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Abstract

This paper examines how firms can use non-market actors, such as regulators, non-government organizations, and political actors, to attack other firms to reap economic benefits by imposing costs on the target firms. We first present an event study analysis within a novel empirical setting, showing that Pershing Square Capital Management engaged in a non-market campaign against Herbalife. The analysis demonstrates that an attacking firm can negatively impact the performance of the target firm and realize performance gains by deploying non-market actors as strategic “weapons.” Building on the findings from the empirical analysis, we then develop a formal model in the Appendix that captures a three-party game between an attacking and a target firm attempting to influence a non-market actor to impose damages on each other.

INTRODUCTION

Firms traditionally employ a variety of strategies to gain an economic advantage, including typical market actions, such as offering a superior product to their competitors or innovating more rapidly. At the same time, firms can also employ non-market actions to reap economic benefits, a strategy that involves engaging with various non-market actors such as regulators, political actors, non-government organizations (NGOs), media agencies, and advocacy groups. For instance, firms can raise costs for competitors through the use of non-market actors by lobbying for protective trade policies to impede foreign competition as shown by Bonardi (2004) and Schuler (1996), or by attempting to influence government actors to establish regulations that restrict entry and limit competition as demonstrated by Maijoor and Van Witteloostuijn (1996).

One underexplored, but important way firms can engage with non-market actors strategically is to directly attack target firms. When conceptualizing non-market strategy primarily as a three-party game, including an attacking firm, a target firm, and a non-market actor, the role of the non-market actor changes from the primary target of a firm's non-market efforts into a strategic "weapon" that allows an attacking firm to inflict damage on another firm and undermine its standing in the market environment. Real-world examples for such behavior are plentiful and can be found in a variety of settings and industries. For instance, firms regularly engage in attempts to influence political actors to block proposed mergers of their competitors, and activist investors attack firms by using strikingly similar tactics as the ones deployed in political campaigns (H. Goldstein and Sirkis 2013; Lipton 2014, Nathan 2013). One recent prominent example is the battle the ride-sharing company Uber has been waging against taxicab companies in jurisdictions around the world. As Uber has entered new markets, it has threatened established transportation firms through traditional market strategies (e.g., lower prices, better customer service, more convenience for consumers etc.), gaining market share rapidly as a result. Many of the incumbents have

responded by using local politicians and regulators to attempt to undermine Uber's advantages in the market environment by demanding new regulations to impose additional licensing requirements on drivers, to restrict the operational range of Uber (e.g., through prohibitions for Uber pick-ups at airports) and to neutralize Uber's core competitive advantages (e.g., by requiring that a driver has to wait a certain minimum amount of time before picking up a passenger who requested it) (Cheok 2015; Davies 2015; Vaccaro 2016). The non-market activities taken by taxi companies therefore have had a direct impact on Uber's performance in the marketplace. Not surprisingly, in response to the sustained non-market attacks from taxi firms, Uber has engaged in sophisticated efforts to influence non-market actors, including hiring more lobbyists and appointing David Plouffe, a top former political operative in the Obama administration, as senior vice president of strategy and policy (Badger and Goldfarb 2014; Cheok 2015). The divergent outcomes of these ongoing battles in cities around the world (e.g., in Washington, DC, Uber emerged victorious against taxicab companies, whereas in France and Germany some of its ride-sharing offerings were outlawed) (Davies 2016; Jeffries 2012) demonstrate the important role non-market actors can play as a strategic "weapon" in the competitive influence game among firms.

The three-way interactions (i.e. between two firms through a non-market actor), however, are not limited to direct competitors in the same industry, but can also occur more generally between activist investors and firms, companies and their suppliers or firms and their employees (e.g., through union groups).

In this paper, we first characterize a representative case of such a non-market attack by conducting an event study of a campaign by Pershing Square Capital Management (PSCM), a hedge fund, against Herbalife, a dietary supplement company. PSCM initially took a \$1 billion short position in Herbalife stock in 2012 and then embarked on a comprehensive effort to decrease

the value of Herbalife's stock by strategically engaging with a variety of non-market actors to attack Herbalife. As we are able to identify specific dates for the non-market attacks on Herbalife by PSCM, we can test whether these attacks were successful in generating negative abnormal returns for Herbalife's stock by using a standard event study approach. This unique empirical setting, therefore, allows us to directly identify the negative effects of PSCM's attacks on Herbalife's financial performance through the use of non-market actors and determine the resulting performance gains for PSCM¹. We estimate the effect of PSCM's non-market attacks on Herbalife's stock price and find that they have significant detrimental effects. Moreover, our results suggest that the advantages enjoyed by the attacking firm exhibit a first-mover effect in the influence game on non-market actors, as it becomes more difficult for the target firm to influence non-market actors to its benefit over time.

