauer (2003); Almeida, Campello, and Weisbach (2004); Denis and Sibilkov (2010); Duchin, Ozbas, and Sensoy (2010); Gamba and Triantis (2008); Matvos and Seru (2014); Matvos, Seru, and Silva (2018)). To test this hypothesis, I rerun regressions of Equations 3 (diversification discount test) and 5 (segment investment efficiency test) on subsamples comprising financially constrained or unconstrained firms.

To sort firms into subsamples, I use three different metrics of financial constraints. The first metric employs an imputed and indirect measure, the Kaplan-Zingales index (see Kaplan and Zingales (1997); Lamont, Polk, and Saá-Requejo (2001)), which relies on predicting constraints out of sample using accounting variables based on reduced-form relations. Firms are classified as constrained if their computed KZ index values lie above the yearly median, and unconstrained otherwise. The second and third metrics provide more direct measures of constraints. One measure is the availability of credit ratings on the firm's debt (see Almeida, Campello, and Weisbach (2004)). If the firm has no available rating but has positive debt, it is considered to have limited access to additional borrowing and thus classified as constrained. However, if the firm has a valid rating or does not have any debt, it is categorized as unconstrained. The last metric is a text-based measure developed by Hoberg and Maksimovic (2015), who analyze texts of management discussions on financing needs and firm liquidity disclosed in 10-K statements to construct an index of financial constraints. Firms are identified as constrained if their index values lie above the annual median, and unconstrained otherwise.

Once firms are split into financially constrained and unconstrained subsamples based on one of the algorithms described above, I estimate Equations 3 and 5 for each sample and report the results side-by-side in Panel A and B of Table 7, respectively. Panel A shows the impact of hedge fund activism on the diversification discount for the constrained and unconstrained subsamples. To conserve space, I report results based on two excess q measures - *Goodwill Adjusted Excess q* and *BDS Excess q*. For both measures of the diversification discount, and for all three measures of financial constraints, I find that the attenuating effect of hedge fund activism is stronger among financially constrained firms compared to unconstrained firms. For example, the coefficient on the interaction term, $Treat_i \times After_{i,t}$, is 0.18

(5% significance) and 0.30 (10% significance) for financially constrained firms based on the credit rating and Hoberg and Maksimovic (2015) measures, respectively, when the dependent variable is *Goodwill Adjusted Excess q*. For unconstrained firms, these coefficients are both statistically insignificant with estimates of 0.02 and 0.06, respectively. The p-values from testing the differences of these coefficients between constrained and unconstrained groups yield marginal results (e.g., significant at 5% only for the KZ index). However, if a sub-optimal internal capital market results partially from agency problems rather than ample acess to external financing, these differences need not be statistically significant. I revisit this channel in Section 3.4.

Panel B of Table 7 documents the effect of hedge fund activism on segment investment efficiency, based on lagged segment sales growth as a proxy for division level investment opportunities. For all three measures of financial constraints, the improvement in allocative efficiency following hedge fund activism is stronger among financially constrained firms, corroborating the interpretations for the alleviation of the diversification discount. This is seen by examining the coefficient on the triple interaction term, $Treat_i \times After_{i,t} \times HighSalesGrowth_{i,j,t-1}$, or alternitavely $Treat_i \times After_{i,t} \times HighestSalesGrowth_{i,j,t-1}$. After constrained firms are targeted by hedge funds, they significantly increase investments only in their high (highest) sales growth segments by as little as 0.50% to as much as 0.74% (0.59%) of their firm level total assets, depending on the constraint measure. In contrast, unconstrained firms do not significantly increase investments differentially in segments with good opportunities. However, the coefficient on the triple interaction term is generally positive for the unconstrained sample as well, and the differences between the constrained and unconstrained samples are not always statistically significant, again suggesting an alternative channel related to agency costs that may also affect internal capital markets.

The results are broadly consistent with the intuition that an activist hedge fund aiming to improve the excess value of a targeted conglomerate would push to optimize its internal capital market especially if the target is financially constrained, since the value of an internal capital market is likely to be greater when the firm has limited access to external financing. A larger attenuation in the diversification discount and more investment allocations to segments with high sales growth among financially constrained targets support this interpretation. In the following section, I examine an alternative agency-based channel that can explain the effect of hedge fund activism on the internal efficiency of conglomerates.

3.4 CEO Turnover, Internal Connections, and the Effect of Hedge Fund Activism

Another corollary from the main hypothesis is that the impact of hedge fund activism on the efficiency of conglomerates should be stronger if there is a CEO turnover subsequent to the activism event that severs ties between powerful divisional managers and the CEO. If the diversification discount of targeted conglomerates stem from internal power struggles and divisional rent seeking (see Rajan, Servaes, and Zingales (2000); Scharfstein and Stein (2000); Xuan (2009); Ozbas and Scharfstein (2010); Duchin and Sosyura (2013)), an activism event that brings in a new CEO from outside of the company, for example, should have a larger impact on improving internal efficiency than otherwise. This is a plausible channel for my main results given previous evidence on the effect of hedge fund activism on CEO turnover (see Brav, Jiang, Partnoy, and Thomas (2008)). To test this channel, I run the following firm-year level regression as an extension of Equation 3.

$$\begin{aligned} Excess\ q_{i,t} = {} & \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times Turnover_i \\ & + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t} \end{aligned} \tag{7}$$

$Turnover_i$ is a dummy variable equal to one if the firm was targeted and subsequently experienced a CEO turnover within the next five years. Using CEO appointment data from ExecuComp, I denote a turnover where an incumbent CEO was replaced by a firm outsider (insider) - defined as a person who had joined the firm less (more) than two years ago following Parrino (1997) - as $TurnoverOut_i$ ($TurnoverIn_i$).[9] All other variables and controls are as in Equation 3. The coefficient, β_2, estimates the differential impact of hedge fund activism on the diversification discount for targeted firms that experience a subsequent CEO turnover, above and beyond its impact on non-turnover targets as estimated by β_1. The results are reported in Table 8. The estimates for the coefficient, β_1, on the interaction term, $Treat_i \times After_{i,t}$, reconfirm the main result of the paper reported in Section 3.1, namely that hedge fund activism attenuates the diversification discount of targeted conglomerates. The estimates are highly significant and positive across all specifications, and similar in magnitude with those reported in Table 3.

The central result in Table 8 is the coefficient, β_2, on the triple interaction term, $Treat_i \times After_{i,t} \times TurnoverOut_i$, which is positive and statistically significant. The magnitude of the β_2 estimates are at least as large as the β_1 estimates across most specifications, highlighting a substantial incremental impact of outside CEO turnovers subsequent to being targeted. For example, the result based on *Excess Tobin's q* in Column 1 suggests the excess q growth differential for targets relative to controls is 13% for targeted conglomerates without an outside CEO turnover, but 27% for those whose CEOs are subsequently replaced by an outsider.

In sharp contrast, the coefficient on the triple interaction term, $Treat_i \times After_{i,t} \times TurnoverIn_i$, is negligible in magnitude, negative in sign, and statistically insignificant, regardless of the excess q measure employed. This implies that when an incumbent CEO is replaced by an insider of the firm, there is no incremental efficiency improvement beyond what would occur without an inside turnover. When both terms, $Treat_i \times After_{i,t} \times TurnoverOut_i$ and $Treat_i \times After_{i,t} \times TurnoverIn_i$, are included together in the same regression, each of their coefficients remain intact with only the outside CEO turnover effect standing out as a substantial incremental impact relative to the benchmark effect of hedge fund activism with no subsequent CEO turnover of any kind.

These results are consistent with the role of hedge fund activism in alleviating ex-ante

[9] Constraining the sample to firms covered by the ExecuComp universe truncates the sample size by half.

agency frictions where divisional managers and incumbent CEOs have social ties that distort the efficient allocation of divisional investment subsidies. The interpretation is that when the incumbent CEO is replaced by someone from outside of the firm after being targeted by an activist hedge fund, these ties are severed and the allocative inefficiencies are effectively removed. On the other hand, when the CEO is replaced by an insider, it is more likely that one social network of intra-firm ties between divisional managers and the CEO is simply replaced with another preexisting social network, thus having a weaker effect on the diversification discount.

3.5 Payout Policy and the Effect of Hedge Fund Activism

Previous studies show that one of the common outcomes of hedge fund activism is an increase in payout (see Brav, Jiang, Partnoy, and Thomas (2008); Klein and Zur (2009)), which potentially serves as a disciplinary mechanism by reducing agency costs of free cash flows available to managers (see DeAngelo and DeAngelo (2000)). Here, I test whether target firms whose payout is increased after an activism event are more likely to show reduced diversification discounts, consistent with such a disciplining change enhancing internal allocative efficiency. I run the following regression.

$$\begin{aligned} Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times IncrPayout_i \\ + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t} \end{aligned} \tag{8}$$

$IncrPayout_i$ is an indicator variable equal to one if the firm was targeted and subsequently increased either its overall payout (i.e., inclusive of repurchases), in which case I denote the dummy as $IncrPayout_i$, or its dividends, where I denote it as $IncrDiv_i$. Payout ratios are computed as a fraction of lagged assets, and the firm is identified as increasing its payout if its average payout ratio is higher during the post-activism period ($After_{i,t} = 1$) than during the pre-activism period ($After_{i,t} = 0$). The regression is otherwise analogous to Equation 7. The coefficient, β_2, captures the differential effect of hedge fund activism on the diversification discount of targeted firms who increase their payouts ex-post, relative to its effect on targets who do not as indicated by β_1. Table 9 reports the results.

Across all measures of excess q, Table 9 shows that conglomerates who increase payout after being targeted experience a greater attenuation in their diversification discount. In every specification, the coefficient on the interaction term, $Treat_i \times After_{i,t}$, is positive, and in all but one specification also statistically significant, indicating that the main result holds even for firms that do not payout more. However, the coefficient estimates on the triple interaction term, $Treat_i \times After_{i,t} \times IncrPayout_i$, highlight an important role of activism-induced changes in payout policy in disciplining managerial decisions on divisional investment allocations. The β_2 coefficient is not only always positive and mostly significant (e.g., point estimate of 0.19 significant at 5% in Column 5), but also larger in magnitude than β_1 (e.g., point estimate of 0.15 significant at 10% in Column 5), indicating that the impact of hedge fund activism is more than twice as large when the targeted conglomerate increases its payout subsequent to the activism event.

Consistent with the flexibility in buyback programs and the relatively stronger commitment embedded in changes in dividend payments, the effects are stronger for increases in dividends than for those in overall payout. The β_2 estimates are always larger in magnitude and in most cases more statistically significant when they are estimated using a dummy for dividend increases ($IncrDiv_i$) rather than an indicator for overall payout increases ($IncrPayout_i$). The magnitude of the difference in the β_2 estimate can be as large as 30%. For example, in Column 5 the coefficient on the triple interaction term is 0.19 (5% significance), compared to 0.25 in Column 6 (5% significance). These estimates indicate that increases in dividend commitments reduce the future expected free cash flows available to managers, mitigating agency costs more effectively than temporary increases in repurchases.

Overall, the evidence from Table 9 further supports an agency cost mitigation channel in which hedge fund activism brings changes to conglomerates that better align the incentives of managers to allocate capital more efficiently.

