

Shepherds in Wolves' Clothing? Hedge Fund Activism Using Corporate Divestitures *

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Abstract: With the rise of a new wave of hedge fund activism, debate has been raging over whether activist hedge funds need to be regulated, especially since renowned critics have labelled them as “wolves,” whose goals is to extract short-term profits. Using a sample of hand-collected activist-initiated divestitures, this paper examines the ability of hedge fund activists to create long-term value and compares their efficiency to other shareholder activists. The hedge fund activists in our sample create tangible long-term improvements in firm value not by initiating the sale of the target but by improving firm profitability through selloffs involving large asset reductions. Our results are consistent even after addressing endogeneity concerns.

JEL classification: G23; G34

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“The ‘activist’ business model is designed to take from those that work hard to build long-term value creating enterprises... The “activist” has no responsibility or accountability for what they say or do as they attack our public companies. This timely legislation (i.e. S.1744 Brokaw Act) attacks the tools that enable the activist.” June 2018 Endorsement by Henry C. Newell, Former CEO of Wausau Paper, for Brokaw Act of Senator Tammy Baldwin

I. Introduction

The existing literature on activists has been focused primarily on hedge funds, and in particular on hedge fund-initiated M&As. In doing so, the literature has been missing on the fact that not all activists are hedge funds, and that these other activists have incentives and objectives that are fundamentally different from those of hedge funds. We focus on activist-initiated divestitures, and examine whether their drivers and consequences differ between hedge fund activists (hereafter HFAs) vs. other activists. Norli, Ostergaard, and Schindele (2015) classify the shareholder activists into eight categories: hedge fund activists, financial institutions, private equity companies, investment managers, investment companies, pension funds, industrial owners, and shareholder committees. In our hand-collected sample, over one third of all activists are non-hedge fund activists (hereafter Other activists). Employing a difference-in-differences approach, we test whether the change in profitability around the divestiture is different with HFA intervention. Then, using divestitures involving no activist as our counterfactual, we test whether the change in profitability around the divestiture is incrementally different between HFA and other activists. We find that target firm profitability post the divestiture is higher in HFA-initiated divestitures than in those initiated by other activists. Exploring endogeneity concerns, according to which HFAs target firms that were to divest beforehand, we find evidence that HFA target firms are not more likely to divest ex-ante. Exploring the notion that HFA-initiated divestitures improve performance by facilitating an M&A, we find evidence that HFA-initiated divestitures do not increase the likelihood of eventual takeover. Taken together, our results suggest that hedge funds are better than other activists in improving firm focus and resource deployment through corporate divestitures.

There has been a surge in the popularity of divestitures among shareholder activists, and, as seen above, there has been a growing number of studies analysing the impact of activist-initiated divestitures. Desai and Jain (1999) and John and Ofek (1995) propose that better performance for the remaining assets after the divestiture stems from eliminating negative synergies between divested and remaining assets. Clifford (2008) focuses on active vs. passive

hedge funds, showing that active ones are associated with larger asset reductions, providing the first indirect evidence towards HFA-initiated divestitures. Greenwood and Schor (2009) suggest that targets of activists are more likely to get acquired, and this could be the case with targets of hedge fund activist-initiated divestitures, especially since corporate divestitures (especially spinoffs) increase the probability of takeovers (Chemmanur and Yan (2004)). Direct evidence was further established by Brav, Jiang, and Kim (2015). They focus on manufacturing establishments which experience HFA-initiated plant sales or closures. They suggest that hedge fund activists improve production efficiency in the long-term through capital redeployment. Gantchev, Sevilir, and Shivdasani (2019) find that activist targets are more likely to undertake divestitures that lead to a reduction in business segments, thereby implying the activist-initiated divestitures can curb empire building. Hege and Zhang (2019) examine the impact of hedge fund activism on the overall corporate transaction markets. They found that targets of hedge fund activism—as well as firms exposed to hedge fund threats—increase divestitures, and that activist targets who undertake divestitures experience efficiency gains in the long run.

Our paper complements this literature by answering several remaining open questions: Does the positive effect on HFAs hold for other shareholder activists such as pension funds and mutual funds? Is the value creation by HFAs through divestitures restricted to primarily manufacturing firms? Is value creation feasible only when the plants are sold or can activist hedge funds create value by spinning off the underperforming subsidiary, thereby allowing the parent company to retain control? We attempt to answer those questions by disaggregating activist-initiated divestitures in several regards. To the best of our knowledge, this paper is the first to examine the incremental effect of hedge fund activists compared to other shareholder activists on the value creation through divestitures. We also examine not only selloffs, but also spinoffs, in which the target firm remains in control.

Our main research question is whether and how activist hedge funds are more efficient in creating value through divestitures than other shareholder activist. The unique features of HFAs such as organizational form and interventionist tactics may enable them to be more efficient than other activists. The interventionist tactics, in particular, is a unique feature of HFAs that can prove advantageous while waging activist battles. These tactics include requesting meetings with the company chairman or the CEO and indicating willingness to become involved in board elections (Becht et al. (2017)). Paul Singer's Elliott Management is

one of the most indomitable HFAs. The following excerpt, describing Elliott's activist efforts, provides an excellent example of how far HFAs go in ensuring the success of their campaigns:

“An analyst that follows Elliott argues that the fund's huge size ensures that it has the resources needed to support their activist campaigns over long periods, which also sets it apart from other activist managers. The fund famously held out for 15 years before reaching a deal with the Argentinian government over debt it owned.

Indeed, proxy solicitors advising both companies and targets argue that Elliott Management will spare no expense in its campaigns, coming up with unusual and innovative strategies to convince investors to back their efforts. In Australia, Elliott paid for billboard advertisements in Sydney, Melbourne, Brisbane, and Perth urging shareholders to “Think Smart,” a play on a slogan employed by the fund's target, BHP Billiton plc. In another campaign against aluminium giant Alcoa, the fund, in an unprecedented move, even mailed thousands of mini-player devices to retail investors, each with one short four-minute video explaining the activist's position at a target company.” (Orol (2018)).

The aforementioned excerpt implies that HFAs are more pro-active compared to that of other activists. However, there is no evidence on whether this pro-activist approach makes them more efficient than other activists.

We hand-collect a unique sample of all divestitures, including both selloffs and spinoffs, from 1994 to 2016, allowing us to explore the differences between HFA-initiated divestitures, divestitures involving other activists, and divestitures with no activist intervention. Several findings emerge. We document that announcement returns around HFA-initiated divestitures are higher than those around divestitures initiated by other activists. While, to the best of our knowledge, we are the first to study this incremental effect of HFAs in the short-term, we believe that our main contribution relies in suggesting that this effect is backed up by an expectation by market participants for improved profitability. First, we show that the incremental effect of HFAs on the long-term firm profitability is higher, in the wake of the completion of divestitures, compared to other activists. This effect can be seen up to two years post the completion of divestiture. We further find that the type of divestiture plays a major role in the ability of HFAs to create long-term value. More specifically, we find that the incremental effect of HFAs on the long-term firm profitability is higher when the divestiture is a selloff. We find that activists in general, and HFAs in particular, do not create long-term value through spinoffs.

It is possible that the increase in profitability is driven by changes at the target firm, perhaps initiated by the activist, in addition to the divestiture. In order to isolate the incremental effect of divestiture on firm-level profitability, we examine how the size of the divestiture, measured by the percentage reduction in assets, attenuates the change in profitability. We focus on selloffs, in which divestitures necessarily translate to a reduction in firm assets. We find that the incremental effect of HFAs on the long-term firm profitability is higher when the asset reduction through selloffs is larger. That is, long-term value creation is higher where the divested assets represent a large portion of the target firm. This suggests that HFAs create long-term value by streamlining their targets through selling off underperforming subsidiaries, thereby enhancing firm focus and resource deployment.

We next explore the possible channels through which HFAs create value. First, we examine the speed of resolution as a measure of activist efficiency. We find that while the speed of resolution of spinoffs is roughly the same for both HFAs (approximately 10 months), and other activists (approximately 9.5 months), HFAs (approximately 10 months) achieved selloffs at a faster rate compared to other activists (approximately 13 months). This might be due to the interventionist tactics employed by activist hedge funds (Becht et al. (2017)) – as well as the fact that they solicit support from other activists to form “wolf-packs” (Briggs (2007); Coffee and Palia (2016)) and attempt to win the support of institutional investors and proxy advisors (Alexander et al. (2010)). This result further supports the notion that HFAs are more efficient than other activists. Next, we explore the M&A channel, according to which divestitures initiated by HFAs facilitate an eventual acquisition of the target firm. Greenwood and Schor (2009) suggest that the goal of HFAs is to create value through the sale of their targets. While there is obvious value creation through mergers, the value creation is limited to short-term stock price boosts and takeover premium. As a result, HFAs are viewed as short-term players whose goal is to make a “quick buck” for their investors. We find no evidence of divestitures initiated by HFAs increasing the probability of takeovers. Our findings thus do not support the notion that HFAs create tangible improvements in firm value primarily through the sale of their targets.

We also acknowledge an alternative explanation to the HFA effect on post-divestiture profitability, according to which HFAs are better in identifying firms that are anyway prone to divest and target them in order to free ride. We attend to this endogeneity concern by examining whether HFA are ex-ante more likely to target firms prone to divest. Kolev (2016) finds that the single strongest predictor of divestitures was prior divestitures. We thus control for prior

divestiture experience. More specifically, we analyse whether HFAs are more likely to be involved in subsequent divestitures – in particular, if the target firm is an established serial divestor. We find no evidence supporting the takeover channel, as HFAs do not appear to simply target firms that are expected to divest.