We then we use the empirical analysis as basis to develop a formal model that conceptualizes an influence game between an attacking firm and a target firm with a non-market actor as a third party (in the Appendix). The attacking firm attempts to influence the non-market actor to impose economic damages on the target firm, which can then lead to gains for the attacking firm in the market environment. The target firm in turn defends itself through its own attempts to sway the non-market actor as countermeasures to the attacks. We explore the outcomes of this competitive non-market game.

In Section I, we describe the empirical context of our event study, outlining the actions taken by PSCM and Herbalife. In Section II, we present our data and methods. Section III shows our analytical results and robustness checks. Section IV concludes. In the Appendix, we develop

¹ A significant negative reaction of Herbalife's stock to a non-market attack from PSCM would translate into financial gain for PSCM due to its initial short position in Herbalife's stock. Details on PSCM's performance gains will be discussed in the results section.

a game-theoretic model of a three-player influence game that formalizes the case we describe, incorporating an attacking firm, target firm, and non-market actors.

I. EMPIRICAL CONTEXT

To illustrate our arguments through a representative case, the empirical section focuses on the specific instance of an attacking firm PSCM attempting to influence non-market actors to attack a target firm (Herbalife) with the goal of gaining direct financial benefits. Throughout the course of 2012, PSCM, the hedge fund owned and founded by activist investor William Ackman, built up a \$1 billion short position in the stock of Herbalife. Subsequent news reports stated that PSCM likely took its short position at a price of around \$45 to \$50 per share (La Roche 2014a; Vardi 2014a). On December 20, 2012, Ackman with his hedge fund began to embark on a comprehensive, multipronged effort to strategically influence non-market actors to exert direct pressure on Herbalife's stock price and undermine its standing in the market and non-market environment (Lipton 2014). Herbalife, in turn, responded with its own attempts to sway non-market actors as defense against PSCM's attacks.

The interactions between PSCM and Herbalife provide the ideal empirical setting to examine the effect of non-market attacks on firm performance. By using an event study methodology (similar to other studies such as Oxley and Schnietz [2001]), we can directly test whether there is a significant reaction by the stock market to strategic non-market actions taken by PSCM and Herbalife against each other, respectively. This approach allows us to identify the effects of these actions on firm performance by determining cumulative abnormal returns for Herbalife's stock around those events. The unique nature of PSCM's market position against Herbalife implies that the performance implications of the non-market strategy actions are unequivocal and diametrically opposed for both sides. Because of its \$1 billion short position in

Herbalife stock, PSCM will receive financial payoffs if the stock price of Herbalife declines (especially below the price level at which PSCM shorted the stock). Losses in the value of Herbalife's stock due to PSCM's non-market attacks can therefore translate directly into performance gains for PSCM. That is, in this sense, PSCM's and Herbalife's interests are diametrically opposed. Similarly, any increases in Herbalife stock will benefit Herbalife but translate into direct losses for PSCM, especially if they occur at a price higher than the initial short price. Both sides are on opposite sides: PSCM as the attacking firm attacked target company Herbalife by taking its short position against the firm and by using non-market actors to achieve its goal of decreasing Herbalife's stock price. PSCM's actions stand out in that it has attempted to influence the market's perception of Herbalife in a way that would move the market directly towards the equilibrium it desires by deploying a targeted non-market strategy. Essentially, the firm made a bet against Herbalife in the market environment and then engaged in non-market efforts to realize the desired outcome of that bet. As Harvey L. Pitt, a former chairman of the Securities and Exchange Commission (SEC) put it, "Mr. Ackman's campaign was starting to look like an effort to move the price rather than spread the truth" (Lipton, Stevenson, and Schmidt 2014, p. 4). Or as Herbalife acknowledged in one of its statements to the media as the battle between the two firms was ongoing, "Bill Ackman has been engaged in a nearly three-year effort to drive down Herbalife's stock in order to enrich himself and his investors" (Wapner 2015, p. 2).