3.6 Increasing Internal Efficiency vs. Refocusing Firm Boundary

An alternative interpretation of our results may be that it is not that internal efficiency improvements are driving the attenuation of the diversification discount, but that firms are simply forced to shed assets and refocus their operations (see Bethel, Liebeskind, and Opler (1998)). If focused firms have higher valuations as documented by the literature (see Comment and Jarrell (1995)), activism-induced refocusing could result in a diminished diversification discount.

This is unlikely a concern in my study, because the main sample comprises only conglomerate firm-year observations. In other words, none of the analysis includes cases where a conglomerate subsequently becomes focused. However, one may still ask whether improving efficiency within the intensive margin of the firm is a suboptimal choice compared to refocusing the firm along the extensive margin. To test this possibility, I extend the sample to include yearly observations for the main sample of conglomerate firms when they are no longer diversified. This increases the sample size from 1,408 firm-year observations to 1,768, implying that refocusing occurs in roughly one third of targeted conglomerates. On this sample, I run regressions analogous to Equations 7 and 8, written as follows:

$$\begin{aligned} Excess\ q_{i,t} &= \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times Refocus_i \\ &+ \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t} \end{aligned} \tag{9}$$

where $Refocus_i$ is a dummy variable equal to one if the firm is a target that reduces the average number of its business segments ($RefocusSeg_i$) or segment industries at the 2 digit SIC level ($RefocusSIC_i$) after an activism event compared to before. The coefficient, β_2, indicates the differential impact of hedge fund activism on the excess q of targeted firms who refocus their operations after the activism event, relative to its effect on targets who remain diversified as indicated by β_1. I present the results in Table 10.

The key takeaway from Table 10 is that refocusing the boundary of the firm is no more valuable an activism outcome than increasing the internal allocative efficiency within the boundary of the firm. While the coefficient on the interaction term, $Treat_i \times After_{i,t}$, is always positive and highly significant as in the earlier main result, the coefficient on the triple interaction term, $Treat_i \times After_{i,t} \times Refocus_i$, is never positive or significant. In fact, the sign on the estimate for β_2 is always negative, indicating that the positive effect of hedge fund activism on excess q is marginally stronger for conglomerates that do not reduce the number of their segments, neither at the segment level nor segment industry level. The result suggests a unique role of hedge fund activism in the functioning of target internal capital markets.

3.7 Endogeneity of Hedge Fund Activism

Activist hedge funds choose targets selectively, meaning that treatment of hedge fund activism is not random. This raises potential endogeneity concerns on the interpretations of the changes in targeted conglomerates around activism events. One argument can be that hedge funds target firms with relatively severe inefficiencies, so that their interventions will have a larger impact on firm value. However, it is precisely this type of selection that is of interest for this study, as it implies there are underlying problems in the way diversified firms are managed that activist hedge funds are able to correct. An alternative argument is that the observed improvements in firm value and allocative efficiency may not be attributable to the real effects of hedge fund activism, but merely to their skill in picking firms that would exhibit such changes even in the absence of active interventions. For example, if discounted conglomerates simply have higher future returns, excess q would be mean-reverting (see Lamont and Polk (2001)). Then, hedge funds that are skilled at timing their investments would be able to invest in discounted conglomerates and earn abnormal returns in the upward sloping segment of the mean reversion process, even without any real activist effort.

If the latter were the case, targeted and matched conglomerates would have different trends prior to the event date, as hedge funds would target firms with increasingly less downward trending excess qs, while matched firms would have upward trending but gradually plateauing excess qs. It would also be the case that the post-event differences between targets and matched firms are transitory. From Table 4 and Figure 1, it is clear that neither is true. Rather, targeted and matched conglomerates show similar pre-event trends in their diversification discounts, and persistent divergences afterward. However, one may still be concerned that targeted and matched firms may have different degrees of mean reversion, where conglomerates with more prominent mean reversion are selected by hedge funds.

To further address this issue, I also perform a direct test for mean reversion of excess q in the sample of conglomerate firms by running an OLS regression of the percentage growth rate of excess q from $t-1$ to t on the level of excess q in $t-1$, controlling for firm fixed effects to capture mean reversion within firms. I also allow for targeted conglomerates to have a different slope by interacting lagged excess q with a treatment indicator ($Treat_i$) to test whether they exhibit a higher degree of mean reversion compared to matched conglomerates. If hedge funds were simply picking stocks that are more likely to mean-revert, one would expect a negative and significant coefficient on the level of excess q for targeted conglomerates. This regression can be written as follows.

$$\%\Delta Excess\ q_{i,t} = \beta_1 \cdot Excess\ q_{i,t-1} + \beta_2 \cdot Excess\ q_{i,t-1} \times Treat_i + \phi_i + \epsilon_{i,t} \qquad (10)$$

The results from this regression are shown in Table 11. For all measures of the diversification discount, the coefficient on the lagged level of excess q is never negative and significant. More importantly, the coefficient on the interaction term, $Excess\ q_{i,t-1} \times Treat_i$, is never significantly negative either. If anything, β_2 is positive and large in magnitude, indicating that excess q growth is in fact higher when lagged excess q is high for targeted conglomerates, ruling out explanations based on mean reversion of the diversification discount.

The existing literature also provides findings that work against the notion that the observed effects of hedge fund activism cannot be attributed to activism per-se. For example, hedge fund activism has been associated with changes in target companies that are unlikely to take place in the absence of pressure from activists, such as sharp increases in CEO and board turnover rates (see Brav, Jiang, Partnoy, and Thomas (2008)). Activism campaigns also entail significant costs for the activist investor, implying that the expected returns from activism are commensurately high. For instance, campaigns that end in proxy fights are estimated to cost on average $11 million (see Gantchev (2013)). Furthermore, numerous studies find that the announcement returns on 13D filings disclosing activist stakes are higher than those on 13G filings for passive stakes (see Clifford (2008); Klein and Zur (2009)).

In short, the evidence presented here and in other studies to date suggest it is unlikely that the endogeneity of hedge fund activism confounds the interpretations of my findings.

4 Conclusion

In this paper, I present novel evidence of hedge fund activism in an important segment of the economy comprised of large and diversified conglomerate firms. By studying the impact of hedge fund activism on the diversification discount and divisional investment efficiency of conglomerates, I contribute to the debate in finance on the efficiency of conglomerate firms. The results also shed new light on the broad role of shareholder activism in the economy.

I begin by showing empirical evidence in a difference-in-differences setting that hedge fund activism leads to a significant attenuation in the diversification discount of targeted conglomerate firms, a result that is robust to numerous methods of measuring the diversification discount introduced in the literature. The path of the diversification discount among targeted and matched firms suggest that their trends are parallel prior to the activism event, partially alleviating concerns regarding confounding effects. Moreover, matched conglomerates continue on a path of value deterioration, implying activist hedge funds' skill in unlocking value in diversified firms that would otherwise be forgone.

Consistent with optimization of internal capital markets, I find that targeted conglomerates allocate more investments than before to business segments with good investment opportunities and alleviate division level financial constraints. These results are stronger for firms that are financially constrained and thus face a higher marginal value of internal capital. Furthermore, the effect of hedge fund activism on the diversification discount is stronger when targeted firms thereafter replace their incumbent CEOs with firm outsiders, severing social ties between divisional managers and the incumbent CEO that may have hindered efficient internal allocation prior to being targeted. The effect is also stronger when the targeted firm increases its payout ratio ex-post, consistent with an agency-based mechanism where activists discipline the management by stripping them of free cash flow, forcing them to allocate investments across divisions more efficiently. While previous studies provide evidence of shareholder activism reshaping firm boundaries through asset sales and refocusing, this paper shows that hedge fund activism brings improvements to the internal allocation efficiency of target conglomerates, which is at least as important to alleviating the diversification discount as refocusing the firm.

Finally, I discuss the implications of endogenous targeting for these results. Hedge funds choose targets, for example, those that are performing poorly, with the aim of improving their operations through active interventions. Such selection is not a confounding factor for this study, but rather highlights the large ex-ante inefficiencies that plague target conglomerates. Another alternative explanation is that hedge funds simply exploit mean reversion in the diversification discount and the internal efficiency of conglomerates, rather than bringing real effects to the table themselves. I find no evidence of mean reversion among my sample of conglomerates, particularly for targeted firms, suggesting that the effects of hedge fund activism are unlikely the results of luck or passive stock picking.

Overall, the evidence from this study are consistent with large ex-ante inefficiencies within conglomerates, and a positive role played by activist hedge funds in removing intra-firm frictions underlying such inefficiencies.

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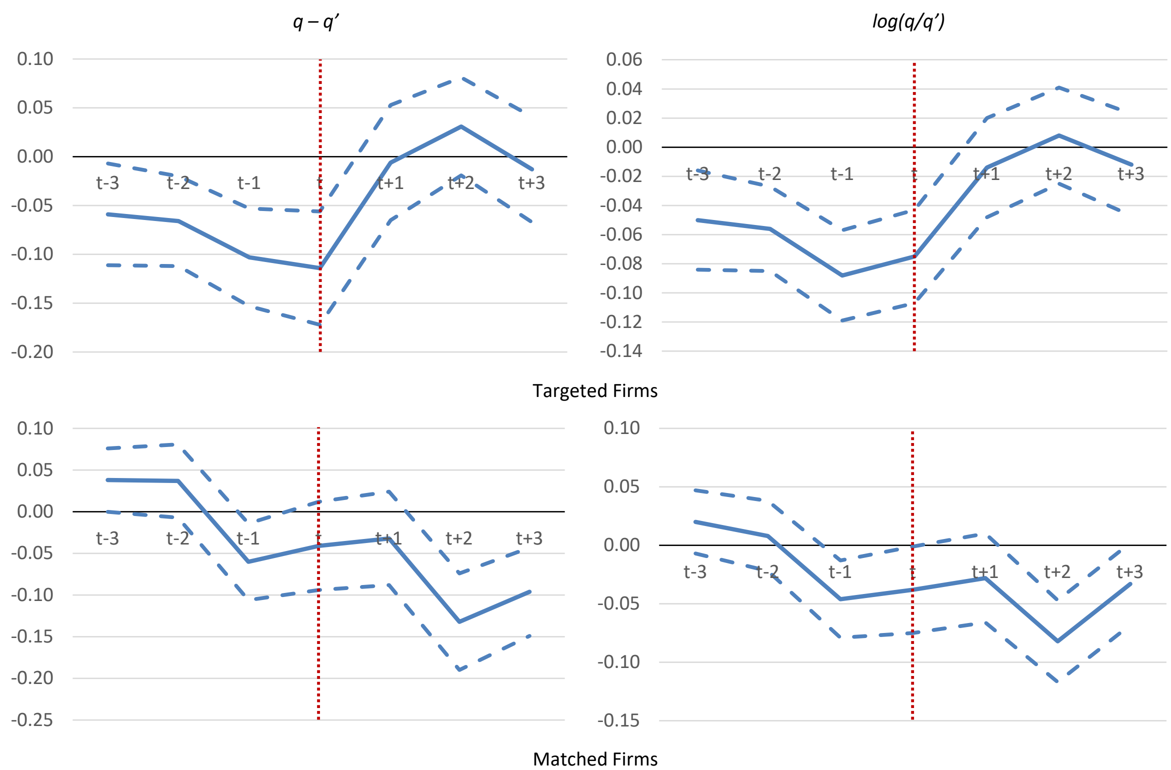
Figure 1. Excess q Dynamics around Hedge Fund Activism