We also test whether HFAs are more likely to engage in selloffs and spinoffs. It is possible that divestitures improve profitability regardless of activism, only HFAs are simply more likely to implement such value-enhancing strategy. Additional analyses suggest that while the value creation channel is through selloffs, activists in general, and HFAs in particular, have no preference for a certain type of divestiture (spinoff or selloff). Furthermore, we find no evidence of wealth transfer from bondholders to shareholders as a consequence of divestitures initiated by HFAs (Klein and Zur (2011)). On the contrary, we find evidence that bondholders actually gain in the long-term as a result of divestitures initiated by HFAs.

Our paper contributes to the activism literature in several regards. Most studies on hedge fund activism focus on a comparison of hedge fund activist targets with targets involving no activist. However, HFAs are only one category of shareholder activism, while other activists, such as mutual funds and pension funds, have been waging activist battles long before HFAs. By analysing the value creation through divestitures, this paper is the first to examine the incremental effect of HFAs compared to other activists.

We also contribute to the existing literature on hedge fund activism and divestitures. Existing studies have mostly focused on asset sales initiated by HFAs. Our paper not only focuses on selloffs, but also explores the impact of spinoffs initiated by shareholder activists (both HFAs and other activists). Given the different features of spinoffs and selloffs¹, our findings lend support to the fact that the type of divestiture and the size of the divestiture² play a vital role in the value creation through divestitures initiated by HFAs. We further contribute to the existing literature on hedge fund activism and divestitures by analysing the impact of activist-initiated divestitures across all sectors. The cases of Carl Icahn’s fight with eBay (Adams (2018)) and

¹ In a spinoff, the subsidiary retains its assets, employees, and intellectual property from the parent company, and the parent company lends support to the subsidiary by investing equity in the newly formed firm and by providing legal, technology, or financial services; whereas, in a selloff, the parent company concedes control of the subsidiary to another firm.

² We find that the incremental effect of HFAs on long-term firm profitability, compared to other activists, is visible in selloffs and not spinoffs. Furthermore, firms that undertake selloffs involving large asset reductions are found to have experienced higher firm profitability post the completion of the divestiture.

Starboard Value's fight with Macy's (Benoit and Kapner (2015)) highlight how HFAs are using divestitures to create value in sectors other than manufacturing.

Our study also contributes to the ongoing debate over whether HFAs present a critical problem for US public firms, their investors, and the economy. While one strand of literature³ suggests that HFAs improve the performance of targeted firms and benefit all shareholders by promoting managerial and directorial accountability⁴, another strand of literature contends that the substantial gains realised by hedge funds through activism impair the long-term performance of firms⁵, or hinder the wealth transfer from other stakeholders (Klein and Zur (2011)). Our findings suggest that HFAs are more than able to achieve long-term value creation and will not sacrifice it for the sake of making a quick buck for their investors. Through divestitures, and more specifically, selloffs, HFAs actually shepherd their targets in creating long-term value.

Finally, our paper also plays an advisory role for policymakers and investors: value creation by HFAs is not restricted to upticks in stock prices. HFAs are in for the long haul while undertaking activist engagements. Other activists could be nudged towards partnering with HFAs rather than undertaking their own activist engagements, especially since HFAs (unlike other activists) are free of any major conflicts of interest and have enough flexibility to undertake activist engagements that create long-term value.

The remainder of the paper is structured as follows. Section II outlines the procedure of data collection and describes the data samples used for this paper. Section III outlines the methodology used for the empirical analysis. Section IV outlines the results. Section V describes the additional analyses conducted to provide a more comprehensive understanding of the impact of activist-initiated divestitures. Finally, Section VI concludes the paper.

II. Data

The sample used in this study is obtained from our hand-collected central shareholder activism database (hereafter, CSAD), constructed using Schedule 13D (hereafter, SC 13D) filings that are available from the Security and Exchange Commission's (SEC) EDGAR database.

³ Brav, Jiang, and Kim (2015); Brav et al. (2018)

⁴ Bebchuk, Brav, and Jiang (2015); Boyson, Gantchev, and Shivdasani (2017)

⁵ Cremers et al. (2015)

Our CSAD consists of 6,380 activism events by 872 activists spanning a time period of 22 years, from 1994 to 2016. This is one of the most comprehensive activist databases used in studies related to shareholder activism and is therefore an important contribution towards the shareholder activism literature.

Our CSAD is dominated by hedge funds, which highlights the growing prominence of hedge fund activism. More specifically, 4,114 SC 13D filings are documented by HFAs, constituting 64.50% of the CSAD. The remaining 35.50% of the CSAD consists of other activists, which primarily constitute of *financial institutions, individual investors, investment companies, investment managers, pension funds, private equity companies and shareholder committees*.

To obtain all activist-initiated divestitures, our CSAD is merged with the Thomson One Banker Mergers and Acquisitions Database. After applying the necessary constraints⁶, we obtain 358 activist-initiated divestitures – of which, 259 are initiated by HFAs and 99 are initiated by other activists. Table 1 outlines the percentage of activist-initiated divestitures by year, by activist type, and by industry. It is apparent that activist divestitures are not concentrated in the manufacturing sector studied by Brav, Jiang, and Kim (2015). Our study spans other industries involving activist-initiated divestitures such as the retail, real estate and high-technology sectors.

(Insert Table 1 here)

Figure 1 shows the distribution of activist-initiated divestitures by year.

(Insert Figure 1 here)

The target firms' stock price and accounting information, required for the analyses, are obtained from CRSP and Compustat respectively.

III. Methodology

This section outlines the methodology employed to conduct the empirical analysis used to test the hypotheses.

Cumulative Abnormal Returns

⁶ Only divestitures that occur within twenty-four months after the initial SC 13D filing are considered for this study. Furthermore, only spinoffs and selloffs are considered for this paper, since they are the most popular divestiture demands.

The divestiture announcement period abnormal returns of the targets are estimated using the market-adjusted model, as shown in equation (1):

$$AR_{i,t} = r_{i,t} - r_{m,t} \quad (1)$$

where: $r_{i,t}$ – return on stock i in period t ; $r_{m,t}$ – return on market in period t .

The cumulative abnormal returns of the shareholders of the target companies undertaking divestitures are the sum of the abnormal returns over the 3-days (-1 to +1), 5-days (-2 to +2) and 11 days (-5 to +5) surrounding the announcement day of the divestiture, as shown in equation (2):

$$CAR_{i,t} = \sum_{t=-x}^{t=+x} AR_{i,t} \quad (2)$$

where: $x = 1$ (for 3-day CARs), 2 (for 5-day CARs) and 5 (for 11-day CARs).

Measuring Long-Term Performance

A difference-in-difference estimation is employed to examine the change in long-term firm profitability post the divestiture completion, among HFAs compared to other activists, as shown in equation (3):

$$\begin{aligned} & Profitability_{i,t} \\ & = \alpha + \beta_1 Activist + \beta_2 HedgeFund + \beta_3 Post Divestiture \\ & + \beta_4 Activist \times Post Divestiture \\ & + \beta_5 Activist \times Hedge Fund \times Post Divestiture + \beta_6 Ln(MV) + \beta_7 \left(\frac{M}{B}\right) \\ & + \beta_8 Leverage + \beta_9 \left(\frac{Cash}{Assets}\right) + \beta_{10} \left(\frac{Capex}{Assets}\right) + \beta_{11} Dividend Yield \\ & + \beta_{12} Distress + \beta_{13} \left(\frac{Cash Flows}{Equity}\right) \quad (3) \end{aligned}$$

where: $t=1$ and 2 years post the divestiture completion.

The dependent variable in equation (3) is the firm profitability, measured by the ratio of earnings before interest and taxes (EBIT) to total assets. The *Post Divestiture* dummy variable equals one for all years ($y=1, 2$) post the divestiture completion and 0 for the year of divestiture completion. This variable effectively estimates the change in profitability rather than its level.

The key variables of interest are the interaction terms *Activist x Divestiture*, which analyses the impact of activist-initiated divestitures (irrespective of activist type) compared to divestitures involving no activist, and *Activist x Hedge Fund x Post Divestiture*, which analyses the incremental effect of HFAs on the change in long-term profitability, compared to other activists. All variables are explained in Appendix A. To eliminate the impact of outliers, all continuous variables are winsorized at 2% and 98% levels. The standard errors are clustered by firm.

To analyse the takeover channel proposed by Greenwood and Schor (2009), that is, to examine whether HFAs use divestitures to increase the probability of takeovers, a probit model is used, as shown in equation (4):

$$\Pr(\text{Acquired} = 1) = \Phi(X' \beta) \quad (4)$$

where: $\Phi(\cdot)$ is the cumulative distribution function (CDF) of the standard normal distribution and:

$$\begin{aligned} X' \beta = & \alpha + \beta_1 \text{HedgeFund} + \beta_2 \text{Activist} + \beta_3 \text{Spinoff} + \beta_4 (\text{Activist} \times \text{Spinoff}) \\ & + \beta_5 (\text{HedgeFund} \times \text{Activist} \times \text{Spinoff}) + \beta_6 \ln(\text{Target MV}) \\ & + \beta_7 \left(\text{Target} \left(\frac{M}{B} \right) \right) + \beta_8 \text{TargetLeverage} + \beta_9 \left(\text{Target} \left(\frac{\text{Cash Flows}}{\text{Equity}} \right) \right) \\ & + \beta_{10} \left(\text{Target} \left(\frac{\text{Cash}}{\text{Assets}} \right) \right) + \beta_{11} \left(\text{Target} \left(\frac{\text{Capex}}{\text{Assets}} \right) \right) \\ & + \beta_{12} \text{TargetDividendYield} + \beta_{13} \text{TargetDistress} \end{aligned} \quad (5)$$

The dependent variable in equation (4) is the *Acquired* dummy variable that takes the value of 1 if a firm is acquired within twelve months after the completion of the divestiture and 0 if the firm remains independent in the twelve months after the completion of the divestiture. The key variables of interest are the interaction variable (*Activist x Spinoff*), which analyses the impact of spinoffs initiated by activists, in general, on the probability of takeovers compared to spinoffs involving no activists and the interaction variable (*HedgeFund x Activist x Spinoff*), which analyses the incremental effect of spinoff initiated by HFAs, on the probability of takeovers, compared to spinoffs initiated by other activists. All variables are defined in Appendix A. To eliminate the impact of outliers, all continuous variables are winsorized at the 2% and 98% levels. The standard errors are clustered by firm.