The strategic non-market actions PSCM has taken to attack Herbalife consist of a variety of sophisticated strategies that the company deployed to influence non-market actors. They can be classified into the following categories: attempts to influence political actors (e.g., regulators), efforts to engage with NGOs and other activist groups, coalition building among regular citizens and engagement with the media. To execute these non-market actions, Ackman hired numerous

lobbyists, strategists, and public relations firms across the country (Lipton 2014). In addition, PSCM also held designated PR events for important market actors (e.g., analysts) to put further pressure on Herbalife in the market and non-market environment. We note that all of these actions by Ackman can and are sometimes used by firms against competing firms.

Types of Non-market Attacks

Starting off the battle with PR events for financial analysts

PSCM through its CEO William Ackman made the first move against Herbalife on December 20, 2012 by delivering a presentation to investment analysts that centered on the argument that Herbalife should be considered a pyramid scheme (Lipton 2014). This message was the central argument that Ackman then pushed in all his subsequent interactions with non-market actors to create a narrative about Herbalife that would undermine the confidence of investors in the company. He subsequently gave additional investor presentations with similar themes, including announcements that he was ready to “deliver a knockout blow” (Vardi 2014b, p. 1) and that investors would “learn why Herbalife is going to collapse” (Vardi 2014b, p. 2).

Engagement with political actors

One of the major pillars of PSCM’s non-market strategy consisted of engaging with a variety of political actors (e.g., regulators, politicians, and legislators) mostly through indirect means of influence. One of the main goals of these interactions was to convince regulators and legislators to initiate a regulatory review of Herbalife by the SEC or the Federal Trade Commission (FTC). PSCM mostly used other non-market actors (in many cases regional political players) by convincing them through third-party consultants and hired lobbyists to engage in letter writing campaigns to the relevant regulators (Lipton 2014). For example, following contacts with representatives from the firms hired by PSCM, lawmakers and elected officials in multiple states and municipalities (including Massachusetts, New York, and Nevada) sent letters to the FTC, SEC,

or both, calling for an investigation of Herbalife (Lipton 2014). A particularly high-profile letter to these two agencies came from Senator Edward Markey (D-Massachusetts), who asked for a closer examination of Herbalife (Lipton 2014; Markey 2014). However, news reports later revealed that Sen. Markey took this initiative only after his staff had met with people associated with PSCM, and his office seemed not to have independently checked some of the allegations against Herbalife raised in his letters (Bierman 2014; Lipton 2014). A report in the *Boston Globe* further indicated that some of the allegations came from two constituents, one of which had been in contact with Ackman (Bierman 2014). In summary, PSCM built an elaborate network of lobbying firms and government contacts to generate momentum against Herbalife and convince regulators to investigate the company through communications from seemingly unrelated sources.

Engagements with NGOs and activist groups

Another core element of PSCM's non-market strategy was to engage with NGOs and activist groups with the same goal of influencing them to advocate for increased scrutiny of Herbalife by regulators. Using the same network of lobbyists, PR firms and consultants PSCM deployed to engage with political actors, it started extensive outreach campaigns to NGOs and activist groups to build further pressure on Herbalife and regulators. For example, in Spring 2013, the National Consumers League (NCL) sent a letter to the FTC requesting an investigation into Herbalife (Ro 2013). The NCL acknowledged that before sending the letter, members of the organization had spoken with representatives of Ackman's team (Lipton 2014). In another instance in October 2013, 33 leaders of California nonprofits and community groups signed a letter to the FTC and the local district and state attorney calling for an investigation of Herbalife. This coalition and subsequent letter were found to be linked to Laura Berrera, who was hired by one of Ackman's lobbyists (Lipton 2014). In addition to these outreach efforts to activist groups, PSCM also donated money directly to advocacy groups that then opposed Herbalife publicly or called for regulatory scrutiny.

Most of PSCM's monetary contributions were directed towards Hispanic outreach groups, mostly because Hispanic customers were integral to Herbalife's business model. For example, in early 2013, a donation of \$10,000 was made by PSCM to the League of United Latin American Citizens (LULAC), a group that later called for an investigation into Herbalife's business practices (Lipton 2014). Reaching out to these activist and community groups was an attempt by PSCM to gain additional momentum and support against Herbalife among a broader set of constituency groups.