These figures plot the dynamics of the diversification discount of conglomerate firms, measured as the difference between the firm's Tobin's q and the imputed q' from its individual business segments, or Excess q, in the years around hedge fund activism events (or pseudo-events for matched control firms). Imputed q' is the asset-weighted average of segment qs, where each segment's q is the average q of single-segment standalone firms in the same 2-digit SIC industry as the segment. Excess q is then expressed either as $q - q'$ or $log(q/q')$. The coefficients and their standard error bands are estimated and presented from the following specification:

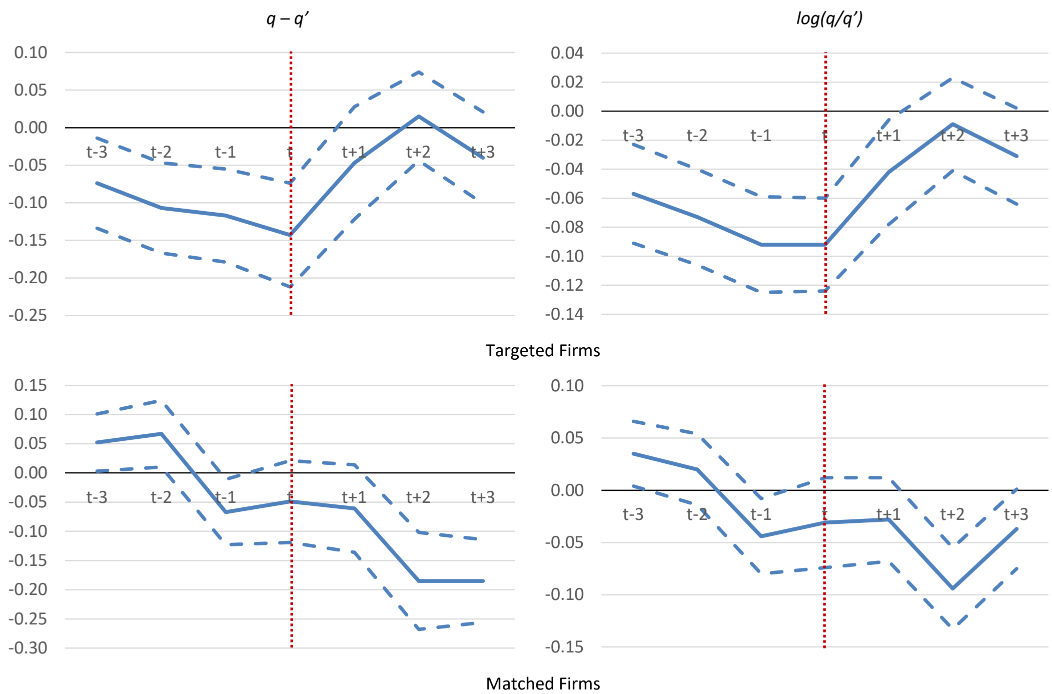
$$Excess\ q_{i,t} = \sum_{k=-3}^{+3} \beta_k \cdot d[t+k]_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

where $d[t+k]$ is a dummy variable equal to one if the firm observation is k years from the hedge fund activism event year (or pseudo-event year for matched control firms), and zero otherwise. The β_k coefficients, which capture the trends in the diversification discount around activism events (or pseudo events), are plotted for targeted firms and matched control firms separately. In Panel A, I use Tobin's q to compute the dependent variable, Excess Tobin's q. In Panel B, q is adjusted for the accounting of goodwill in book assets following Custódio (2014), to compute the dependent variable, Goodwill Adjusted Excess q. In Panel C, I use model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018), to compute the dependent variable, BDS Excess q. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level.

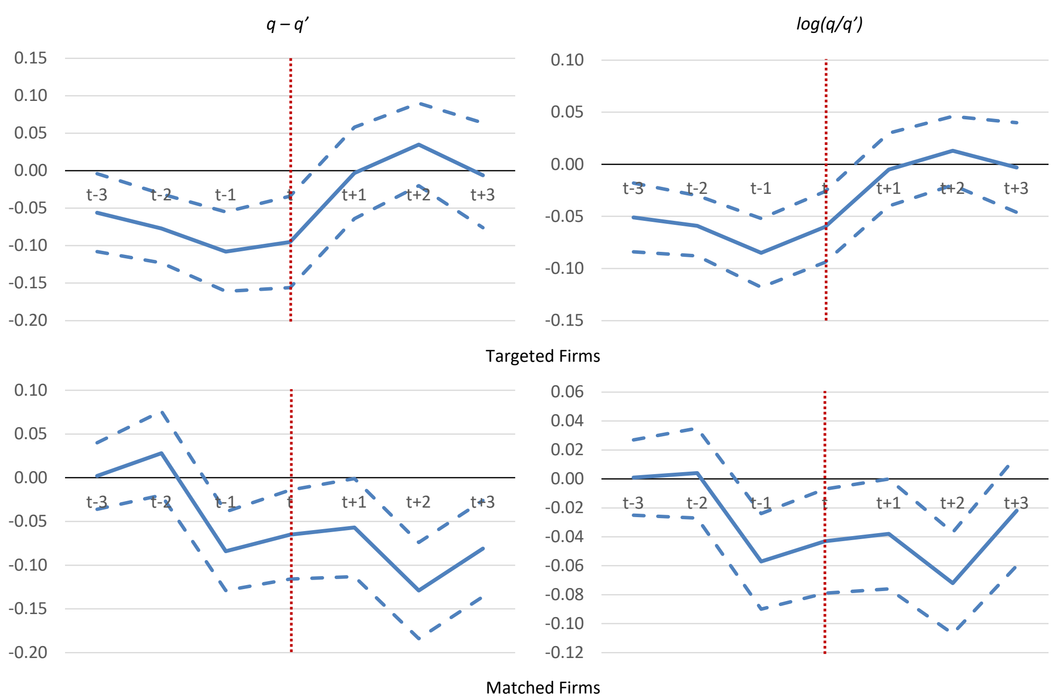


(a) Excess Tobin's q

Figure 1. Excess q Dynamics around Hedge Fund Activism (continued)



(b) Goodwill Adj. Excess q



(c) BDS Excess q

Figure 2. Segment Profitability Dispersion around Hedge Fund Activism

These figures plot kernel distributions of segment profitability, or ROA, before (dotted line) and after (solid line) hedge fund activism events (or pseudo-events for matched control firms), for targeted (left) and matched control (right) conglomerate firms. Segment ROA is demeaned within the firm-year level. The kurtosis coefficients and standard deviations of the distributions are reported in the legends.

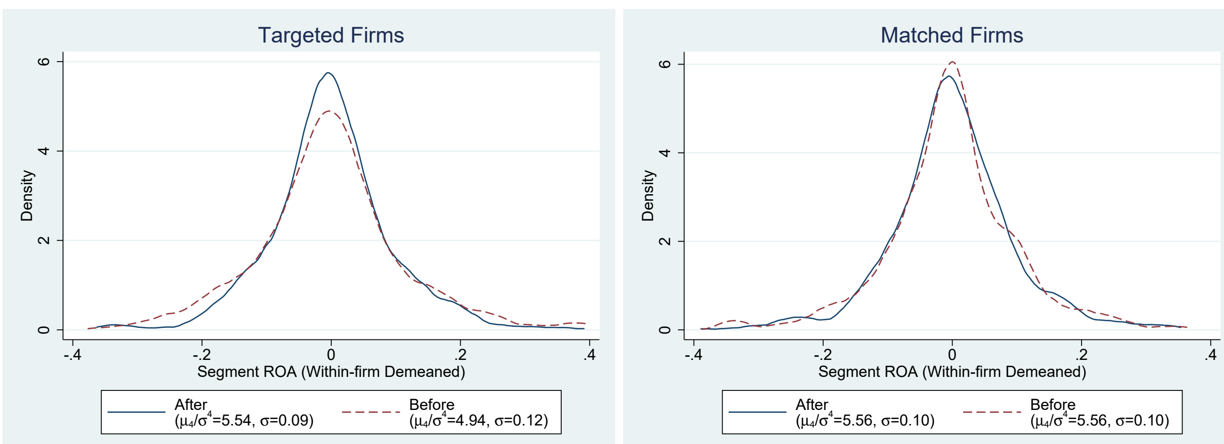


Table 1. Conglomerate Hedge Fund Activism by Year and Industry

This table summarizes the number of conglomerate firms targeted by hedge fund activism (# of Target Firms), the number of activism campaigns (# of Campaigns), the average of targeted firm assets (Avg Assets Targeted), total assets of all targeted conglomerate firms (Total Assets Targeted), the average number of segments in targeted conglomerate firms (Avg # of Segments), and total number of segments in all targeted conglomerate firms (Total # of Segments), within each year (Panel A) and each of the Fama-French 12 industries (Panel B).

Panel A. Conglomerate Hedge Fund Activism by Year

Year	# of Target Firms	# of Campaigns	Avg Assets Targeted ($bn)	Total Assets Targeted ($bn)	Avg # of Segments	Total # of Segments
1994	2	2	0.13	0.27	2.00	4.00
1995	6	6	5.74	34.43	2.17	13.00
1996	7	7	4.47	31.30	2.57	18.00
1997	6	6	0.49	2.92	2.50	15.00
1998	6	6	0.33	1.96	2.17	13.00
1999	7	7	0.83	5.78	3.43	24.00
2000	4	4	0.41	1.64	3.00	12.00
2001	2	2	1.00	2.00	2.50	5.00
2002	5	5	0.22	1.09	2.60	13.00
2003	4	4	0.86	3.44	3.00	12.00
2004	8	9	0.20	1.82	2.22	17.78
2005	7	8	0.91	7.30	2.75	19.25
2006	10	11	3.87	42.57	3.00	30.00
2007	13	14	0.99	13.80	2.64	34.36
2008	8	8	1.17	9.34	3.00	24.00
2009	2	2	2.57	5.15	2.50	5.00
2010	8	10	4.01	40.11	2.80	22.40
2011	4	5	0.87	4.37	2.60	10.40
2012	7	10	3.14	31.38	2.30	16.10
2013	12	12	5.84	70.04	2.75	33.00
2014	9	10	3.53	35.29	2.80	25.20
Total	137	148	2.34	346.00	2.67	365.64

Panel B. Conglomerate Hedge Fund Activism by Industry

Year	# of Target Firms	# of Campaigns	Avg Assets Targeted ($bn)	Total Assets Targeted ($bn)	Avg # of Segments	Total # of Segments
Consumer Nondurables	11	11	4.73	52.05	2.45	27.00
Consumer Durables	8	8	3.27	26.13	2.75	22.00
Manufacturing	39	40	1.46	58.40	2.88	112.13
Energy	6	6	1.22	7.33	2.67	16.00
Chemicals and Products	10	10	3.78	37.75	3.10	31.00
High Tech	13	15	0.72	10.87	2.60	33.80
Telecommunications	8	11	3.81	41.92	2.36	18.91
Utilities	1	1	0.04	0.04	2.00	2.00
Wholesale and Retail	16	19	1.62	30.75	2.74	43.79
Healthcare	7	8	0.72	5.77	2.25	15.75
Others	18	19	3.95	74.99	2.47	44.53
Total	137	148	2.34	346.00	2.67	365.64

Table 2. Summary Statistics

This table presents summary statistics of firm characteristics at the firm-year level for the sample of targeted and matched conglomerate firms. The matched sample is formed by matching each targeted firm with a non-targeted firm in the same event year t and the same 2-digit SIC industry that has the closest propensity score, estimated using log firm assets, market-to-book ratio, return on assets (ROA), all measured at $t-1$, and ROA growth from $t-3$ to $t-1$. For each firm variable, the mean, standard deviation, 25th percentile, median, and 75th percentile for targeted firms and matched firms are summarized separately over the full sample period in Panel A. In Panel B, I report the means of each variable for targeted and matched firms separately over subsample periods before and after hedge fund activism events (or pseudo-events for matched control firms), and also report the differences between targeted and matched firms during each of the before and after subperiods along with their t-statistics. Panel C shows the number of activist hedge funds and the average concentration of hedge funds in terms of assets targeted and number of firms targeted.