To analyse whether HFAs increase the probability of spinoffs, since spinoffs subsequently increase the probability of takeovers (Chemmanur and Yan (2004)), a probit model is used as shown in equation (6):

$$\Pr(\text{Spinoff} = 1) = \Phi(X' \beta) \quad (6)$$

where: $\Phi(\cdot)$ is the cumulative distribution function (CDF) of the standard normal distribution and:

$$\begin{aligned} X' \beta = & \alpha + \beta_1 \text{Activist} + \beta_2 (\text{Activist} \times \text{HedgeFund}) + \beta_3 \text{Ln}(MV) + \beta_4 \left(\frac{M}{B}\right) \\ & + \beta_5 \text{Leverage} + \beta_6 \left(\frac{\text{Cash Flows}}{\text{Equity}}\right) + \beta_7 \left(\frac{\text{Cash}}{\text{Assets}}\right) + \beta_8 \left(\frac{\text{Capex}}{\text{Assets}}\right) \\ & + \beta_9 \text{DividendYield} + \beta_{10} \text{Distress} \end{aligned} \quad (7)$$

The dependent variable in equation (6) is the *Spinoff* dummy variable that takes the value of 1 if the divestiture is a spinoff and 0 if the divestiture is a selloff. The key variable of interest is the interaction variable (*Activist x HedgeFund*), which analyses the incremental effect of HFAs, on the probability of the divestiture being a spinoff, compared to other activists. All variables are defined in Appendix A. To eliminate the impact of outliers, all continuous variables are winsorized at the 2% and 98% levels. The standard errors are clustered by firm.

To analyse the impact of activist-initiated divestitures on the bondholders, that is, to examine whether divestitures initiated by HFAs create value through a wealth transfer from bondholders to shareholders, the short-term and long-term abnormal returns to bondholders are computed using the methodology used by Klein and Zur (2011). The short-term abnormal returns are computed as follows:

$$BR_{t=0} = \frac{BP_{t+1} + C_t - BP_{t-10}}{BP_{t-10}} \quad (8)$$

where: BP_{t+1} is the bond price on the first trading day after day zero, BP_{t-10} is the price for the same bond for the earliest transaction that took place within ten calendar days prior to day zero, and C_t is the sum of all coupon payments between day (t-10) and day (t+1).

The long-term abnormal returns are computed as follows:

$$BR_{t=0} = \frac{BP_{t+365} + C_t - BP_{t+1}}{BP_{t+1}} \quad (9)$$

where: BP_{t+365} is the bond price for the latest transaction that took place within 365 days following day zero, BP_{t+1} is the bond price for the same bond on the first trading day after trading day zero, C_t is the sum of all coupon payments between days (+2, +365).

IV. Empirical Analysis and Discussion

Summary Statistics

Panel A of Table 2 compares the characteristics of targets of activist-initiated divestitures and the targets of divestitures involving no activist. Activists, in general, target smaller firms for divestitures compared to the firms undertaking divestitures involving no activist. This could be because it is easier for activists to voice their demands to the management of smaller firms and it is also easier for them to bring about changes in smaller firms since the bureaucratic channels are simpler for smaller firms. While targets of activist-initiated divestitures have more cash, their profitability and dividend yield prior to the divestiture is lower compared to firms undertaking divestitures involving no activist. The lower profitability implies that these firms are in need of either, more efficient resource deployment and firm focus, or they fail to operate effectively as standalone entities.

(Insert Table 2 here)

Panel B of Table 2 compares the characteristics of targets within the activist universe, that is, it compares the characteristics of targets of HFAs and the targets of other activists. From Panel B, it can be seen that within the activist universe, HFAs target larger firms, for divestitures, compared to other activists. While both the return on assets and profitability of HFA targets are higher prior to the divestiture, compared to other activists, they are still negative, thereby implying that more efficient resource deployment is necessary in these targets, which can be achieved through divestitures. Thus, we get the first evidence of due diligence by activists, both by HFAs and other activists, prior to undertaking activist campaigns. In our main analysis, we focus on the change in profitability (rather than level), to make sure that our results are not driven by the fact that HFA targets are different prior to the divestiture.

Announcement Effects of Activist-Initiated Divestitures

This section compares the short-term market reactions to both HFA-initiated divestitures and divestitures initiated by other activists and examines whether HFA targets outperform non-HFA targets.

As mentioned earlier, HFAs may be more pro-active compared to other activists, and so we expect a higher market reaction to divestitures initiated by HFAs compared to divestitures initiated by other activists. Table 3 shows the results of the announcement effects. Short-term market reaction is measured using the 3-day, 5-day, and 11-day CARs computed using the market-adjusted model⁷. As observed from the table, the CARs of HFA activist-initiated divestitures are all positive and statistically significant at the 1% level across all specifications. The CARs of targets undertaking divestitures initiated by other activists, however, are only statistically significant for the 3-day specification. That said, while the CARs of HFA-initiated divestitures are higher than the CARs of targets undertaking divestitures initiated by other activists, only the difference between the 5-day CARs is statistically significant at the 10% level.

(Insert Table 3 here)

HFAs are considered to be focused on the short-term, and critics accuse them of forcing the CEOs of their target companies to play the quarterly game. Furthermore, the source of value creation by HFAs has primarily been attributed to the ability of HFAs to force their targets to get acquired (Greenwood and Schor (2009); Becht et al. (2017)). While there is value creation through mergers and acquisitions, from the target company's perspective, most of this value creation is restricted to upticks in stock prices and takeover premium. As a result, the "raider" tag will always be attached to HFAs unless there is concrete evidence that they improve performance in the long-term. Given that HFAs are known for their short-termism, this evidence is insufficient to categorically state that HFAs create higher long-term value than other activists. We thus next directly explore whether market participants embed an expectation for improved profitability.

HFA-Initiated Divestitures: Long-Term Performance

As mentioned earlier, there is some evidence of HFAs creating value through divestitures. For instance, Brav, Jiang, and Kim (2015) focus on HFA-initiated plant sales and suggest that HFAs improve production efficiency in the long-term through capital redeployment. Gantchev, Sevilir, and Shivdasani (2019) find that activists use divestitures to curb empire building. Hege and Zhang (2019) find that HFA targets as well firms exposed to HFA threats increase divestitures that result in efficiency gains in the long-term.

⁷ For the purpose of robustness, the CARs are also computed using the market model.

We complement the above literature by exploring two main channels through which HFAs create value through divestitures. More specifically, we explore the firm focus channel proposed by Desai and Jain (1999) and John and Ofek (1995) and the takeover channel proposed by Greenwood and Schor (2009). The former would imply that HFAs create tangible long-term improvements in their targets through divestitures, while the latter would reaffirm that value creation through HFAs is restricted to the short-term.

To explore the firm focus channel, we use a difference-in-difference estimation to analyse the incremental effect of HFAs on the change in firm profitability post the divestiture completion compared to other activists. We employ the estimation as shown by equation (3). Table 4 outlines the results.

From Table 4, it can be seen that divestitures initiated by other activists have a negative impact on the firm profitability in both the first year and the second year post the divestiture completion. On the other hand, the unconditional effect of HFAs (the joint test of *Activist x Post Divestiture + Activist x Hedge Fund x Post Divestiture* at the bottom of the table) produces a statistically significant F-Statistic. Most importantly, the coefficient of the *Activist x Hedge Fund x Post Divestiture* interaction variable is positive and significant. Therefore, we find that the incremental effect of HFAs, on the firm profitability, is higher compared to other activists, thereby indicating that HFAs create tangible improvements in long-term firm value through divestitures.

(Insert Table 4 here)

Figure 2 shows the firm profitability 1-year prior to and up to 2 years post the divestiture completion of activist-initiated divestitures compared to divestitures involving no activist.

(Insert Figure 2 here)

Figure 3 shows the change in firm profitability 1-year prior to and up to 2 years post the divestiture completion of HFA-initiated divestitures compared to divestitures initiated by other activists. Figure 2 and Figure 3 reaffirm the finding that the incremental effect of HFAs on the long-term firm profitability post the divestiture completion is higher than other activists.

(Insert Figure 3 here)

Next, we delve deeper into the long-term performance analysis by examining whether the type of divestiture plays a role in the ability of HFAs to create value. Divestitures primarily consists

of spinoffs and selloffs. Prezas and Simonyan (2015) find that firms undertaking selloffs have a higher long-term operating performance than firms undertaking spinoffs. They attribute the higher operating performance to the higher after-tax proceeds obtained from the sale of underperforming assets compared to the value gained by spinning off the same underperforming assets. Based on this rationale, HFA-initiated selloffs are more likely to create a higher change in profitability post the divestiture compared to HFA-initiated spinoffs.