Coalition building among regular citizens

Another essential part of PSCM's non-market strategy was to incentivize ordinary citizens to participate in letter writing campaigns to regulators with the goal of convincing them to initiate a regulatory review of Herbalife. Similar to Ackman's efforts to influence elected officials and NGOs to exert pressure on regulators, his group and affiliated consultants used citizens in a related manner. Several of those letters had identical wording, even as they were sent by seemingly unrelated individuals, and some of the letter writers stated that they could not remember sending the letter when interviewed by journalists after the fact (Lipton 2014). Moreover, PSCM also facilitated the establishment of toll free numbers across the United States with the goal of building a coalition of citizens who would argue that they were victims of Herbalife's business practices (Lipton 2014).

Media engagements

The final pillar of PSCM's non-market strategy was to use the media in two specific ways: (1) to support the previously mentioned efforts to organize different groups, politicians, and citizens against Herbalife and (2) to engage directly with journalists to further perpetuate the narrative that Herbalife's practices needed to be investigated. These media outreach efforts included holding press conferences through groups and firms affiliated with PSCM and establishing websites such

as “www.factsaboutherbaldife.com” aimed at undermining Herbalife publicly (Shen 2016; Vardi 2014b).

Herbalife’s Responses

As the non-market attacks from PSCM became stronger, Herbalife started mounting its own defenses to counter the negative narrative Ackman’s group was trying to promote. For example, Herbalife increased its own lobbying expenditures on a federal level from \$560,000 in 2012 to almost \$2 million in 2014, which was reportedly partly in response to PSCM’s attacks on the firm (Herbst-Bayliss 2014a; OpenSecrets.org 2014). The company also tried to strengthen its ties to influential political actors, including hiring former Los Angeles Mayor Antonio Villaraigosa to serve as a senior advisor to CEO Michael O. Johnson (Ketcham-Colwill 2013). In addition, the firm engaged in its own outreach efforts to activist groups and the general public, for example through sponsorship of public events.

II. DATA AND METHODS

Data

To gather the relevant dates and events for this event study, we established a detailed timeline of non-market actions taken by PSCM and Herbalife against each other from December 2012 to December 2014. The event data were collected through a comprehensive search of newspaper articles and public documents, including a detailed exposé from the *New York Times* on William Ackman’s tactics against Herbalife (Lipton 2014). The exposé, in particular, was very useful in establishing an exact timeline of attack and defense events in the battle between the two firms. The initial list of non-market actions included numerous minor and overlapping events (both market and non-market), so we narrowed down the final list for the event study by focusing on the clearly identifiable major strategic non-market actions taken by either side. That is, we chose company actions that were linked to the primary purpose of exerting non-market influence targeted at the

other firm. The final number of events included is 21, with 12 of those actions attributed to PSCM and 9 to Herbalife. Column 1 of Table 1 lists all events/non-market actions taken by PSCM with a detailed description and classification that corresponds to the aforementioned categories of non-market actions. Column 1 of Table 2 similarly shows all relevant events/non-market actions taken by Herbalife.

--- Please see Tables 1 and 2 ---

The data on stock prices, daily returns, and daily market returns (S&P 500 composite index) were obtained from the Center for Research in Security Prices (CRSP) through the Wharton Research Data Services (WRDS) and the event study estimation was run in Stata.

Estimation

We test the effects of strategic non-market actions on firm performance through a standard event study methodology as implemented in Anand and Khanna (2000). For each event and using an estimation window of 120 days to 30 days before the event, we first estimate the coefficients of the following trivial regression model:

$$R_{Ht} = \alpha_H + \beta_H * R_{mt} + \varepsilon_{Ht}$$

whereby R_{Ht} are the daily returns on Herbalife stock for each day t during the estimation window and R_{mt} are the corresponding daily market returns (we used the S&P 500 returns as market benchmark in this specification).

We then use the estimated coefficients to predict the expected values of the daily returns for Herbalife during the event window. For the standard specification the chosen event window is 2 days ($t, t+1$), consistent with other event studies in the literature (Das, Sen, and Sengupta 1998). Finally, we calculate abnormal returns (AR) for each day of the event window by calculating the difference between actual and predicted daily returns for Herbalife. Cumulative abnormal returns are then determined by summing up the abnormal returns across both days of the event window.

The same procedure is implemented for each event separately (all estimations were conducted in Stata).