Panel A. Summary Statistics

	Targeted Firms (N=137)					Matched Firms (N=137)				
	Mean	Std	25%	Median	75%	Mean	Std	25%	Median	75%
Age	31.74	15.27	18.50	32.00	44.00	31.00	15.95	17.00	31.00	42.00
Capex/Assets	0.05	0.04	0.03	0.04	0.06	0.06	0.06	0.03	0.04	0.07
Cash/Assets	0.10	0.11	0.02	0.07	0.15	0.11	0.11	0.03	0.07	0.16
Assets ($ bn)	2.44	6.17	0.16	0.54	1.79	12.78	37.99	0.10	0.80	3.24
Market Cap ($ bn)	1.99	5.34	0.08	0.36	1.53	7.75	19.28	0.09	0.76	2.76
Debt/Assets	0.23	0.19	0.08	0.20	0.34	0.17	0.16	0.04	0.13	0.23
Tobin's q	1.43	0.68	1.03	1.28	1.67	1.38	0.57	1.00	1.28	1.65
ROA Growth	0.00	0.09	-0.04	0.00	0.03	0.00	0.07	-0.03	0.00	0.02
ROA	0.03	0.08	0.00	0.04	0.07	0.04	0.07	0.02	0.05	0.08
Sales Growth	0.06	0.20	-0.04	0.04	0.13	0.08	0.18	-0.02	0.07	0.15
Cash Flow/Assets	0.13	0.08	0.09	0.13	0.17	0.14	0.08	0.10	0.14	0.18
Segment Sales HHI	0.65	0.32	0.44	0.58	0.78	0.82	0.52	0.49	0.63	0.95
No. Segments	2.65	0.91	2.00	2.00	3.00	2.81	1.16	2.00	2.00	3.00
No. Industries	2.32	0.66	2.00	2.00	2.00	2.35	0.66	2.00	2.00	3.00

Panel B. Univariate Differences between Targeted and Matched Firms

	Before				After			
	Targeted	Matched	Diff	t-statistic	Targeted	Matched	Diff	t-statistic
Age	30.27	29.38	0.88	0.94	34.49	33.81	0.69	0.52
Capex/Assets	0.06	0.06	0.00	-0.66	0.05	0.05	0.00	-1.04
Cash/Assets	0.10	0.11	-0.01	-1.67	0.12	0.12	0.00	-0.16
Assets ($ bn)	2.39	10.48	-8.09	-5.43	2.55	16.80	-14.24	-5.37
Market Cap ($ bn)	1.73	6.20	-4.47	-6.36	2.46	10.43	-7.97	-5.34
Debt/Assets	0.23	0.17	0.06	5.99	0.23	0.16	0.07	5.00
Tobin's q	1.41	1.41	0.00	0.04	1.47	1.34	0.13	2.86
ROA Growth	0.00	0.00	0.00	-0.85	0.00	-0.01	0.02	2.54
ROA	0.03	0.05	-0.02	-4.78	0.04	0.04	0.00	0.52
Sales Growth	0.07	0.10	-0.03	-2.07	0.04	0.04	0.00	-0.24
Cash Flow/Assets	0.13	0.15	-0.02	-5.04	0.13	0.13	0.01	0.97
Segment Sales HHI	0.63	0.83	-0.20	-7.58	0.68	0.80	-0.12	-3.32
No. Segments	2.71	2.76	-0.05	-0.76	2.55	2.90	-0.35	-3.89
No. Industries	2.33	2.33	0.00	0.03	2.31	2.38	-0.07	-1.19

Panel C. Fund Concentration

Number of Funds	HHI (Target Assets)	HHI (Number of Targets)
90	0.08	0.03

Table 3. Hedge Fund Activism and the Diversification Discount

This table presents results from univariate tests (Panel A) and difference-in-differences regressions (Panel B) of the differences in the diversification discount between targeted and matched conglomerate firms before and after hedge fund activism events. The diversification discount is measured as the difference between the firm's Tobin's q and the imputed q' from its individual business segments, or Excess q. Imputed q' is the asset-weighted average of segment qs, where each segment's q is the average q of single-segment standalone firms in the same 2-digit SIC industry as the segment. Excess q is then expressed either as $q - q'$ or $log(q/q')$. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In Panel A, I report the average Excess q for all firms, targeted firms, matched firms, and the difference between targeted and matched firms, separately for the periods before and after activism events (or pseudo-events for matched firms). The standard errors of the means are reported in parentheses underneath the averages. In Panel B, I run diff-in-diff regressions of Excess q on $After$, a dummy variable equal to one if the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms) and zero otherwise, and its interaction term with $Treat$, a dummy variable equal to one if the firm is a targeted firm and zero otherwise.

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and year (or industry-by-year) fixed effects are included as well. Standard errors are adjusted for clustering at the firm level (*** p<0.01, ** p<0.05, * p<0.1).

Panel A. Average Excess q

	Before				After			
	All	Targeted	Matched	Difference	All	Targeted	Matched	Difference
Excess Tobin's q								
$q - q'$	-0.082***	-0.094***	-0.070***	-0.023	-0.071***	-0.008	-0.131***	0.123**
	(0.018)	(0.025)	(0.025)	(0.035)	(0.024)	(0.034)	(0.034)	(0.048)
$log(q/q')$	-0.103***	-0.108***	-0.098***	-0.010	-0.100***	-0.055**	-0.143***	0.088***
	(0.012)	(0.016)	(0.017)	(0.023)	(0.016)	(0.022)	(0.024)	(0.032)
Goodwill Adj. Excess q								
$q - q'$	-0.050**	-0.046	-0.055	0.009	-0.021	0.070	-0.108**	0.179***
	(0.024)	(0.033)	(0.034)	(0.047)	(0.034)	(0.049)	(0.045)	(0.067)
$log(q/q')$	-0.092***	-0.080***	-0.103***	0.023	-0.081***	-0.026	-0.133***	0.107***
	(0.013)	(0.018)	(0.020)	(0.027)	(0.019)	(0.026)	(0.028)	(0.038)
BDS Excess q								
$q - q'$	0.088***	0.070***	0.107***	-0.037	0.062***	0.119***	0.006	0.113***
	(0.016)	(0.023)	(0.023)	(0.032)	(0.022)	(0.032)	(0.029)	(0.043)
$log(q/q')$	0.004	-0.006	0.015	-0.021	-0.015	0.026	-0.054**	0.080***
	(0.011)	(0.015)	(0.016)	(0.021)	(0.015)	(0.020)	(0.021)	(0.029)

Table 3. Hedge Fund Activism and the Diversification Discount (continued)

Panel B. Diff-in-Diff Regressions of Excess q on Hedge Fund Activism

	Excess Tobin's q				Goodwill Adj. Excess q				BDS Excess q			
	$q-q'$		$log(q/q')$		$q-q'$		$log(q/q')$		$q-q'$		$log(q/q')$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	0.121**	0.137***	0.081**	0.083***	0.121**	0.169***	0.066**	0.078***	0.152***	0.179***	0.103***	0.112***
	(0.053)	(0.050)	(0.034)	(0.031)	(0.060)	(0.058)	(0.033)	(0.028)	(0.050)	(0.049)	(0.032)	(0.030)
After	-0.042	-0.007	-0.018	0.006	-0.052	-0.048	-0.015	-0.001	-0.054	-0.027	-0.032	-0.011
	(0.043)	(0.048)	(0.028)	(0.030)	(0.051)	(0.063)	(0.028)	(0.030)	(0.039)	(0.051)	(0.024)	(0.031)
log(MV)	0.034	0.022	0.028*	0.025	0.070***	0.044	0.047***	0.044**	0.059**	0.019	0.045***	0.021
	(0.023)	(0.026)	(0.015)	(0.018)	(0.026)	(0.031)	(0.015)	(0.018)	(0.023)	(0.025)	(0.015)	(0.018)
log(Age)	0.098	-0.033	0.077	-0.018	-0.120	-0.241	-0.035	-0.123	0.030	-0.199	0.049	-0.127
	(0.150)	(0.141)	(0.092)	(0.100)	(0.184)	(0.163)	(0.097)	(0.102)	(0.147)	(0.137)	(0.095)	(0.091)
Observations	1,608	1,434	1,608	1,434	1,608	1,434	1,608	1,434	1,608	1,434	1,608	1,434
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Industry-by-Year FE	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Adj R^2	0.676	0.773	0.717	0.794	0.749	0.817	0.782	0.840	0.642	0.735	0.692	0.765

Table 4. Excess q Dynamics around Hedge Fund Activism

This table presents the dynamics of the diversification discount of conglomerate firms, measured as the difference between the firm's Tobin's q and the imputed q' from its individual business segments, or Excess q, in the years around hedge fund activism events (or pseudo-events for matched control firms). Imputed q' is the asset-weighted average of segment qs, where each segment's q is the average q of single-segment standalone firms in the same 2-digit SIC industry as the segment. Excess q is then expressed either as $q - q'$ or $log(q/q')$. The results are reported from the following specification:

$$Excess\ q_{i,t} = \sum_{k=-3}^{+3} \beta_k \cdot d[t+k]_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

where $d[t+k]$ is a dummy variable equal to one if the firm observation is k years from the activism event year (or pseudo-event year for matched firms), and zero otherwise. The regressions are run on the subsamples of targeted and matched firms separately. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level (*** p<0.01, ** p<0.05, * p<0.1).