Table 5 provides the results, which show that the incremental effect of HFAs on the firm profitability post the divestiture, compared to other activists, is positive and statistically significant for selloffs, but not for spinoffs. This effect is statistically significant in both the first year and the second year post the selloff. These findings suggest that HFAs improve firm focus by selling off the underperforming assets and streamlining the firm, thereby improving the long-term profitability. These results complement the findings of Brav, Jiang, and Kim (2015) who find that HFAs improve production efficiency in the long-term through capital re-deployment. These findings also suggest that HFAs are more efficient than other activists in enhancing firm focus.

(Insert Table 5 here)

It is possible that the increase in profitability is driven by changes at the target firm, perhaps initiated by the activist, in addition to the divestiture. In order to isolate the incremental effect of divestiture on firm-level profitability, we examine how the size of the divestiture, measured by the percentage reduction in assets, attenuates the change in profitability. We focus on selloffs, in which divestitures necessarily translate to a reduction in firm assets. We split the sample size by the magnitude of asset reduction to analyse whether divestiture size plays a role in influencing the long-term value. More specifically, we compute the median asset reduction value post the divestiture completion and split the sample into below median (larger asset reduction) and above median (smaller asset reduction) categories. Asset reduction is measured by the difference between total assets in the quarter of divestiture completion and total assets in the quarter of divestiture announcement. Table 6 provides the results.

From Table 6, it can be seen the incremental effect of HFAs on the long-term profitability compared to other activists is higher when there is a larger asset reduction, that is, long-term value creation is higher where the divested assets represent a large portion of the target firm. This suggests that HFAs create long-term value by streamlining their targets through selling off underperforming subsidiaries, thereby enhancing firm focus and resource deployment.

(Insert Table 6 here)

Overall, analysis of the long-term performance suggests that HFAs are more than capable of creating tangible long-term value and their source of value creation is not just restricted to upticks in stock prices. Furthermore, they are found to be more efficient at activist campaigns than other activists. This could be because of their organizational form and their interventionist tactics. Since other activists do not operate based on the same playbook as HFAs and do not have the same size of resources and tactics available to HFAs, they are better off partnering with HFAs than waging their own activist campaigns.

While we find that HFAs have higher incremental effect on firm profitability compared to other activists, we find that the coefficient of capital expenditures-to-assets ratio is negative and statistically significant at the 1% level for divestitures in general, and selloffs in particular. This could be because in firms with higher expenses on fixed assets such as buildings, vehicles, equipment, or land, it is more difficult for HFAs to benefit from a divestiture. In such firms, the goal of the HFAs would then be to cut the short-term losses rather than at improving the long-term performance. This is established from the findings outlined in Table 6, where we observe that the coefficient of capital expenditures-to-assets ratio is statistically significant only for those selloffs that have a smaller asset reduction and where HFAs do not have a statistically significant impact on the profitability.

Activist-Initiated Divestitures: Speed of Resolution

In this section, we explore the speed of resolution of activist-initiated divestitures. We interpret the speed of resolution as a measure of activist efficiency. More specifically, we compute the average time between the activist campaign announcement date and the divestiture announcement date. The results are provided in Table 7.

(Insert Table 7 here)

From Table 7, we find that, on average, activist-initiated spinoffs take 10 months to be resolved from the date when the activist campaign was launched and activist-initiated selloffs take 11 months to be resolved.

When we analyse the activist universe, we find that while HFA-initiated spinoffs and spinoffs initiated by other activists take approximately the same time to be resolved (10 months, on average), HFA-initiated selloffs are resolved faster compared to selloffs initiated by other

activists. More specifically, the average time between the campaign announcement date and the selloff announcement date is approximately 10 months when the activist is a hedge fund and is approximately 13 months for other activists. This further supports the notion that HFAs are more efficient than other activists, especially since HFAs use selloffs to shed the underperforming assets of their targets and improve long-term profitability.

Hedge Fund Activist-Initiated Divestitures: Probability of Takeovers

This section explores the takeover channel of HFA proposed by Greenwood and Schor (2009) and analyses whether HFAs use divestitures as a stepping stone to eventually force the sale of their targets.

According to Chemmanur and Yan (2004), spinoffs increase the probability of an incumbent management of a firm with multiple divisions to cede control to a rival firm, thereby losing their private benefits of control. In other words, divestitures, especially spinoffs, increase the probability of takeovers.

Greenwood and Schor (2009) find that the positive abnormal returns experienced by the targets around the time of activist campaign announcement is attributed to the ability of the activist to force their targets to be acquired. Since divestitures are a useful tool to aid in the takeover of the target, HFAs can use this tool to force the sale of their targets.

To explore the takeover channel of divestitures, we merge the divestiture master sample (consists of divestitures initiated by HFAs, divestitures initiated by other activists, and divestitures involving no activists) with the Thomson One Banker Mergers and Acquisitions database. Only those takeovers that take place within twelve months post the divestiture completion are considered.

We employ the probit model shown by equation (4) to analyse whether HFAs increase the probability of takeovers post the divestiture completion. Table 8 provides the results.

It can be seen that the key variable of interest, the *Hedge Fund x Activist x Spinoff* interaction variable, is statistically insignificant, thereby implying that HFAs do not increase the probability of takeovers post the divestiture completion. In other words, the source of value creation is firm focus and resource deployment, as observed from the improved profitability through selloffs, and not takeovers.

(Insert Table 8 here)

Overall, our findings suggest that HFAs do not necessarily resort to takeovers alone to create value. In other words, they do not undertake an activist campaign with the goal of short-term gains. They are more than capable of playing the long-term game resulting in tangible firm improvements. Furthermore, they are more efficient than other activists and HFA targets experience more positive improvements through divestitures than targets of other activists and firms with no activist involvement.

Addressing Endogeneity Concerns

Our findings indicate that HFAs improve the long-term firm profitability through divestitures. An alternate explanation to the HFA effect on the post-divestiture profitability would be that HFAs are free riders, that is, they are better in identifying firms that are anyway prone to divest and simply target these firms to free ride.

We address this endogeneity concern by examining whether HFAs are ex-ante more likely to target firms prone to divest. Kolev (2016) finds that the single strongest predictor of divestitures is prior divestiture experience. We thus control for prior divestiture experience. More specifically, we analyse whether HFAs are more likely to be involved in subsequent divestitures – in particular, if the target firm is an established serial divestor. The following probit model is employed to address the endogeneity concern:

$$\Pr(\text{Activist} = 1) = \Phi(X' \beta) \quad (10)$$

where: $\Phi(\cdot)$ is the cumulative distribution function (CDF) of the standard normal distribution and:

$$\begin{aligned} X' \beta = & \alpha + \beta_1 \text{Experienced} + \beta_2 \text{Ln}(\text{Target MV}) + \beta_3 \left(\text{Target} \left(\frac{M}{B} \right) \right) \\ & + \beta_4 \text{TargetLeverage} + \beta_5 \left(\text{Target} \left(\frac{\text{Cash Flows}}{\text{Equity}} \right) \right) \\ & + \beta_6 \left(\text{Target} \left(\frac{\text{Cash}}{\text{Assets}} \right) \right) + \beta_7 \left(\text{Target} \left(\frac{\text{Capex}}{\text{Assets}} \right) \right) \\ & + \beta_8 \text{TargetDividendYield} + \beta_9 \text{TargetDistress} \quad (11) \end{aligned}$$

The key variable of interest is the *Experienced* dummy variable that takes the value of 1 if firms have undertaken at least 3 divestitures in the past 5 years and 0 otherwise. We also replace

Activist dummy variable with *Hedge Fund* dummy variable and re-run the model to analyse whether HFAs target more serial divestors compared to other activists. Table 9 provides the results.

Specifications (1) and (2) of Table 9 analyse whether activists, in general, free ride. Specifications (3) and (4) of Table 9 analyse whether HFAs free ride compared to other activists. The key variable, *Experienced*, is statistically insignificant across all specifications, thereby implying that activists in general, and HFAs, in particular, do not simply target firms that are prone to divest.

(Insert Table 9 here)

Thus, we can conclude that HFAs do not free ride by simply identifying firms that are prone to divest and targeting them. We suggest that it is the ability of HFAs to improve firm focus through divestitures that creates long-term value.

V. Additional Analyses

In this section, we conduct additional analyses to ascertain whether HFAs have a preferred type of divestiture, as well as to discover whether HFA-initiated divestitures create shareholder value at the expense of bondholders.

Hedge Fund Activists: Choice between Spinoffs and Selloffs

It is possible that divestitures improve profitability regardless of activism, only HFAs are simply more likely to implement such value-enhancing strategy. Our focus in the next test is therefore on the likelihood of selloffs and spinoffs rather than on the gains from implementing these strategies. We employ the probit model as outlined by equation (6). Table 10 provides the results.

From Table 10, we find that the coefficient of our key variable of interest, the *Activist x Hedge Fund* interaction variable is statistically insignificant, thereby implying that HFAs do not have a preference of divestiture, although their source of value creation is selloffs. Since spinoffs increase the probability of takeovers, and since Greenwood and Schor (2009) suggest that HFAs create value by forcing their targets to be acquired, we explore whether HFAs increase the probability of spinoffs. Our findings reaffirm the notion that HFAs do not use divestitures as a steppingstone to initiate an eventual sale of their target.

(Insert Table 10 here)

Hedge Fund Activist-Initiated Divestitures: Do Bondholders Benefit?

Previous studies such as Klein and Zur (2011) and Jory, Ngo, and Susnjara (2017) suggest that bondholders seem to be the “sacrificial lambs” in the HFAs’ process of creating value, that is, HFA results in a wealth transfer from bondholders to shareholders. We analyse whether this is the case when it comes to activist-initiated divestitures by computing and comparing the short-term and long-term bond returns of HFA targets undertaking divestitures and targets of other activists undertaking divestitures.