III. RESULTS

PSCM's Attacks

Column 4 of Table 1 shows the cumulative abnormal returns (CAR) for the 2-day event windows for each strategic non-market action taken by PSCM. The corresponding test statistics and p-values are shown in columns 5 and 6, respectively. Most major non-market actions taken by PSCM in our sample resulted in statistically significant, negative abnormal returns for Herbalife's stock during the event window, achieving the desired outcome for PSCM. The multi-faceted corporate non-market strategy efforts by PSCM to damage Herbalife's standing in the market environment seemed to have been successful throughout successive rounds of attacks. The initial presentation by Ackman to analysts on December 20, 2012, had a strong significant stock price reaction (-28%), opening the battle between the two firms. From January 2013 to December 2014, PSCM was able to maintain momentum against Herbalife and cause negative stock market reactions against Herbalife on numerous occasions through its targeted non-market efforts. Even Ackman's last attack in December 2014, which consisted of releasing a damaging internal Herbalife video, resulted in a drop of Herbalife's stock of approximately 7.4%. The empirical findings indicate that an attacking firm can significantly affect the performance of the target firm negatively. The value destroyed (from Herbalife's perspective) and gained (from PSCM's perspective) through these strategic actions was substantial. Table 3 shows descriptive statistics for the cumulative abnormal returns across all attack events that exhibit statistically significant CARs.

--- Please see Table 3 ---

The average damage to Herbalife's stock price caused by PSCM's non-market actions was -8.9%, including the initial presentation to analysts after having shorted the stock. Without the

initial presentation to analysts, the average was -6.5%. Based on Herbalife's market capitalization of approximately \$4.56 billion on December 18, 2012, an average non-market attack by PSCM (when using -8.9%) would have translated into destroyed market value of \$406 million. The cumulative effect of PSCM's non-market actions when summing up all significant CARs across all significant attack events was -79.7% (including the initial presentation and excluding the Herbalife stock sell-off by Hedge funds) and -51.6% (excluding the initial analyst event and the Herbalife stock sell-off by Hedge funds). Examining the effect of different categories of non-market actions on Herbalife's stock reveals that the engagements with political actors had the largest negative effect on Herbalife's stock (an average of -8.3%), followed by engagements with the media, only one of which was significant, (-7.4%) and engagements with NGOs/activist groups (-3.7%). These results compare to the findings in Hillman, Zardkoohi, and Bierman (1999) who examine the stock price reactions to the appointment of firm representatives to political offices. The significant CARs in their analysis range from 3% to 13.7%.

Moreover, because of its initial short position in Herbalife stock, the performance losses for Herbalife during that time translated directly into performance gains for PSCM in a bifurcated manner. For price levels of Herbalife stock below the price at which PSCM shorted the stock, any negative abnormal returns will directly increase the profit made on the short position held by PSCM. Assuming that Ackman shorted the stock at approximately \$48-\$50 (based on the upper end of the range some media outlets speculated and on what Ackman acknowledged himself), his \$1 billion investment would correspond to 20 million shares (at a \$50 price for the short) (La Roche 2014a, 2015; Vardi 2014a). A 24% decrease in Herbalife stock from \$50 to \$38 (which was the stock price at the end of December 2014) would then lead to a profit of \$240 million if the short position had been liquidated at that time. Considering that PSCM spent only about \$50

million on its non-market campaign as reported in July 2014 (Farrell 2014), and yearly costs of holding the short position were about \$20 million/year (Cox 2016), the return on investment on the non-market efforts would have been substantial if PSCM had closed out its short position at the end of 2014. For price levels of Herbalife stock above the price at which the stock was shorted, any negative abnormal returns will minimize potential losses for PSCM of holding the short position, thereby improving performance as well.

Finally, we also compared the change in Herbalife's stock price with that of the S&P 500 index from December 14, 2012 (just before PSCM started its battle) until December 31, 2014. The S&P 500 index increased by 46% from 1,414 to 2,059 in that time, whereas Herbalife's stock price decreased by 14% from about \$43.9 to \$37.7. While we cannot ascribe the decrease in Herbalife's stock price entirely to PSCM's attacks, the glaring discrepancy between the two seems to suggest an important role that PSCM's played in influencing Herbalife's stock price development over an extended period of time.