	Targeted Firms						Matched Control Firms					
	Excess Tobin's q		Goodwill Adj. Excess q		BDS Excess q		Excess Tobin's q		Goodwill Adj. Excess q		BDS Excess q	
	$q-q'$	$log(q/q')$	$q-q'$	$log(q/q')$	$q-q'$	$log(q/q')$	$q-q'$	$log(q/q')$	$q-q'$	$log(q/q')$	$q-q'$	$log(q/q')$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
d[t-3]	-0.059	-0.050	-0.074	-0.057*	-0.056	-0.051	0.038	0.020	0.052	0.035	0.002	0.001
	(0.052)	(0.034)	(0.060)	(0.034)	(0.052)	(0.033)	(0.038)	(0.027)	(0.049)	(0.031)	(0.038)	(0.026)
d[t-2]	-0.066	-0.056*	-0.107*	-0.073**	-0.077*	-0.059**	0.037	0.008	0.067	0.020	0.028	0.004
	(0.046)	(0.029)	(0.060)	(0.033)	(0.046)	(0.029)	(0.044)	(0.030)	(0.057)	(0.034)	(0.048)	(0.031)
d[t-1]	-0.103**	-0.088***	-0.117*	-0.092***	-0.108**	-0.085**	-0.060	-0.046	-0.067	-0.044	-0.084*	-0.057*
	(0.050)	(0.031)	(0.062)	(0.033)	(0.053)	(0.033)	(0.046)	(0.033)	(0.056)	(0.036)	(0.045)	(0.033)
d[t]	-0.114*	-0.075**	-0.143**	-0.092***	-0.095	-0.060*	-0.041	-0.038	-0.049	-0.031	-0.065	-0.043
	(0.058)	(0.032)	(0.069)	(0.032)	(0.061)	(0.034)	(0.053)	(0.037)	(0.070)	(0.043)	(0.051)	(0.036)
d[t+1]	-0.006	-0.014	-0.047	-0.042	-0.003	-0.005	-0.032	-0.028	-0.061	-0.028	-0.057	-0.038
	(0.059)	(0.034)	(0.075)	(0.036)	(0.061)	(0.035)	(0.056)	(0.038)	(0.075)	(0.040)	(0.056)	(0.038)
d[t+2]	0.031	0.008	0.015	-0.009	0.035	0.013	-0.132**	-0.082**	-0.185**	-0.094**	-0.129**	-0.072**
	(0.050)	(0.033)	(0.059)	(0.032)	(0.055)	(0.033)	(0.058)	(0.035)	(0.083)	(0.039)	(0.055)	(0.035)
d[t+3]	-0.013	-0.012	-0.040	-0.031	-0.006	-0.003	-0.096*	-0.033	-0.129*	-0.037	-0.081	-0.022
	(0.054)	(0.035)	(0.061)	(0.033)	(0.070)	(0.043)	(0.053)	(0.035)	(0.071)	(0.038)	(0.055)	(0.038)
log(MV)	-0.050	-0.015	-0.020	0.013	-0.056*	-0.021	0.033	0.042	0.079	0.069	0.045	0.054
	(0.030)	(0.024)	(0.040)	(0.026)	(0.030)	(0.022)	(0.065)	(0.051)	(0.092)	(0.057)	(0.064)	(0.049)
log(Age)	-0.612	-0.326	-0.906*	-0.467*	-0.964**	-0.559**	-0.080	-0.031	-0.175	-0.059	-0.164	-0.089
	(0.398)	(0.243)	(0.480)	(0.257)	(0.471)	(0.267)	(0.172)	(0.156)	(0.259)	(0.186)	(0.150)	(0.134)
Observations	510	510	510	510	510	510	537	537	537	537	537	537
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.794	0.809	0.853	0.865	0.720	0.751	0.855	0.866	0.867	0.885	0.836	0.853

Table 5. Do Targeted Firms Invest More in Segments with Good Opportunities?

This table presents results from firm-segment-year level diff-in-diff regressions testing whether hedge fund activism differentially affects targeted firms to allocate investment to segments with high investment opportunities. The results are reported from the following specification:

$$\begin{aligned} SegInv_{i,j,t} = {} & \alpha \cdot Treat_i \times After_{i,t} + \beta \cdot Treat_i \times After_{i,t} \times HighInvOpp_{i,j,t-1} \\ & + \delta \cdot Treat_i \times InvOpp_{i,j,t-1} + \kappa \cdot After_{i,t} \times InvOpp_{i,j,t-1} + \lambda \cdot After_{i,t} + \tau \cdot InvOpp_{i,j,t-1} \\ & + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,j,t} \end{aligned}$$

where $SegInv$ is segment capital expenditure scaled by firm total assets. $Treat$ is a dummy variable equal to one if the firm is a targeted firm and zero otherwise. $After$ is a dummy variable equal to one if the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms) and zero otherwise. $HighInvOpp$ is a dummy variable equal to one if the segment's investment opportunity is above the firm's average and zero otherwise. $LowInvOpp$, $HighestInvOpp$, and $LowestInvOpp$ are alternative indicators for whether the segment has below average, the best, or worst investment opportunity within the firm. $InvOpp$ is segment level investment opportunities defined in two alternative ways: (i) Segment's q as the average q of single-segment standalone firms in the same 2-digit SIC industry as the segment, adjusted for the accounting of goodwill in book assets following Custódio (2014), or (ii) the segment's sales growth rate. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm-segment level (*** p<0.01, ** p<0.05, * p<0.1).

	Dependent Variable: Segment Investment							
	InvOpp = Segment q (Goodwill Adj.)				InvOpp = Segment Sales Growth			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treat × After	-0.036	0.423*	-0.030	0.286	0.167	0.519**	0.203	0.507***
	(0.210)	(0.216)	(0.208)	(0.200)	(0.197)	(0.202)	(0.193)	(0.196)
Treat × After × High InvOpp	0.728**				0.382***			
	(0.294)				(0.143)			
Treat × After × Low InvOpp		-0.628**				-0.334**		
		(0.301)				(0.141)		
Treat × After × Highest InvOpp			0.594**				0.364**	
			(0.284)				(0.148)	
Treat × After × Lowest InvOpp				-0.510*				-0.367**
				(0.278)				(0.149)
Treat × InvOpp	0.241	0.107	0.245	0.116	0.730*	0.756**	0.748*	0.755**
	(0.217)	(0.217)	(0.221)	(0.216)	(0.384)	(0.385)	(0.383)	(0.384)
After × InvOpp	-0.101	0.039	-0.042	0.105	-0.940**	-0.908**	-0.915**	-0.905**
	(0.155)	(0.153)	(0.156)	(0.147)	(0.383)	(0.382)	(0.384)	(0.376)
After	0.067	-0.067	0.023	-0.168	0.023	0.022	0.021	0.016
	(0.329)	(0.348)	(0.337)	(0.336)	(0.194)	(0.194)	(0.194)	(0.194)
InvOpp	-0.453**	-0.333	-0.444**	-0.351*	0.039	0.025	0.029	0.027
	(0.194)	(0.203)	(0.196)	(0.201)	(0.321)	(0.320)	(0.321)	(0.320)
log(MV)	0.418***	0.346**	0.416***	0.372***	0.464***	0.462***	0.461***	0.458***
	(0.142)	(0.136)	(0.141)	(0.131)	(0.162)	(0.162)	(0.161)	(0.162)
log(Age)	-1.925	-1.683	-2.321*	-1.843	-2.398	-2.398	-2.427	-2.420
	(1.324)	(1.259)	(1.356)	(1.264)	(1.569)	(1.568)	(1.568)	(1.570)
Observations	3,121	3,078	3,188	3,193	3,224	3,224	3,224	3,224
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.198	0.192	0.183	0.190	0.168	0.167	0.167	0.167

Table 6. Do Segments of Targeted Firms become Less Constrained?

This table presents results from firm-segment-year level regressions testing whether targeted firms' segments become less financially constrained, and whether segments with good investment opportunities are affected differentially. In Panel A, the results are reported from the following specification:

$$\begin{aligned} SegInv_{i,j,t} = {} & \alpha_1 \cdot SegmentCFR_{i,j,t} + \alpha_2 \cdot OtherSegmentCFR_{i,-j,t} \\ & + \beta_1 \cdot After_{i,t} \times SegmentCFR_{i,j,t} + \beta_2 \cdot After_{i,t} \times OtherSegmentCFR_{i,-j,t} \\ & + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_{i,j} + \theta_t + \epsilon_{i,j,t} \end{aligned}$$

where $SegInv$ is segment capital expenditure scaled by firm total assets. $SegmentCFR$ is the segment's residual cash flow, computed as the residual from regressing the segment's cash flow on its sales growth, q, and industry-by-year dummy. $OtherSegmentCFR$ is the sum of the residual cash flows from all other segments in the same firm. $After$ is a dummy variable equal to one if the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms) and zero otherwise. In Panel B, I run the following regression:

$$\begin{aligned} SegInv_{i,j,t} = {} & \alpha_1 \cdot SegmentCFR_{i,j,t} + \alpha_2 \cdot OtherSegmentCFR_{i,-j,t} \\ & + \delta_1 \cdot SegmentCFR_{i,j,t} \times HighInvOpp_{i,j,t-1} + \delta_2 \cdot OtherSegmentCFR_{i,-j,t} \times HighInvOpp_{i,j,t-1} \\ & + \beta_1 \cdot After_{i,t} \times SegmentCFR_{i,j,t} + \beta_2 \cdot After_{i,t} \times OtherSegmentCFR_{i,-j,t} \\ & + \kappa_1 \cdot After_{i,t} \times SegmentCFR_{i,j,t} \times HighInvOpp_{i,j,t-1} \\ & + \kappa_2 \cdot After_{i,t} \times OtherSegmentCFR_{i,-j,t} \times HighInvOpp_{i,j,t-1} \\ & + \lambda \cdot After_{i,t} + \tau \cdot After_{i,t} \times HighInvOpp_{i,j,t-1} + \gamma \cdot Controls_{i,t-1} + \phi_{i,j} + \theta_t + \epsilon_{i,j,t} \end{aligned}$$

where $HighInvOpp$ is a dummy variable equal to one if the segment's investment opportunity is above the firm average and zero otherwise. I employ three measures of segment investment opportunities: (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) segment sales growth. In the first two methods, (i) and (ii), segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment. In all regressions, firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm-segment fixed effects and industry-by-year fixed effects are also included in all specifications. Also reported at the bottom of Panel A are p-values from F-tests on the inequalities $\alpha_1 > \alpha_2$ and $\alpha_1 + \beta_1 > \alpha_2 + \beta_2$ for each sample, as well as p-values from F-tests comparing each of $\alpha_1 + \beta_1$ and $\alpha_2 + \beta_2$ between the targeted and matched samples. At the bottom of Panel B, p-values from testing the inequalities $\alpha_1 + \beta_1 + \delta_1 + \kappa_1 > \alpha_2 + \beta_2 + \delta_2 + \kappa_2$ and $\alpha_1 + \beta_1 > \alpha_2 + \beta_2$ in each sample, and those from testing targeted and matched sample differences in $\alpha_1 + \beta_1 + \delta_1 + \kappa_1$, $\alpha_2 + \beta_2 + \delta_2 + \kappa_2$, $\alpha_1 + \beta_1$, and $\alpha_2 + \beta_2$ are shown as well. Standard errors are adjusted for clustering at the firm-segment level (*** p<0.01, ** p<0.05, * p<0.1).