We employ the methodology of Klein and Zur (2011) to compute both the short-run and long-run bond returns, as shown by equations (8) and (9) respectively. Table 11 provides the results.

As evidenced by Panel A of Table 11, a case can be made that HFAs do not, in the short-term, create significant value for bondholders through divestitures. While both HFA-initiated divestitures and divestitures initiated by other activists experience negative abnormal returns, the returns are not statistically significant.

(Insert Table 11 here)

While both HFAs and other activists create positive and significant gains in the long run, the difference is once again statistically insignificant. However, while there is no outperformance, targets of HFA-initiated divestitures experience long-term bond returns of 16.54%, statistically significant at the 1% level.

Overall, our findings, contrary to Klein and Zur (2011), suggest that HFA-initiated divestitures create value for shareholders and bondholders alike, thereby providing evidence that HFA-initiated divestitures do not cause any wealth transfer from bondholders to shareholders.

VI. Conclusion

This paper studies an important value-creation channel by HFAs: corporate divestitures. By examining a unique and hand-collected sample of activist-initiated divestitures from 1994 to 2016, we evaluate the ability of HFAs to create value. Furthermore, we also evaluate whether HFAs are more efficient than other activists. Our findings suggest that HFAs are more than capable of creating tangible long-term firm value without resorting to takeovers. In other words, through divestitures, and more specifically, selloffs, HFAs actually shepherd their targets in creating long-term value.

Employing a difference-in-difference approach, we test whether the change in profitability around the divestiture is different with HFA intervention and find that target firm profitability post the divestiture is higher in HFA-initiated divestitures compared to other activists. We find that the increase in firm profitability is attributed to HFA-initiated selloffs and not HFA-initiated spinoffs, thereby indicating that while HFAs do not have a preference for a certain type of divestiture, divestiture type does play an influential role in creating long-term value. We also find that divestiture size also plays a significant role in the value creation by HFAs. More specifically, we find that the incremental effect of HFAs on the long-term firm profitability, compared to other activists, is higher in selloffs involving large asset reductions and is statistically insignificant in selloffs involving small asset reduction. We also find that HFA-initiated divestitures do not increase the probability of takeovers post the divestiture, thereby suggesting that HFAs create long-term value through divestitures by enhancing firm focus and resource deployment and not through the takeover channel.

We address the endogeneity concerns by examining whether HFAs simply identify firms that are prone to divest and target them and find that it is not the case. It is the ability of HFAs to force their targets to shed underperforming assets that creates long-term value.

Our paper makes several contributions to the existing literature on shareholder activism in general, and HFA in particular. First, most studies on HFA compare the impact of HFA on their targets with firms involving no activist. However, since HFAs are only one category of shareholder activism and have only gained prominence in recent times, it is important to compare the impact of HFA with the impact of other activists who have been waging activism battles long before HFAs entered into the fray. To the authors' best knowledge, this is the first paper that examines the incremental effect of HFAs compared to other activists, in particular in the context of activist-initiated divestitures. Second, unlike existing studies focusing specifically on asset sales, we explore the impact of spinoffs initiated by shareholder activists (both HFAs and other activists). Since spinoffs and selloffs have different features, our paper supports the notion that the type of divestiture and the size of divestiture plays a major role in the ability of HFAs to create long-term value. Third, we show that divestitures are not limited to the manufacturing sector. The cases of Carl Icahn's fight with eBay (Adams (2018)) and Starboard Value LP's fight with Macy's (Benoit and Kapner (2015)) highlight how HFAs are using divestitures in sectors other than manufacturing.

Our study contributes to the ongoing debate over the long-term impact of HFA on the firms, their investors, and the economy. Our paper also plays an advisory role for policymakers and investors: value creation by HFAs is not restricted to upticks in stock prices. HFAs are in for the long haul while undertaking activist engagements. Other activists could be nudged towards partnering with HFAs rather than undertaking their own activist engagements, especially since HFAs (unlike other activists) are free of any major conflicts of interest and have enough flexibility to undertake activist engagements that create long-term value. Signs of this shift are evident, with other activists having begun either to side with HFAs or to invest in HFAs (Toonkel and Soyoung (2013)).

This study has its limitations. We have only analysed spinoffs and selloffs in this paper. Future research could analyse other types of divestitures, such as split-offs, carve outs and so forth. Future research could also examine whether hedge fund activists reduce managerial overconfidence through divestitures— exploring whether improved managerial discipline through hedge fund activist-initiated divestitures might serve to reduce managerial overconfidence.

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Table 1: Percentage of Divestitures with Activist Involvement

The sample consists of 358 US divestitures with activist involvement spanning a time period between 1994 and 2016. Panel A presents the percentage of divestitures by year. Panel B presents the percentage of divestiture by Activist type. Other activists included Private Equity Companies, Investment Managers, Individual Investors, Industrial Owners, Financial Institutions, Mutual Funds, and Shareholder Committees. Panel C presents the percentage of divestiture by Industry. Panel C represents the percentage of divestitures by industry.

Panel A: Percentage of Divestitures by Year					
Year	No: of Deals	Percent (%)	Year	No: of Deals	Percent (%)
1994	1	0.28	2006	19	5.31
1995	1	0.28	2007	34	9.50
1996	1	0.28	2008	27	7.54
1997	6	1.68	2009	28	7.82
1998	9	2.51	2010	24	6.70
1999	9	2.51	2011	15	4.19
2000	9	2.51	2012	18	5.03
2001	18	5.03	2013	16	4.47
2002	16	4.47	2014	21	5.87
2003	12	3.35	2015	26	7.26
2004	11	3.07	2016	19	5.34
2005	18	5.03	Total	358	100.00

Panel B: Percentage of Divestitures by Activist	
Activist	Number of Divestitures
Hedge Fund Activists	259 (72.35%)
Other Activists	99 (27.65%)

Panel C: Percentage of Divestitures by Industry					
Industry	Hedge Fund Activists	Other Activists	Industry	Hedge Fund Activists	Other Activists
Consumer Products & Services	20	7	Materials	20	3
Energy	53	16	Media & Entertainment	17	11
Finance	16	6	Real Estate	10	7
Healthcare	22	7	Retail	18	3
High Technology	37	13	Consumer Staples	6	4
Industrials	23	11	Telecommunications	17	11
			Total	259	99

Table 2: Target Characteristics

This table provides a comparison of characteristics of target companies undertaking divestitures. Panel A compares the characteristics of target firms undertaking divestitures initiated by activists and target firms undertaking divestitures involving no activist. Panel B compares the characteristics of target firms undertaking divestitures initiated by hedge fund activists and target firms undertaking divestitures initiated by other activists. The variables are defined in Appendix A. All variables are winsorized at the 2% and 98% levels. The T-test is used to test the significance of the difference in the means. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	Mean (1)	N (2)	Mean (3)	N (4)	Mean (5)	N (6)	Mean (7)	P-Value (8)
Panel A: Target Characteristics – Activist vs. Non-Activist								
	Full Sample		Activist Sample		Non-Activist Sample		Difference (Activist – Non-Activist)	
Ln (MV)	13.29	1,728	12.89	180	13.34	1,548	-0.45**	0.0223
MB	2.453	1,332	2.108	134	2.492	1,198	-0.384	0.2130
Leverage	0.4253	1,335	0.3895	133	0.4292	1,202	-0.0397	0.1425
Cash/Assets (%)	9.72	1,325	13.15	132	9.34	1,193	3.81***	0.0016
Capex/Assets (%)	5.91	1,219	4.97	127	6.02	1,092	-1.05	0.1139
ROA (%)	-7.21	1,257	-9.95	127	-6.90	1,130	-3.05	0.1982
Profitability (%)	-1.21	1,243	-4.39	127	-0.85	1,116	-3.54*	0.0574
Dividend Yield (%)	1.49	1,335	0.97	134	1.55	1,201	-0.58***	0.0094
Distress	-0.0121	1,243	-0.0439	127	-0.0085	1,116	-0.0354*	0.0574
Cash Flows/Equity	-0.280	1,281	-0.274	131	-0.281	1,150	0.007	0.9567
Panel B: Target Characteristics – By Activist Type								
	Full Sample		Hedge Fund Activist Sample		Other Activist Sample		Difference (HFA – Other Activist)	
Ln (MV)	12.89	180	13.32	131	11.74	49	1.58***	0.0000
MB	2.108	134	2.379	90	1.553	44	0.826	0.1145
Leverage	0.3895	133	0.378	89	0.413	44	-0.035	0.5115
Cash/Assets (%)	13.15	132	14.16	88	11.14	44	3.02	0.3066
Capex/Assets (%)	4.97	127	4.50	88	6.03	39	-1.53	0.1524

ROA (%)	-9.95	127	-6.94	88	-16.76	39	9.82**	0.0424
Profitability (%)	-4.39	127	-0.96	88	-12.14	39	11.78***	0.0041
Dividend Yield (%)	0.97	134	1.11	91	0.67	43	0.44	0.2379
Distress	-0.0439	127	-0.0096	88	-0.1214	39	0.1118***	0.0041
Cash Flows/Equity	-0.2745	131	-0.0953	90	-0.06678	41	0.5725**	0.0168

Table 3 – Gains to Targets from Divestitures

This table reports the short-term gains to targets, post divestitures initiated by activists. This table compares the short-term gains to targets from divestitures initiated by HFAs (Columns 3 and 4) and the short-term gains to targets from divestitures initiated by other activists (Columns 5 and 6). Short-term gains are measured using the cumulative abnormal returns (CARs) computed using the market-adjusted model. For robustness, we also compute the CARs using the market model. CAR [-1, +1] denotes the CARs over 3-days [-1, +1] surrounding the day of divestiture announcement. CAR [-2, +2] denotes the CARs over 5-days [-2, 2] surrounding the day of divestiture announcement. CAR [-5, +5] denotes the CARs over 11-days [-5, 5] surrounding the day of divestiture announcement. CARs are winsorized at the 10% and 90% levels. The t-test is used to test the significance of the difference in the means (Columns 7 and 8). Statistical significance at the 1%, 5% and 10% levels are denoted as ***, **, and * respectively.