Herbalife's Responses

The CARs for Herbalife's non-market responses are shown in Table 2, together with the corresponding test statistics and p-values (the stock buyback offering was also included although it was a market event, but considered part of Herbalife's efforts to counter the non-market attacks by PSCM (Vardi 2014b)). Only four of the nine events are statistically significant and only two non-market actions had the desired reaction – a positive CAR: the sponsorship of a congressional fellowship in Washington, DC in cooperation with the Asian Pacific American Institute for Congressional Studies (+2.8%) and the announcement that two people were charged by the SEC with insider trading in relation to the PSCM short position of Herbalife (+6.1%). The other two reactions had the opposite effect of what Herbalife had intended by causing negative abnormal returns: (1) the hiring of former LA Mayor Antonio Villaraigosa, and (2) a media statement by

Herbalife's CFO about the FTC investigation into Herbalife. The first action was publicly criticized by the leader of the Hispanic group League of United Latin American Citizens (LULAC), which had been part of PSCM's attacks against the firm (Southern California Public Radio 2013). The negative stock reaction seems to indicate that the market believed the selection of Villaraigosa by Herbalife might not solve Herbalife's problem with several Hispanic activist groups. The second one was a statement by Herbalife's CFO asserting that the FTC investigation would turn out in Herbalife's favor. However, just the day before, PSCM had launched another attack against Herbalife by claiming that the firm's sales numbers in Venezuela were not accurate (Stanford 2014). It is likely that effect of these two close events overlapped and PSCM's action was more effective.

The findings demonstrate that through its non-market attacks PSCM was able to create a hostile environment for Herbalife. Any subsequent non-market actions by Herbalife had limited or no positive effect on its performance, indicating that the increased momentum against Herbalife made it successively harder to defend itself against the ongoing attacks.

Robustness Checks and Update on the PSCM-Herbalife War

Estimation window

Following a standard event study approach, we used the day of each event (t) as the starting point for the estimation window. In our case this implies that for the later events the estimation window includes periods where the battle between Herbalife and PSCM had already started. This approach strengthens the validity of our findings because we are even observing abnormal returns – compared to market returns – for many of the non-market events although the battle had already started to have an impact on Herbalife's stock price. In a robustness check, we use a longer estimation window of ($t-260$ to $t-15$) and obtain similar results (omitted here).

Extended timeline and update on battle

The main focus of our analysis is on the time frame 2012 to 2014, because PSCM ramped up its attacks strongly right after having taken the short position and all non-market events in this time frame were meticulously documented in the *New York Times* exposé on the Herbalife war. However, we also implement a further robustness check by examining a different time period for the battle between PSCM and Herbalife. We conducted an additional search of more than 3,000 articles to extend the timeline from December 2014 to August 2016. The results for major selected attack and defense events in that period are shown in Table 4 and exhibit similar patterns as our main analysis.

--- Please see Table 4 ---

Many of the events during that timeframe were defensive actions taken by Herbalife and most of them did not have a significant impact on its stock price. This finding indicates that PSCM seemed to have enjoyed a first-mover advantage in the influence game among PSCM, Herbalife, and the non-market actors that manifested itself through a detrimental effect on Herbalife's firm performance early on. While PSCM also continued its attacks on Herbalife, it also started facing more scrutiny for its efforts targeted at Herbalife. In March 2015, the *Wall Street Journal* reported that the FBI and federal prosecutors launched an investigation into PSCM to ascertain whether the company provided false statements to political actors about Herbalife (Matthews 2015). Although PSCM was cleared in February 2016 (Balakrishnan 2016), a prominent legal scholar at that time acknowledged that "Market manipulation can be a fraught area of the law. [...] Attempting to discredit a company, even through false statements, isn't illegal, nor is paying others to make such statements on your behalf." (Matthews 2015, p. 1). This seems to indicate that the non-market attacks launched by PSCM were not illegal, even if they affected the stock price of Herbalife.

The battle between the two firms took an important turn on July 15, 2016 when the FTC announced a settlement with Herbalife, forcing the company to pay \$200 million for consumer compensation and to modify several of its business practices (M. Goldstein and Stevenson 2016). The ruling did not label Herbalife as a pyramid scheme, which several media reports and investors opposing PSCM interpreted as a win for Herbalife since many of PSCM's non-market actions had been aimed at bringing regulators to declare Herbalife a pyramid scheme (M. Goldstein and Stevenson 2016). Such a classification would likely have led to a crash in Herbalife's stock price and potentially forced the firm to cease operations. The CAR around the FTC decision announcement was not significant (as shown in Table 4), suggesting that the stock market had priced in the expectations of the settlement already. Herbalife attempted to promote a positive narrative of the settlement by stating that the decision of the FTC "does not change our direct-selling business model and will set new standards for the industry. We agreed to the terms and to pay \$200 million because we simply wanted to move forward with our mission." (M. Goldstein and Stevenson 2016) The company also hit back at PSCM by discussing an "intransigent short-seller hellbent on a misinformation campaign designed to destroy our company." (M. Goldstein and Stevenson 2016)