Table 6. Do Segments of Targeted Firms become Less Constrained? (continued)

Panel A. Segment Investment-Residual Cash Flow (CFR) Sensitivity

	Dependent Variable: Segment Investment				
	All	Targeted	Matched	Targeted	Matched
	(1)	(2)	(3)	(4)	(5)
Segment CFR	8.719***	8.322***	9.157***	10.330***	8.850***
	(1.542)	(2.236)	(2.201)	(2.513)	(2.252)
Other Segment CFR	2.491**	2.865*	0.993	3.659*	0.490
	(1.068)	(1.637)	(1.823)	(1.934)	(1.824)
After × Segment CFR				-6.860**	0.990
				(3.264)	(3.042)
After × Other Segment CFR				-3.221	2.009
				(2.182)	(2.682)
After				0.130	0.024
				(0.142)	(0.157)
log(MV)	0.396***	0.223	0.752**	0.270	0.732**
	(0.119)	(0.183)	(0.333)	(0.180)	(0.344)
log(Age)	-2.724**	-2.140	-4.836*	-2.579	-5.094*
	(1.057)	(1.848)	(2.652)	(1.841)	(2.928)
p: SegCFR>OthSegCFR	0.00	0.02	0.00	0.02	0.00
p: SegCFR+After×SegCFR >OthSegCFR+After×OthSegCFR				0.27	0.07
p: Overall SegCFR: T<M		0.40		0.13	
p: Overall OthSegCFR: T<M		0.78		0.32	
Observations	3,168	1,497	1,623	1,497	1,623
Segment FE	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y
Adj R^2	0.773	0.724	0.822	0.727	0.821

Table 6. Do Segments of Targeted Firms become Less Constrained? (continued)

Panel B. Constraint Alleviation for High Opportunity Segments vs. Other Segments

	Dependent Variable: Segment Investment					
	InvOpp = Segment Tobin's q		InvOpp = Segment Gdwl Adj. q		InvOpp = Segment Sales Growth	
	Targeted	Matched	Targeted	Matched	Targeted	Matched
	(1)	(2)	(3)	(4)	(5)	(6)
Segment CFR	12.854***	5.502**	12.820***	5.281*	11.136***	8.944***
	(3.286)	(2.738)	(3.263)	(2.786)	(3.262)	(3.265)
Other Segment CFR	2.182	1.979	2.194	2.451	3.282	0.425
	(2.454)	(1.894)	(2.524)	(1.871)	(2.336)	(2.054)
Segment CFR × High InvOpp	-5.777	8.808**	-5.762	9.421**	-2.531	0.542
	(3.929)	(4.089)	(3.839)	(4.494)	(3.498)	(3.821)
Other Segment CFR × High InvOpp	2.606	-3.353	2.649	-4.326**	-0.370	-0.203
	(2.669)	(2.059)	(2.870)	(2.164)	(2.478)	(2.053)
After × Segment CFR	-7.963**	1.990	-8.270**	2.152	-12.476**	3.169
	(3.622)	(3.498)	(3.465)	(3.422)	(6.259)	(3.249)
After × Other Segment CFR	-2.199	0.943	-1.673	1.024	-1.378	0.517
	(2.410)	(2.748)	(2.435)	(2.726)	(2.499)	(2.904)
After × Segment CFR × High InvOpp	2.374	-4.520	2.955	-5.157	10.699	-7.605
	(6.413)	(4.884)	(6.394)	(5.074)	(7.610)	(5.416)
After × Other Segment CFR	-2.768	2.568	-3.946	1.867	-3.524	0.967
× High InvOpp	(3.402)	(2.249)	(3.305)	(2.240)	(3.828)	(2.545)
After	-0.047	-0.000	-0.031	0.010	-0.065	0.100
	(0.100)	(0.174)	(0.099)	(0.174)	(0.124)	(0.200)
After × High InvOpp	0.120	0.119	0.090	0.087	0.212	-0.022
	(0.145)	(0.179)	(0.158)	(0.174)	(0.157)	(0.180)
log(MV)	0.282	0.758**	0.280	0.788**	0.410**	0.630*
	(0.176)	(0.342)	(0.174)	(0.336)	(0.189)	(0.356)
log(Age)	-2.417	-5.242*	-2.311	-5.094*	-1.216	-3.056
	(1.840)	(2.912)	(1.882)	(2.918)	(1.984)	(2.374)
High InvOpp Segments						
p: SegCFR+After×SegCFR >OthSegCFR+After×OthSegCFR	0.44	0.14	0.40	0.12	0.24	0.36
p: Overall SegCFR: T<M	0.19		0.20		0.55	
p: Overall OthSegCFR: T<M	0.37		0.40		0.31	
Low InvOpp Segments						
p: SegCFR+After×SegCFR >OthSegCFR+After×OthSegCFR	0.21	0.21	0.25	0.24	0.66	0.03
p: Overall SegCFR: T<M	0.35		0.33		0.06	
p: Overall OthSegCFR: T<M	0.27		0.27		0.58	
Observations	1,497	1,623	1,497	1,623	1,460	1,485
Segment FE	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y
Adj R^2	0.734	0.822	0.734	0.823	0.732	0.813

Table 7. Does Hedge Fund Activism Matter More for Financially Constrained Firms?

This table presents results from testing the impact of hedge fund activism on subsamples each consisting of financially constrained and unconstrained firms. Firms are classified as constrained under three alternative measures of financial constraints: (i) Above the within-year median Kaplan-Zingales index (see Kaplan and Zingales (1997) and Lamont, Polk, and Saá-Requejo (2001)); (ii) Has no credit rating but has positive debt; (iii) Above the within-year median of the text-based measure by Hoberg and Maksimovic (2015). In Panel A, I run firm-year level diff-in-diff regressions testing the differences in the diversification discount between targeted and matched conglomerate firms before and after hedge fund activism events.

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

I report results from using two versions of q to compute Excess q (i.e., $q - q'$ where q' is the asset-weighted average of segment qs): (i) q adjusted for the accounting of goodwill in book assets following Custódio (2014) where segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment, and (ii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). $Treat$ is a dummy variable indicating whether the firm is a targeted firm, and $After$ is a dummy variable indicating whether the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms). Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level. In Panel B, I run firm-segment-year level diff-in-diff regressions testing whether hedge fund activism differentially affects targeted firms to allocate investment to segments with high investment opportunities, where segment investment opportunities are measured as segment sales growth.

$$\begin{aligned} SegInv_{i,j,t} &= \alpha \cdot Treat_i \times After_{i,t} + \beta \cdot Treat_i \times After_{i,t} \times HighSalesGrowth_{i,j,t-1} \\ &+ \delta \cdot Treat_i \times SalesGrowth_{i,j,t-1} + \kappa \cdot After_{i,t} \times SalesGrowth_{i,j,t-1} + \lambda \cdot After_{i,t} + \tau \cdot SalesGrowth_{i,j,t-1} + \gamma \cdot Controls_{i,t-1} + \phi_{i,j} + \theta_t + \epsilon_{i,j,t} \end{aligned}$$

$SegInv$ is segment capital expenditure scaled by firm total assets. $HighSalesGrowth$ ($HighestSalesGrowth$) indicates whether the segment's sales growth is above the firm average (highest within the firm). Firm level controls, as well as firm-segment and industry-by-year fixed effects are included. p-values from F-tests for the inequalities of coefficients on the relevant interaction terms between constrained and unconstrained samples are reported as well. Standard errors are adjusted for clustering at the firm-segment level (*** p<0.01, ** p<0.05, * p<0.1).

Panel A. Financial Constraints and the Impact of Hedge Fund Activism on the Diversification Discount

	Dependent Variable: Goodwill Adj. Excess q						Dependent Variable: BDS Excess q					
	Kaplan-Zingales		Credit Rating		Hoberg-Maksimovic		Kaplan-Zingales		Credit Rating		Hoberg-Maksimovic	
	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.	Const.	Unconst.
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	0.416***	0.038	0.175**	0.016	0.299*	0.062	0.392***	0.080	0.136**	0.164	0.277**	0.139
	(0.158)	(0.101)	(0.074)	(0.126)	(0.166)	(0.105)	(0.121)	(0.080)	(0.064)	(0.125)	(0.125)	(0.102)
After	-0.239*	-0.074	-0.133	0.068	-0.146	-0.110	-0.165*	-0.061	-0.086	0.024	-0.080	-0.132
	(0.133)	(0.105)	(0.091)	(0.102)	(0.115)	(0.092)	(0.096)	(0.075)	(0.072)	(0.087)	(0.072)	(0.081)
log(MV)	0.031	0.235***	-0.063	-0.020	0.185	-0.011	-0.027	0.145**	-0.092**	-0.056	0.088	-0.086
	(0.060)	(0.084)	(0.068)	(0.053)	(0.111)	(0.071)	(0.034)	(0.062)	(0.045)	(0.035)	(0.082)	(0.067)
log(Age)	0.419	-0.043	1.008*	-0.442	-0.020	-0.334	-0.168	-0.390	0.361	-0.785	-0.602	-0.683
	(0.566)	(0.847)	(0.557)	(0.591)	(0.599)	(0.668)	(0.434)	(0.570)	(0.420)	(0.527)	(0.563)	(0.638)
p: $T \times A$ Con>Uncon	0.02		0.14		0.11		0.02		0.58		0.20	
Observations	396	498	510	441	236	244	396	498	510	441	236	244
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.770	0.906	0.892	0.865	0.893	0.924	0.732	0.813	0.843	0.752	0.855	0.839

Table 7. Does Hedge Fund Activism Matter More for Financially Constrained Firms? (continued)

Panel B. Financial Constraints and the Impact of Hedge Fund Activism on Segment Investment Efficiency

	Dependent Variable: Segment Investment											
	Kaplan-Zingales				Credit Rating				Hoberg-Maksimovic			
	Constrained		Unconstrained		Constrained		Unconstrained		Constrained		Unconstrained	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	-0.140	-0.124	-0.269	-0.166	-0.078	0.018	0.336	0.307	-0.081	-0.029	0.227	0.282
	(0.396)	(0.391)	(0.290)	(0.290)	(0.351)	(0.359)	(0.269)	(0.262)	(0.371)	(0.363)	(0.454)	(0.429)
Treat × After × High Sales Growth	0.506***		0.289		0.740***		0.134		0.488*		0.246	
	(0.193)		(0.219)		(0.260)		(0.182)		(0.284)		(0.237)	
Treat × After × Highest Sales Growth		0.589***		0.089		0.522*		0.261		0.489*		0.195
		(0.195)		(0.221)		(0.272)		(0.190)		(0.289)		(0.213)
Treat × Sales Growth	0.170	0.133	1.019	1.209*	0.174	0.334	0.912	0.842	0.457	0.476	1.782**	1.845**
	(0.578)	(0.573)	(0.668)	(0.674)	(0.811)	(0.815)	(0.583)	(0.580)	(0.844)	(0.834)	(0.868)	(0.836)
After × Sales Growth	-0.429	-0.475	-2.341***	-2.179***	-1.609**	-1.366*	-0.637	-0.709	-0.475	-0.445	-1.274	-1.199
	(0.526)	(0.532)	(0.815)	(0.799)	(0.739)	(0.736)	(0.566)	(0.570)	(0.818)	(0.801)	(0.966)	(0.905)
After	0.125	0.112	0.072	0.071	0.169	0.188	-0.387	-0.387	-0.151	-0.142	-0.298	-0.310
	(0.402)	(0.400)	(0.241)	(0.242)	(0.311)	(0.314)	(0.272)	(0.272)	(0.402)	(0.401)	(0.407)	(0.405)
Sales Growth	0.409	0.432	0.278	0.216	0.456	0.383	-0.100	-0.062	-0.548	-0.559	0.203	0.168
	(0.475)	(0.477)	(0.458)	(0.456)	(0.374)	(0.373)	(0.604)	(0.607)	(0.620)	(0.616)	(0.545)	(0.534)
log(MV)	-0.009	-0.021	0.671***	0.650***	0.497**	0.471**	0.346	0.348	-0.685	-0.698	0.252	0.260
	(0.207)	(0.207)	(0.208)	(0.212)	(0.214)	(0.215)	(0.225)	(0.224)	(0.738)	(0.734)	(0.351)	(0.353)
log(Age)	-1.056	-1.322	-2.507	-2.641	-2.945	-2.755	-1.703	-1.751	4.879	4.890	-2.861	-3.045
	(1.837)	(1.849)	(2.947)	(2.942)	(4.152)	(4.159)	(2.365)	(2.376)	(4.157)	(4.142)	(5.049)	(5.073)
p: $T \times A \times H$ Con>Uncon	0.23	0.04			0.03	0.22			0.26	0.21		
Observations	1,410	1,410	1,577	1,577	1,486	1,486	1,539	1,539	899	899	929	929
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.076	0.076	0.170	0.169	0.143	0.140	0.107	0.108	0.072	0.072	0.102	0.102