	Mean	N	Mean	N	Mean	N	Mean	N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Hedge Fund Activist-Initiated Divestitures vs. Other Activist-Initiated Divestitures								
	Full Sample		Hedge Fund Activist Sample		Other Activist Sample		Difference (Hedge Fund Activist vs. Other Activist)	
CAR [-1, +1] (%)	2.28***	292	2.32***	214	2.18***	78	0.14	0.8624
	(0.0000)		(0.0000)		(0.0077)			
CAR [-2, +2] (%)	2.57***	291	3.05***	214	1.25	77	1.80*	0.0685
	(0.0000)		(0.0000)		(0.1805)			
CAR [-5, +5] (%)	2.85***	290	3.30***	213	1.59	77	1.71	0.1332
	(0.0000)		(0.0000)		(0.1180)			

Table 4: Post-Divestiture Profitability of Activist Targets

Difference-in-Difference estimation is conducted to determine the long-term impact of activist-initiated divestitures on target profitability. Specification (1) analyses the incremental impact of HFAs, compared to other activists, on the target profitability 1 year post the divestiture. Specification (2) analyses the incremental impact of HFAs, compared to other activists, on the target profitability 2 years post the divestiture. The key variable of interest, in all specifications, is the interaction variable *Activist x Hedge Fund x Post Divestiture*. **The F-statistic reports the results of joint-hypotheses that sum of the coefficients of *Activist x Hedge Fund x Post Divestiture* and *Activist x Post Divestiture* is different from zero.** All the variables are defined in Appendix A. The number of observations used in different specifications may vary because of the missing value of one or more variables. P-Values are shown in parentheses. **Standard errors are clustered by firm.** Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	(1)	(2)
Dependent Variable	<i>Profitability</i>₁	<i>Profitability</i>₂
Activist	0.0032 (0.931)	-0.0039 (0.915)
Hedge Fund	-0.0094 (0.836)	-0.0171 (0.706)
Post-Divestiture	-0.0132** (0.011)	-0.0118* (0.053)
Activist x Hedge Fund x Post Divestiture	0.1292*** (0.007)	0.1330** (0.025)
Activist x Post Divestiture	-0.0718* (0.081)	-0.0952* (0.091)
Ln (MV)	0.0179*** (0.000)	0.0184*** (0.000)
Target M/B	-0.0028 (0.146)	-0.0020 (0.301)
Target Leverage	-0.0622** (0.035)	-0.0593** (0.018)
Target Cash/Assets	-0.3404*** (0.000)	-0.3100*** (0.000)
Target Capex/Assets	-0.3648*** (0.002)	-0.3580*** (0.004)
Target Dividend Yield	0.6196* (0.057)	0.6937** (0.047)
Target Distress	0.0015*** (0.000)	0.0014*** (0.000)
Target Cash Flows/Equity	0.2126*** (0.000)	0.1972*** (0.000)

Constant	0.1747*** (0.008)	0.0860 (0.187)
<hr/>		
N	1,696	1,617
Pseudo R²	0.6737	0.6653
F-Statistic (Total HFA)	5.19**	2.85*
Year Fixed Effects	YES	YES
Industry Fixed Effects	YES	YES

Table 5: Post-Divestiture Profitability of Activist Targets

Difference-in-Difference estimation is conducted to determine whether divestiture type has an impact on target profitability. *Specifications (1) and (2) analyses the incremental impact of HFAs, compared to other activists, on the target firm profitability 1-year and 2-years post the spinoffs respectively. Specifications (3) and (4) analyse the incremental impact of HFAs, compared to other activists, on the target firm profitability, 1-year and 2-years post the completion of selloffs respectively.* The key variable of interest, in all specifications, is the interaction variable *Activist x Hedge Fund x Post Divestiture*. *The F-statistic reports the results of joint-hypotheses that sum of the coefficients of Activist x Hedge Fund x Post Divestiture and Activist x Post Divestiture is different from zero.* All the variables are defined in Appendix A. The number of observations used in different specifications may vary because of the missing value of one or more variables. P-Values are shown in parentheses. *Standard errors are clustered by firm.* Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

Dependent Variable	(1)	(2)	(3)	(4)
	Spinoff		Selloff	
	<i>Profitability₁</i>	<i>Profitability₂</i>	<i>Profitability₁</i>	<i>Profitability₂</i>
Activist	-0.0010 (0.962)	0.1074 (0.611)	0.0082 (0.840)	-0.0035 (0.932)
Hedge Fund	-0.0006 (0.998)	-0.1308 (0.569)	-0.0219 (0.661)	-0.0232 (0.653)
Post-Divestiture	-0.0109 (0.376)	-0.0155 (0.281)	-0.0130** (0.028)	-0.0103 (0.131)
Activist x Hedge Fund x Post Divestiture	-0.0029 (0.939)	-0.0381 (0.526)	0.1423** (0.011)	0.1738** (0.011)
Activist x Post Divestiture	-0.0217 (0.310)	-0.0160 (0.705)	-0.0697 (0.137)	-0.1281** (0.048)
Ln (MV)	0.0184 (0.236)	0.0252 (0.108)	0.0203*** (0.000)	0.0197*** (0.000)
Target M/B	0.0028 (0.445)	-0.0014 (0.661)	-0.0052** (0.020)	-0.0038 (0.105)
Target Leverage	-0.1855** (0.047)	-0.1731*** (0.004)	-0.0525* (0.095)	-0.0480* (0.077)
Target Cash/Assets	-0.5094** (0.019)	-0.3378 (0.228)	-0.3077*** (0.000)	-0.2897*** (0.000)
Target Capex/Assets	-0.4176 (0.233)	0.1287 (0.688)	-0.3278** (0.011)	-0.3676*** (0.008)
Target Dividend Yield	-0.5180 (0.340)	-0.4566 (0.307)	0.7877** (0.017)	0.6977* (0.074)
Target Distress	0.0017*** (0.000)	0.0013** (0.021)	0.0014*** (0.000)	0.0013*** (0.000)
Target Cash Flows/Equity	0.1812**	0.1719*	0.2142***	0.2037***

	(0.045)	(0.092)	(0.000)	(0.000)
Constant	-0.1622	-0.2469	0.1844**	0.0843
	(0.377)	(0.175)	(0.015)	(0.269)
N	300	284	1,396	1,333
Pseudo R²	0.8866	0.8611	0.7106	0.6973
F-Statistic (Total HFA)	0.54	1.45	5.11**	2.95*
Year Fixed Effects	YES	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES

Table 6: Post-Divestiture Profitability of Activist Targets

Difference-in-Difference estimation is conducted to determine the long-term impact of activist-initiated *selloffs* on target profitability. The sample is split by median of asset reduction post the divestiture. Asset reduction⁸ is measured by *the difference between total assets in divestiture completion quarter and the total assets in the divestiture announcement quarter*. Specifications (1) and (2) analyses the incremental impact of activist hedge funds, compared to other activists 1-year post the divestiture. Specifications (3) and (4) analyse the incremental impact of activist hedge funds, compared to other activists 2-years post the divestiture. The key variable of interest, in all specifications, is the interaction variable *Activist x Hedge Fund x Time*. *The F-statistic reports the results of joint-hypotheses that sum of the coefficients of Activist x Hedge Fund x Post Divestiture and Activist x Post Divestiture is different from zero*. All the variables are defined in Appendix A. The number of observations used in different specifications may vary because of the missing value of one or more variables. P-Values are shown in parentheses. *Standard errors are clustered by firm*. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	(1)	(2)	(3)	(4)
Dependent Variable	<i>Profitability₁</i>		<i>Profitability₂</i>	
	Below Median (Larger Asset Reduction)	Above Median (Smaller Asset Reduction)	Below Median (Larger Asset Reduction)	Above Median (Smaller Asset Reduction)
Activist	-0.0425 (0.302)	-0.0108 (0.896)	-0.0337 (0.378)	-0.0227 (0.810)
Hedge Fund	0.0575 (0.378)	0.0169 (0.847)	0.0451 (0.408)	0.0353 (0.715)
Post Divestiture	-0.0145 (0.118)	-0.0110 (0.181)	-0.0056 (0.560)	-0.0141 (0.181)
Activist x Hedge Fund x Post Divestiture	0.1836** (0.035)	0.1009 (0.182)	0.1743** (0.030)	0.1735 (0.118)
Activist x Post Divestiture	-0.0422 (0.203)	-0.0849 (0.241)	-0.1029 (0.161)	-0.1550 (0.150)
Ln (MV)	0.0251*** (0.000)	0.0251*** (0.000)	0.0169*** (0.000)	0.0261*** (0.000)
Target M/B	-0.0102*** (0.007)	-0.0008 (0.744)	-0.0010 (0.737)	-0.0033 (0.278)
Target Leverage	-0.0803 (0.115)	-0.0233 (0.552)	-0.0334 (0.329)	-0.0559 (0.213)
Target Cash/Assets	-0.3245** (0.018)	-0.2622** (0.014)	-0.2159** (0.037)	-0.2261** (0.042)
Target Capex/Assets	-0.4230 (0.120)	-0.5588*** (0.004)	-0.2988 (0.112)	-0.3999** (0.046)

⁸ For some divestitures, asset reduction was greater than 100%, that is, asset size more than doubled in the specified time period. These observations, which are outliers, are dropped.