Nevertheless, several news reports highlighted that the FTC ruling actually drew upon arguments pushed earlier by PSCM and Ackman (D. McLaughlin and Townsend 2016, Townsend 2016). This seems to suggest that PSCM's non-market efforts did have an effect in influencing regulators and in shaping the public perception of Herbalife, costing Herbalife over \$200 million in settlement costs. Moreover, after the settlement was announced, PSCM doubled down on its attacks against Herbalife by stating publicly, "We expect that once Herbalife's business restructuring is fully implemented, these fundamental structural changes will cause the pyramid to

collapse” (M. Goldstein and Stevenson 2016). Ackman further vowed to continue his war against Herbalife by putting pressure on regulators in other countries to investigate Herbalife, using the FTC ruling as additional ammunition (Townsend 2016). This line of non-market attacks might be particularly problematic for Herbalife as 80% of its revenues are generated outside the US (Townsend 2016). In August 2016, Ackman also publicly praised the fact that Fidelity Investments, one of the largest shareholders of Herbalife reduced its stock holdings in Herbalife by 14% (T. McLaughlin and Herbst-Bayliss 2016). The CAR around this event (shown in Table 4) was -0.9%. At that time, it was expected that the non-market battle between the two companies would continue intensely for the foreseeable future, especially in foreign markets. However, just before finalizing our study, PSCM decided to exit its holdings of Herbalife and stop its battle against the firm in March 2018 (La Monica 2018). In practice, it is rarely known for sure if a firm will win a non-market battle *ex-ante*. However, there usually comes a point where it becomes clear who the victor is. It seems this became true in our Herbalife case, and Ackman retreated in the end.

IV. CONCLUSION

The case study of PSCM and Herbalife demonstrates the potential for firms to use non-market actors to gain a market advantage. PSCM took a large short position in Herbalife, and engaged with non-market actors (e.g., political actors, NGOs and activist groups, regular citizens, and the media) in an effort to attack Herbalife and drive down its stock price. Herbalife responded with its own non-market efforts to combat PSCM’s actions and defend its stock price.

We conducted an event study by calculating abnormal returns to Herbalife’s stock around specific non-market events. Our analysis of PSCM’s non-market actions revealed significant negative abnormal returns of Herbalife’s stock price for several of the non-market attacks in

question. Herbalife's responses in turn were found to be far less effective, with only two of nine non-market attacks having a significant positive effect on its stock price. Our results highlight the importance of non-market actors in influence games between firms.

TABLES

Table 1 Cumulative Abnormal Returns (CARs) for Herbalife’s Stock for the Non-market Actions Taken by Pershing Square Capital Management (PSCM)