Table 8. CEO Turnover, Internal Connections, and the Effect of Hedge Fund Activism

This table presents results from testing whether specific types of CEO turnovers subsequent to hedge fund activism amplify its effects on the diversification discount. I run the following triple difference regression:

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times Turnover_i + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

$Treat$ is a dummy variable indicating whether the firm is a targeted firm, and $After$ is a dummy variable indicating whether the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms). $Turnover$ is a dummy variable equal to one if the firm was targeted and subsequently experienced a CEO turnover within the next five years. I denote a turnover where an incumbent CEO was replaced by a firm outsider (insider) as $TurnoverOut$ ($TurnoverIn$). I report results from using three versions of q to compute Excess q (i.e., $q - q'$ where q' is the asset-weighted average of segment qs), (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In the first two methods, (i) and (ii), segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level. (*** p<0.01, ** p<0.05, * p<0.1).

	Dependent Variable:								
	Excess Tobin's q			Goodwill Adj. Excess q			BDS Excess q		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Treat × After	0.125**	0.150***	0.128**	0.101**	0.123**	0.101*	0.155***	0.180***	0.158***
	(0.048)	(0.055)	(0.053)	(0.046)	(0.055)	(0.052)	(0.046)	(0.051)	(0.050)
Treat × After × TurnoverOut	0.143*		0.143*	0.146*		0.146*	0.146**		0.146**
	(0.084)		(0.083)	(0.086)		(0.086)	(0.070)		(0.069)
Treat × After × TurnoverIn		-0.010	-0.011		-0.001	-0.002		-0.009	-0.010
		(0.058)	(0.055)		(0.056)	(0.053)		(0.056)	(0.054)
After	-0.018	-0.014	-0.018	-0.009	-0.005	-0.009	-0.039	-0.035	-0.040
	(0.047)	(0.047)	(0.047)	(0.048)	(0.048)	(0.048)	(0.046)	(0.046)	(0.047)
log(MV)	0.065**	0.062**	0.065**	0.085***	0.082***	0.085***	0.056**	0.053*	0.056**
	(0.025)	(0.027)	(0.025)	(0.026)	(0.028)	(0.026)	(0.026)	(0.028)	(0.026)
log(Age)	-0.244	-0.275	-0.242	-0.400*	-0.433**	-0.399*	-0.413*	-0.444**	-0.410*
	(0.212)	(0.210)	(0.211)	(0.207)	(0.206)	(0.205)	(0.216)	(0.212)	(0.215)
Observations	706	706	706	706	706	706	706	706	706
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.790	0.788	0.790	0.825	0.823	0.825	0.765	0.762	0.765

Table 9. Payout Policy and the Effect of Hedge Fund Activism

This table presents results from testing whether increases in payout subsequent to hedge fund activism amplifies its effects on the diversification discount. I run the following triple difference regression:

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times IncrPayout_i + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

$Treat$ is a dummy variable indicating whether the firm is a targeted firm, and $After$ is a dummy variable indicating whether the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms). $IncrPayout$ is a dummy variable equal to one if the firm was targeted and subsequently increases its overall payout ($IncrPayout$) or dividends ($IncrDiv$). Excess q is expressed as $q - q'$ or $log(q/q')$, where q' is the asset-weighted average of segment qs. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In the first two methods, (i) and (ii), segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level. (*** p<0.01, ** p<0.05, * p<0.1).

	Dependent Variable:											
	Excess Tobin's q				Goodwill Adj. Excess q				BDS Excess q			
	$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	0.138*	0.156**	0.088*	0.088**	0.151*	0.177**	0.082*	0.086**	0.096	0.116**	0.070*	0.081**
	(0.077)	(0.065)	(0.045)	(0.038)	(0.089)	(0.074)	(0.044)	(0.036)	(0.060)	(0.053)	(0.038)	(0.034)
Treat × After × IncrPayout	0.151*		0.066		0.188**		0.070		0.141**		0.072*	
	(0.085)		(0.051)		(0.092)		(0.048)		(0.069)		(0.043)	
Treat × After × IncrDiv		0.212**		0.117**		0.253**		0.111**		0.187**		0.094**
		(0.094)		(0.048)		(0.098)		(0.043)		(0.086)		(0.044)
After	-0.048	-0.042	-0.007	-0.002	-0.070	-0.064	-0.007	-0.004	-0.016	-0.012	-0.006	-0.003
	(0.062)	(0.062)	(0.035)	(0.035)	(0.078)	(0.077)	(0.035)	(0.034)	(0.050)	(0.050)	(0.031)	(0.031)
log(MV)	-0.022	-0.026	0.008	0.004	0.000	-0.005	0.029	0.026	0.015	0.011	0.019	0.017
	(0.031)	(0.032)	(0.018)	(0.019)	(0.037)	(0.038)	(0.019)	(0.019)	(0.025)	(0.026)	(0.018)	(0.018)
log(Age)	0.014	-0.010	0.025	0.012	-0.269	-0.298	-0.142	-0.154	-0.189	-0.211	-0.122	-0.133
	(0.150)	(0.152)	(0.103)	(0.103)	(0.193)	(0.193)	(0.120)	(0.119)	(0.135)	(0.135)	(0.090)	(0.090)
Observations	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,434	1,434
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.772	0.773	0.810	0.811	0.808	0.809	0.843	0.844	0.736	0.737	0.766	0.766

Table 10. Increasing Internal Efficiency vs. Refocusing Firm Boundary

This table presents results from testing whether industry refocusing subsequent to hedge fund activism drives its effects on the diversification discount. I run the following triple difference regression:

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times Refocus_i + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

$Treat$ is a dummy variable indicating whether the firm is a targeted firm, and $After$ is a dummy variable indicating whether the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms). $Refocus$ is a dummy variable equal to one if the firm was targeted and subsequently reduces the number of its segments ($RefocusSeg$) or segment industries at the 2 digit SIC level ($RefocusSIC$). Excess q is expressed as $q - q'$ or $log(q/q')$, where q' is the asset-weighted average of segment qs. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In the first two methods, (i) and (ii), segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. Standard errors are adjusted for clustering at the firm level. (*** p<0.01, ** p<0.05, * p<0.1).

	Dependent Variable:											
	Excess Tobin's q				Goodwill Adj. Excess q				BDS Excess q			
	$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	0.164***	0.149**	0.107***	0.102***	0.188***	0.169**	0.097***	0.093**	0.183***	0.171***	0.119***	0.116***
	(0.062)	(0.067)	(0.036)	(0.038)	(0.071)	(0.074)	(0.036)	(0.037)	(0.056)	(0.060)	(0.034)	(0.035)
Treat × After × RefocusSIC	-0.138		-0.073		-0.187		-0.076		-0.062		-0.028	
	(0.135)		(0.070)		(0.148)		(0.067)		(0.128)		(0.065)	
Treat × After × RefocusSeg		-0.069		-0.044		-0.094		-0.047		-0.018		-0.016
		(0.115)		(0.061)		(0.126)		(0.059)		(0.106)		(0.055)
After	-0.004	-0.005	0.007	0.006	-0.015	-0.016	0.010	0.010	-0.039	-0.040	-0.019	-0.019
	(0.056)	(0.056)	(0.032)	(0.032)	(0.066)	(0.066)	(0.033)	(0.033)	(0.050)	(0.050)	(0.029)	(0.030)
log(MV)	0.037	0.039	0.030	0.031	0.059	0.062	0.049**	0.050**	0.058*	0.059*	0.040**	0.040**
	(0.035)	(0.035)	(0.019)	(0.019)	(0.041)	(0.041)	(0.020)	(0.020)	(0.032)	(0.031)	(0.018)	(0.018)
log(Age)	-0.099	-0.089	-0.062	-0.056	-0.344**	-0.330**	-0.180**	-0.174**	-0.212	-0.209	-0.136*	-0.134
	(0.141)	(0.143)	(0.078)	(0.080)	(0.155)	(0.156)	(0.078)	(0.079)	(0.140)	(0.141)	(0.081)	(0.081)
Observations	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768	1,768
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.724	0.724	0.752	0.752	0.761	0.760	0.785	0.785	0.659	0.659	0.710	0.710

Table 11. Mean Reversion Test

This table presents results from mean reversion tests of the diversification discount, where I run OLS regressions of the changes in Excess q on the lagged levels of Excess q, allowing for targeted conglomerates to have a different slope.

$$\%\Delta Excess\ q_{i,t} = \beta_1 \cdot Excess\ q_{i,t-1} + \beta_2 \cdot Excess\ q_{i,t-1} \times Treat_i + \phi_i + \epsilon_{i,t}$$

Excess q is expressed as $q - q'$ or $log(q/q')$, where q' is the asset-weighted average of segment qs. $\%\Delta Excess\ q_{i,t}$ is the percentage change in Excess q from $t-1$ to t. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In the first two methods, (i) and (ii), segment q is the average q of single segment firms in same SIC 2-digit industry as the segment. $Treat$ is a dummy variable indicating whether the firm is a targeted firm. Firm fixed effects are included. Standard errors are adjusted for clustering at the firm level (*** p<0.01, ** p<0.05, * p<0.1).