Target Dividend Yield	0.9061* (0.097)	0.7742* (0.086)	0.4563 (0.454)	0.9065* (0.071)
Target Distress	0.0013*** (0.000)	0.0015*** (0.000)	0.0010*** (0.000)	0.0015*** (0.000)
Target Cash Flows/Equity	0.2518*** (0.000)	0.1852*** (0.000)	0.2044*** (0.000)	0.2133*** (0.000)
Constant	-0.0655 (0.658)	-0.0080 (0.944)	0.0198 (0.872)	-0.0366 (0.731)
N	689	711	658	679
Pseudo R²	0.7478	0.7798	0.7386	0.7645
F-Statistic (Total HFA)	3.09*	0.43	4.58**	0.31
Year Fixed Effects	YES	YES	YES	YES
Industry Fixed Effects	YES	YES	YES	YES

Table 7: Average Difference between Divestiture Announcement Date and Activist Campaign Announcement Date

This table outlines the average time difference between Divestiture Announcement Date and Activist Engagement Date. Panel A outlines the average time to resolution for the full sample. Panel B outlines the average time to resolution for the hedge fund activist sample. Panel C outlines the average time to resolution for the Other Activist sample.

Panel A: Full Sample	
Divestiture Type	Difference Between Divestiture Announcement Date and Activist Engagement Date
Spinoff	0.84 years (Approximately 10 months)
Selloff	0.92 years (Approximately 11 months)
Panel B: Hedge Fund Activist Sample	
Spinoff	0.86 years (Approximately 10 months)
Selloff	0.86 years (Approximately 10 months)
Panel C: Other Activist Sample	
Spinoff	0.79 years (Approximately 9.5 months)
Selloff	1.06 years (Approximately 13 months)

Table 8: Probability of Takeovers Post Hedge Fund Activist-initiated Divestitures

A Probit model is used to analyse whether hedge fund activists increase the probability of takeovers following the divestiture. Dependent variable is The *Acquired* binary variable takes the value of 1 if targets are acquired following the completion of divestiture (both activist and non-activist) and is 0 if they remain independent. The key variable of interest is the *Hedge Fund x Activist x Spinoff* interaction variable that examines the incremental effect of HFAs on the probability of takeovers following the divestiture, compared to other activists. All variables are defined in Appendix A. P-Values are shown in parentheses. Standard errors are clustered by firm. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

Dependent Variable	Coefficient (1)	Marginal Effects at Variable Means (2)
Hedge Fund	-0.0246 (0.948)	-0.0065 (0.948)
Activist	0.6157* (0.064)	0.1621* (0.063)
Spinoff	0.0906 (0.489)	0.0238 (0.488)
Activist x Spinoff	0.0171 (0.979)	0.0045 (0.979)
Hedge Fund x Activist x Spinoff	-0.7148 (0.399)	-0.1882 (0.398)
Ln Target (MV)	0.1067*** (0.000)	0.0281*** (0.000)
Target M/B	-0.0488** (0.017)	-0.0128** (0.016)
Target Leverage	-0.0273 (0.877)	-0.0072 (0.877)
Target Cash Flows/Equity	-0.0587 (0.596)	-0.0154 (0.596)
Target Cash/Assets	0.5778 (0.180)	0.1522 (0.179)
Target Capex/Assets	0.1864 (0.802)	0.0491 (0.802)
Target Dividend Yield	3.826 (0.101)	1.007* (0.100)
Target Distress	0.0723 (0.822)	0.0190 (0.822)
Constant	-2.390*** (0.000)	
N	856	856
Pseudo R²	0.0451	

Table 9: Self-selection of Shareholder Activists to Divesting Firms

To address endogeneity concerns, a probit model is used to analyse whether hedge fund activists target firms with prior divestiture experience. Dependent variable in the first two specifications ((1) and (2)) is the *Activist* binary variable that takes the value of 1 for all activist-initiated divestitures (irrespective of the type of activist) and is 0 for divestitures not involving any activist. Dependent variable for the last two specifications ((3) and (4)) is the *Hedge Fund* binary variable takes the value of 1 for hedge fund activist-initiated divestitures and is 0 for divestitures initiated by other shareholder activists (The sample does not include divestitures involving no activist). The key variable of interest for all specifications is the *Experienced dummy* variable that takes the value of 1 if firms have undertaken at least 3 divestitures in the past 5 years and 0 otherwise. All variables are defined in Appendix A. P-Values are shown in parentheses. Standard errors are clustered by firm. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

Dependent Variable	Coefficient	Marginal	Coefficient	Marginal
	(1)	Effects at Variable Means (2)	(3)	Effects at Variable Means (4)
	Activist		Hedge Fund	
Experienced	0.4929 (0.110)	0.0805 (0.110)	-0.5177 (0.564)	-0.1264 (0.567)
Ln Target (MV)	-0.0316 (0.183)	-0.0051 (0.184)	0.2499** (0.012)	0.0610*** (0.005)
Target M/B	-0.0119 (0.506)	-0.0019 (0.506)	-0.0016 (0.976)	-0.0003 (0.976)
Target Leverage	-0.1025 (0.591)	-0.0167 (0.591)	-1.220** (0.047)	-0.2978** (0.038)
Target Cash/Assets	-0.5038 (0.340)	-0.0822 (0.339)	1.783 (0.139)	0.4351 (0.148)
Target Capex/Assets	-1.706** (0.035)	-0.2785** (0.036)	-3.411 (0.220)	-0.8325 (0.204)
Target Dividend Yield	-2.562 (0.340)	-0.4183 (0.340)	6.876 (0.423)	1.678 (0.423)
Target Distress	-0.0014 (0.192)	-0.0002 (0.194)	0.0193*** (0.000)	0.0047*** (0.000)
Target Cash Flows/Equity	0.1929 (0.701)	0.0031 (0.701)	-0.3438** (0.011)	-0.0839*** (0.007)
Constant	-0.6689** (0.040)		-1.915 (0.123)	
N	1,144	1,144	106	106
Pseudo R²	0.0167		0.2370	

Table 10: Activist-Initiated Divestitures: Choice between Spinoffs and Selloffs

A Probit model is used to analyse whether hedge fund activists increase the probability of spinoffs compared to other activists. Dependent variable is the *Spinoff* binary variable takes the value of 1 if the divestiture is a spinoff (both activist and non-activist) and is 0 if the divestiture is a selloff. The key variable of interest is the *Hedge Fund x Activist* interaction variable that examines the incremental effect of HFAs on the probability of spinoffs compared to other activists. All variables are defined in Appendix A. P-Values are shown in parentheses. Standard errors are clustered by firm. Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively.

	Coefficient (1)	Marginal Effects at Variable Means (2)
Dependent Variable	Spinoff	
Activist	-0.1908 (0.568)	-0.0472 (0.568)
Activist x Hedge Fund	0.3767 (0.305)	0.0932 (0.305)
Ln Target (MV)	0.0651*** (0.003)	0.0161*** (0.003)
Target M/B	0.0327** (0.011)	0.0081** (0.011)
Target Leverage	-0.6087*** (0.002)	-0.1506*** (0.002)
Target Cash Flows/Equity	0.5336*** (0.007)	0.1320*** (0.006)
Target Cash/Assets	0.0556 (0.905)	0.0137 (0.905)
Target Capex/Assets	-3.426*** (0.000)	-0.8476*** (0.000)
Target Dividend Yield	-2.273 (0.351)	-0.5623 (0.351)
Target Distress	-0.0005 (0.643)	-0.0001 (0.643)
Constant	-1.447*** (0.000)	
N	1,011	
Pseudo R²	0.0661	

Table 11: Gains to Bondholders from Activist-initiated Divestitures

This table reports the short-term and long-term gains to targets’ bondholders after divestitures initiated by activists (Columns 1 and 2). A comparison of the short-term gains and long-term gains to the bondholders of targets undertaking divestitures initiated by hedge fund activists (Columns 3 and 4) and to the bondholders of targets undertaking divestitures initiated by other activists (Columns 5 and 6) are also reported. Short-term and long-term gains are computed using the methodology of Klein and Zur (2011). The t-test is used to test the significance of the means and the difference of the means (Columns 7 and 8). Statistical significance at the 1%, 5% and 10% levels are denoted as ***, ** and * respectively. The reduction in the sample size occurs because, unlike the equity markets, bond trading is relatively thin— with many bonds not trading for days (Klein and Zur (2011)).

	Mean (1)	N (2)	Mean (3)	N (4)	Mean (5)	N (6)	Mean (7)	P-Value (8)
	Full Sample		Hedge Fund Activist Sample		Other Activist Sample		Difference (HFA – Other Activists)	
Short-term Bond Returns (%)	2.76	28	0.76	23	11.97	5	-11.21	0.5949
	(0.7285)		(0.9226)		(0.6960)			
Long-Term Bond Returns (%)	19.39***	31	16.54***	26	34.23	5	-0.1769	0.2845
	(0.0029)		(0.0034)		(0.2804)			

Figure 1: Distribution of Divestitures

This figure shows the distribution of activist-initiated divestitures of the full sample. Two main divestitures were considered: spinoffs (defined as a process whereby “a certain asset of a firm is split off from the parent firm into a separately publicly traded firm” (Prezas and Simonyan, 2015, p.84)) and selloffs (defined as a process whereby “a certain asset of the divesting firm is sold off for cash or securities to another firm or entity” (Prezas and Simonyan, 2015, p.84)). The sample spans over a time period from 1994 to 2016. Our final sample consisted of 358 divestitures of which, 259 divestitures are initiated by HFA and the remaining 99 divestitures are initiated by other activists.