	%D(Excess Tobin's q)		%D(Goodwill Adj. Excess q)		%D(BDS Excess q)	
	$q - q'$	$log(q/q')$	$q - q'$	$log(q/q')$	$q - q'$	$log(q/q')$
	(1)	(2)	(3)	(4)	(5)	(6)
Lag(Excess Tobin's q)	0.165	0.286				
	(0.268)	(0.400)				
Lag(Excess Tobin's q) × Treat	0.009	-0.116				
	(0.337)	(0.513)				
Lag(Goodwill Adj. Excess q)			-0.014	-0.055		
			(0.191)	(0.286)		
Lag(Goodwill Adj. Excess q) × Treat			0.243	0.426		
			(0.285)	(0.489)		
Lag(BDS Excess q)					-2.747	-6.700
					(3.920)	(6.080)
Lag(BDS Excess q) × Treat					8.839	13.485
					(7.615)	(10.536)
Observations	1,408	1,408	1,408	1,408	1,408	1,408
Firm FE	Y	Y	Y	Y	Y	Y
Adj R^2	0.002	0.003	0.049	0.047	0.043	0.040

A Appendix

Table A.1. Variables

Variable Name	Description
Tobin's q	Market value of assets ($at + csho \times prcc_f - ceq - txdb$) divided by book value of assets (at)
Excess q	Difference between the firm's q and its synthesized q' imputed from the standalone q of each of its segments, where segment qs are approximated by the average q of single segment firms in the same 2 digit SIC industry as the segments. Expressed either as $q - q'$ or $log(q/q')$
Excess Tobin's q	Excess q computed using baseline Tobin's q
Goodwill Adjusted Excess q	Excess q computed using q adjusted for goodwill accounting bias by subtracting goodwill from book assets (see Custódio (2014))
BDS Excess q	Excess q computed using q estimates free from using single segment firms. Each year, a cross-sectional quantile regression is run without intercept, fitting conglomerate qs onto their divisional sales exposure to each of the 10 Fama-French industries. The coefficients from these regressions produce annual estimates of the median q for conglomerate divisions in each industry (see Boguth, Duchin, and Simutin (2018))
Treat	Firm level dummy variable equal to one if the conglomerate firm is a target of hedge fund activism, and zero otherwise
After	Firm-year level dummy variable which indicates whether the observation is within five years ($t+1$ to $t+5$) after an activism event (for targeted firms) or pseudo-event year (for matched firms)
High InvOpp	Dummy variable equal to one if segment j's investment opportunity is above firm i's average as of year $t-1$
Highest InvOpp	Indicator for whether the segment has the best investment opportunity within the firm
Low InvOpp	Indicator for whether the segment has below average investment opportunity within the firm
Lowest InvOpp	Indicator for whether the segment has the worst investment opportunity within the firm
InvOpp	
Segment q	Average q of single-segment standalone firms in the same 2-digit SIC industry as the segment, adjusted for the accounting of goodwill in book assets following Custódio (2014)
Sales Growth	Change in segment sales from $t-1$ to t, divided by segment sales in $t-1$
Segment CFR	Residual from regression of segment cash flow (scaled by firm total assets) on segment sales growth, segment BDS q, and industry-by-year fixed effects
Other Segment CFR	Sum of all Segment CFR from other segments within the same firm

Financial Constraints	
Kaplan and Zingales (1997)	Firms are classified as constrained if their computed KZ index values lie above the yearly median, and unconstrained otherwise, where KZ index is computed for each firm each year as 1.002×Cash flow+0.283×Tobin's Q+3.139×Debt−39.368×Dividends−1.315×Cash (see Kaplan and Zingales (1997); Lamont, Polk, and Saá-Requejo (2001))
Credit Rating	Firm with no available rating but positive debt is classified as constrained. If the firm has a valid rating or does not have any debt, it is categorized as unconstrained (see Almeida, Campello, and Weisbach (2004))
Hoberg and Maksimovic (2015)	Text-based measure developed by Hoberg and Maksimovic (2015), who analyze texts of management discussions on financing needs and firm liquidity disclosed in 10-K statements to construct an index of financial constraints. Firms are identified as constrained if their index values lie above the annual median, and unconstrained otherwise
TurnoverOut	Dummy variable equal to one if the firm was targeted and subsequently experienced a CEO turnover within the next five years, where an incumbent CEO was replaced by a firm outsider - defined as a person who had joined the firm less than two years ago following Parrino (1997)
TurnoverIn	Dummy variable equal to one if the firm was targeted and subsequently experienced a CEO turnover within the next five years, where an incumbent CEO was replaced by a firm insider - defined as a person who had joined the firm more than two years ago following Parrino (1997)
IncrPayout	Indicator variable equal to one if the firm was targeted and subsequently increased either its overall payout (i.e., inclusive of repurchases) as a fraction of assets
IncrDiv	Indicator variable equal to one if the firm was targeted and subsequently increased either its dividend payments as a fraction of assets
RefocusSIC	Dummy variable equal to one if the firm is a target that reduces the average number of its segment industries at the 2 digit SIC level
RefocusSeg	Dummy variable equal to one if the firm is a target that reduces the average number of its business segments
GDiv	Dummy variable equal to one if the firm is geographically diversified (i.e., has positive foreign sales according to Compustat geographical segment files) as of the year before the activism event (or pseudo-event), and zero otherwise
log(MV)	Natural logarithm of lagged market value of the firm ($cshoxprcc_f$)
log(Age)	Natural logarithm of lagged age of the firm
ROA	Operating profits divided by lagged assets, either at firm or segment level

Table A.2. Geographical Diversification and the Effect of Hedge Fund Activism

This table presents results from testing the impact of hedge fund activism on subsamples each consisting of geographically (i.e., globally) diversified industrial conglomerates and domestic industrial conglomerates. Firms are classified as geographically diversified if they have positive foreign sales according to Compustat geographical segment files, prior to the activism event (or pseudo-event) year. In Panel A, I run firm-year level diff-in-diff regressions testing the differences in the diversification discount between targeted and matched conglomerate firms before and after hedge fund activism events.

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

Excess q is expressed as $q - q'$ or $log(q/q')$, where q' is the asset-weighted average of segment qs. I report results from using three versions of q to compute Excess q, (i) Tobin's q, (ii) q adjusted for the accounting of goodwill in book assets following Custódio (2014), and (iii) model-free estimates of segment qs without relying on standalone firms via quantile regressions following Boguth, Duchin, and Simutin (2018). In the first two methods, (i) and (ii), segment q is the average q of single segment firms in the same SIC 2-digit industry as the segment. $Treat$ is a dummy variable indicating whether the firm is a targeted firm, and $After$ is a dummy variable indicating whether the firm observation is in the years subsequent to the activism event year (or pseudo-event year for matched firms). In Panel B, I alternatively run the following triple difference regression on the pooled sample:

$$Excess\ q_{i,t} = \beta_1 \cdot Treat_i \times After_{i,t} + \beta_2 \cdot Treat_i \times After_{i,t} \times GDiv_i + \delta \cdot After_{i,t} \times GDiv_i + \lambda \cdot After_{i,t} + \gamma \cdot Controls_{i,t-1} + \phi_i + \theta_t + \epsilon_{i,t}$$

$GDiv$ is a dummy variable equal to one if the firm is geographically diversified as of the year before the activism event (or pseudo-event), and zero otherwise. Firm level control variables include the natural logarithm of lagged firm market capitalization and firm age. Firm fixed effects and industry-by-year fixed effects are included as well. At the bottom of Panel A, p-values from F-tests for the inequality of coefficients on the interaction terms between geographically diversified ($GDiv = 1$) and undiversified ($GDiv = 0$) samples are reported as well. Standard errors are adjusted for clustering at the firm level (*** p<0.01, ** p<0.05, * p<0.1).

Panel A. Geographical Diversification and the Impact of Hedge Fund Activism on the Diversification Discount

	Dependent Variable: Excess Tobin's q				Dependent Variable: Goodwill Adj. Excess q				Dependent Variable: BDS Excess q			
	$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$		$q - q'$		$log(q/q')$	
	GDiv=1	GDiv=0	GDiv=1	GDiv=0	GDiv=1	GDiv=0	GDiv=1	GDiv=0	GDiv=1	GDiv=0	GDiv=1	GDiv=0
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Treat × After	0.222**	0.212*	0.111**	0.131**	0.241**	0.272*	0.091*	0.162**	0.195***	0.152*	0.116***	0.098**
	(0.092)	(0.113)	(0.049)	(0.062)	(0.104)	(0.141)	(0.047)	(0.066)	(0.070)	(0.081)	(0.042)	(0.048)
After	-0.139	0.007	-0.064	0.029	-0.137	-0.028	-0.039	0.003	-0.076	0.021	-0.058	0.031
	(0.090)	(0.114)	(0.045)	(0.065)	(0.108)	(0.132)	(0.045)	(0.065)	(0.070)	(0.073)	(0.042)	(0.047)
log(MV)	0.018	-0.043	0.064**	-0.036*	0.055	-0.034	0.092***	-0.016	0.066	0.000	0.084***	-0.018
	(0.065)	(0.036)	(0.030)	(0.018)	(0.074)	(0.058)	(0.029)	(0.026)	(0.041)	(0.031)	(0.024)	(0.018)
log(Age)	-0.048	-0.395	-0.032	-0.386**	-0.374	-0.669	-0.213	-0.528***	-0.261	-0.429*	-0.158	-0.484***
	(0.256)	(0.286)	(0.143)	(0.168)	(0.351)	(0.412)	(0.191)	(0.194)	(0.231)	(0.255)	(0.120)	(0.137)
p: $T \times A$												
GDiv:1=GDiv:0	0.95		0.80		0.86		0.38		0.69		0.78	
Observations	813	368	813	368	813	368	813	368	813	368	813	368
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adj R^2	0.773	0.804	0.804	0.865	0.809	0.814	0.839	0.880	0.727	0.766	0.738	0.849

Table A.2. Geographical Diversification and the Effect of Hedge Fund Activism (continued)

Panel B. Geographical Diversification and the Impact of Hedge Fund Activism (Pooled Regressions)

	Dependent Variable: Excess Tobin's q		Goodwill Adj. Excess q		BDS Excess q	
	$q - q'$	$log(q/q')$	$q - q'$	$log(q/q')$	$q - q'$	$log(q/q')$
	(1)	(2)	(3)	(4)	(5)	(6)
Treat × After	0.230***	0.151***	0.265**	0.160***	0.153**	0.108**
	(0.089)	(0.051)	(0.105)	(0.051)	(0.069)	(0.043)
Treat × After × GDiv	-0.005	-0.037	-0.006	-0.056	0.038	0.006
	(0.129)	(0.073)	(0.151)	(0.073)	(0.100)	(0.062)
After × GDiv	-0.038	-0.031	-0.065	-0.030	-0.092	-0.068
	(0.101)	(0.058)	(0.115)	(0.056)	(0.078)	(0.048)
After	-0.037	0.005	-0.046	0.003	0.029	0.030
	(0.078)	(0.046)	(0.094)	(0.048)	(0.058)	(0.037)
log(MV)	-0.016	0.011	0.008	0.032*	0.020	0.022
	(0.031)	(0.018)	(0.037)	(0.018)	(0.025)	(0.017)
log(Age)	0.004	0.020	-0.282	-0.147	-0.199	-0.127
	(0.155)	(0.104)	(0.195)	(0.119)	(0.135)	(0.088)
Observations	1,434	1,434	1,434	1,434	1,434	1,434
Firm FE	Y	Y	Y	Y	Y	Y
Industry-by-Year FE	Y	Y	Y	Y	Y	Y
Adj R^2	0.770	0.810	0.807	0.843	0.735	0.766