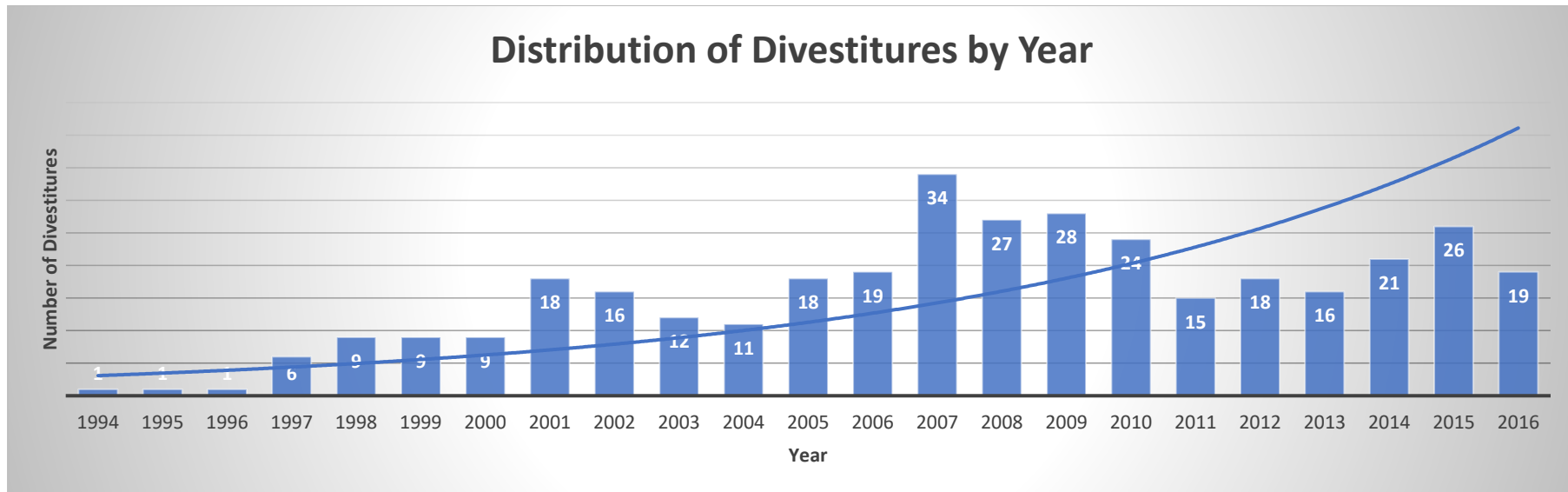


Figure 2: Post-Divestiture Profitability of Divestiture Targets

This figure presents a comparison of targets' firm profitability prior to and post the divestitures initiated by activists and divestitures involving no activist. Profitability is computed as Earnings before Interest and Tax (Compustat Item EBIT) divided by Total Assets (Compustat Item AT). Year (n-1) denotes 1 year prior to the year of the divestiture. Year *n* denotes the year when the divestiture is completed. Year (*n*+1) denotes 1 year after the completion of the divestiture. Year (*n*+2) denotes 2 years post the completion of the activist-initiated divestiture.

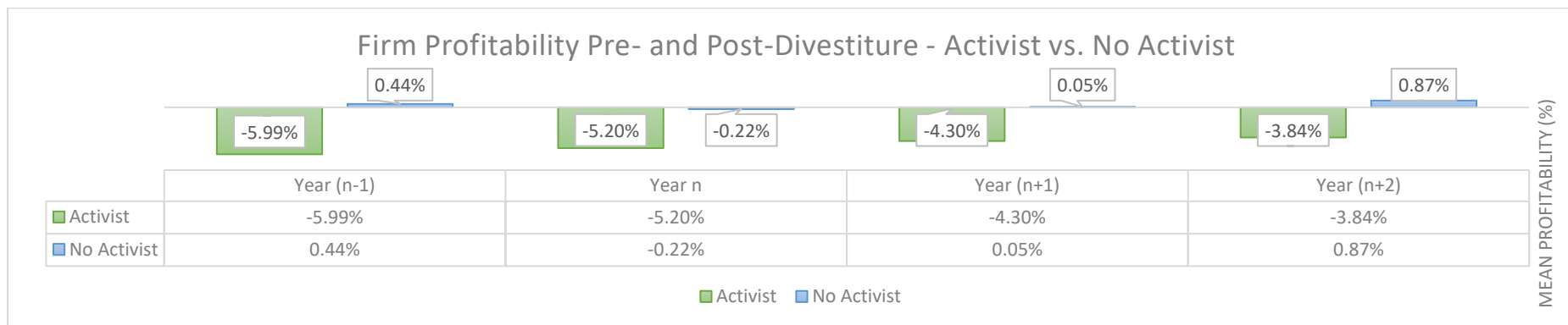
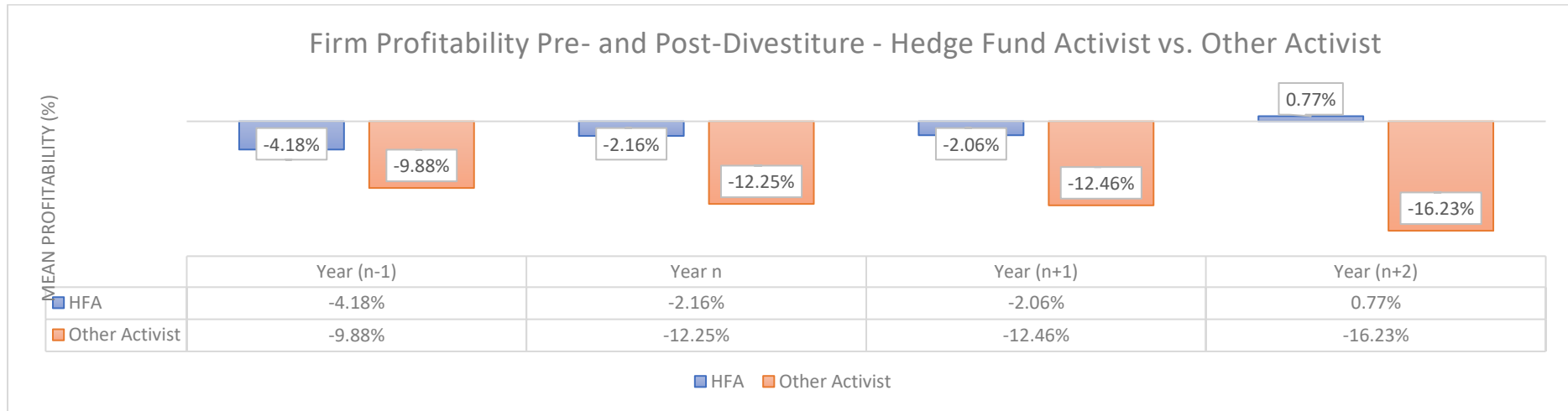


Figure 3: Post-Divestiture Profitability of Activist Targets

This figure presents a comparison of targets' firm profitability prior to and post the divestitures initiated by HFAs and divestitures initiated by other activists. Profitability is computed as Earnings before Interest and Tax (Compustat Item EBIT) divided by Total Assets (Compustat Item AT). Year (n-1) denotes 1 year prior to the year of the divestiture. Year n denotes the year when the divestiture is completed. Year (n+1) denotes 1 year after the completion of the divestiture. Year (n+2) denotes 2 years post the completion of the activist-initiated divestiture.



Appendix A: Definition of Variables

Variable	Definition
Panel A: Gains to Targets	
CAR[-1, +1]	Cumulative abnormal returns around the announcement over 3-days [-1, 1] surrounding the day of divestiture announcement, computed using the market-adjusted model
CAR [-2, 2]	Cumulative abnormal returns around the announcement over 5-days [-2, 2] surrounding the day of divestiture announcement, computed using the market-adjusted model
CAR [-5, 5]	Cumulative abnormal returns around the announcement over 5-days [-2, 2] surrounding the day of divestiture announcement, computed using the market-adjusted model
Panel B: Key Explanatory Variables	
Spinoff	Dummy variable equals one if divestiture is a spinoff and 0 if divestiture is a selloff
Activist	Dummy variable equals one if divestiture is initiated by an activist and 0 if divestiture involves no activist
Hedge Fund	Dummy variable equals one for divestitures initiated by hedge fund activists and 0 for divestitures initiated by other activists.
Post Divestiture	Dummy variable equals 1 for any year (y=1, 2) post the divestiture completion and 0 for the year of divestiture completion.
Panel C: Firm Characteristics	
MV	Market value of the firm (CRSP item PRC x SHROUT)
Ln (MV)	Natural logarithm of MV
M/B	Market value of equity (CRSP item PRC x SHROUT) divided by book value of equity (Compustat item CEQ)
Leverage	Total debt over total capital (Compustat item (DLTT+DLC)/(DLTT+DLC+SEQ))
CF/E	Cash flows (Compustat item IB+DP-DVP-DVC) divided by market value of equity (CRSP item PRC x SHROUT)
Cash/Assets	Cash of the target firms (Compustat Item CH) divided by total assets (Compustat Item AT)
Capex/Assets	Capital Expenditures (Compustat Item CAPX) divided by total assets (Compustat Item AT)
Distress	Earnings before interest and taxes (Compustat Item EBIT) divided by Interest Expense (Compustat Item XINT)
Dividend Yield	Dividend Per Share by Ex-Date (Compustat Item DVPSX_F) divided by Closing Stock Price for Fiscal Year (Compustat Item PRCC_F)
Profitability	Earnings before interest and taxes (Compustat Item EBIT) divided by Total Assets (Compustat Item AT)
ROA	Net Income (Compustat Item NI) divided by Total Assets (Compustat Item AT)