Event Description	Category of non-market action taken by PSCM	Event date	CAR	Test-statistic	P-value
1- Ackman delivers three-hour presentation against Herbalife to investment analysts. ¹	Investor/analyst PR event	20 Dec. 2012	-0.281***	-3.945	0.000
2- The National Consumers League (NCL) asks the FTC to investigate Herbalife. ² Before sending the letter, the NCL spoke with representatives from PSCM. ³	Engagement with NGOs/activist groups	12 Mar. 2013	-0.053**	-2.710	0.007
3- PSCM issues press release condemning Herbalife, citing opposition from nonprofits and other groups. ⁴	Engagement with media	18 Jun. 2013	-0.022	-0.769	0.442
4- Evelyn Mantilla, former member of the Connecticut House of Representatives, who was hired by a lobby group associated with PSCM, writes a letter to Connecticut attorney general urging him to investigate Herbalife. ⁵	Engagement with political actors	27 Jun. 2013	-0.027**	-3.284	0.001
5- Mickey Leibner, a former aide to Senator Edward M. Kennedy, Democrat of Massachusetts, sends a letter to a member of Congress on behalf of a lobbying group hired by PSCM. In the letter he alleges that Herbalife is a pyramid scheme and asks the Congress member for a meeting to discuss this issue further. ⁶	Engagement with political actors	28 Aug. 2013	-0.047***	-4.439	0.000
6- PSCM hires two political consultants to convince multiple NGOs and activist groups in California to sign a letter to the FTC, the local district attorney, and the state attorney general to call for an investigation of Herbalife. In the end the letter was sent and signed by 33 leaders of NGOs and community groups (including the League of United Latin American Citizens – LULAC). When signing the letter many of the leaders were not aware that the political consultants had been paid by PSCM to persuade them. ⁷	Engagement with NGOs/activist groups	18 Oct. 2013	-0.021***	-11.221	0.000
7- Hispanic advocacy groups in Illinois, including a local chapter of the LULAC and the Illinois Hispanic Chamber of Commerce, issue a press release urging the Illinois attorney general to investigate Herbalife. In addition, the press release asks residents to call a toll-free number set-up by PSCM with complaints about Herbalife. ⁸	Engagement with NGOs/activist groups/Coalition building among citizens	11 Dec. 2013	-0.037**	-2.608	0.009
8- Senator Edward J. Markey (D) from Massachusetts writes letters to the FTC and the SEC to convince the agencies to investigate Herbalife. This initiative was taken by the Senator after his staff met with representatives of PSCM as was acknowledged later by his office in a <i>New York Times</i> report. ⁹	Engagement with political actors	23 Jan 2014	-0.155***	-5.121	0.000
9- It is announced publicly that the FTC has opened an investigation of Herbalife. ¹⁰	Engagement with political actors	12 Mar. 2014	-0.102**	-2.422	0.015
10- Ackman announces in the media that he will deliver a “knockout blow” to Herbalife. ¹¹	Engagement with media	21 Jul. 2014	0.141	0.388	0.698
11- <i>Market event</i> : The New York Post reports that several hedge funds sold off almost 5 million Herbalife shares, including several powerful funds (e.g., the ones led by star investors George Soros and Richard Perry). ¹²	Market event	15 Aug. 2014	-0.035***	-11.675	0.000
12- Ackman goes on Bloomberg TV and shows a firm-internal video from Herbalife in which a distributor talks about Herbalife’s sales practices, admitting that many of Herbalife’s sales representatives will not be successful. PSCM subsequently puts that video on their anti-Herbalife website. ¹³	Engagement with media	17 Dec. 2014	-0.074***	-5.522	0.000

Notes: + p < 0.10, ** p < 0.05, *** p < 0.001 (two-tailed test)

Table 2 Cumulative Abnormal Returns (CARs) for Herbalife’s Stock for the Defensive Non-market Actions Taken by Herbalife

Event	Category of non-market action taken by Herbalife	Event date	CAR	Test-statistic	P-value
1- Herbalife names former LA Mayor Antonio Villaraigosa (a prominent political leader in the Hispanic community) as adviser to its CEO. ¹⁴	Engagement with political actors	5 Sep. 2013	-0.016**	-2.436	0.015
2- A Belgian appeals court rules in Herbalife’s favor by overturning a lower court’s ruling that Herbalife was a pyramid scheme. The appeals court instead declares that Herbalife’s business model is in “full compliance with the law.” ¹⁵	Engagement with political/legal actors	3 Dec. 2013	0.059	0.746	0.456
3- <i>Market event</i> : Herbalife increases funds for offer to buy back some of its own stock (worth \$1.5 billion), seen as an effort to bolster its stock price in the context of its battle with PSCM. However, PSCM also released a new report attacking Herbalife on the same day, potentially undermining the effect of Herbalife’s stock buyback. ¹⁶	Market event	3 Feb 2014	0.068	0.471	0.638
4- A group of Hispanic organizations that had received donations from Herbalife, calling themselves “Friends of Herbalife,” sends a letter to lawmakers in support of Herbalife. ¹⁷	Engagement with NGOs/activist groups	10 Feb. 2014	-0.040	-1.364	0.173
5- Carl Icahn appears on Bloomberg Businessweek in defense of Herbalife and declares Ackman “completely wrong” about Herbalife. ¹⁸	Engagement with media/PR event	10 Apr. 2014	-0.115	-0.777	0.437
6- Herbalife announces the sponsorship of a congressional fellowship in Washington, DC in cooperation with the Asian Pacific American Institute for Congressional Studies. ¹⁹	Engagement with media/PR event	25 Jul. 2014	0.028+	1.814	0.070
7- The SEC charges two people with insider trading that occurred just before PSCM took the short position in Herbalife. While the two men charged did not work for PSCM, one of them received confidential information from his roommate, a PSCM employee about the impending short position. The SEC charges led to negative coverage in the media of PSCM’s efforts against Herbalife. ²⁰	Engagement with political actors	30 Sep. 2014	0.061***	9.106	0.000
8- Herbalife sponsors a Greater Washington Hispanic Chamber of Commerce event to honor Jay Haddock, president of Capital Hotels and Suites with the Chairman’s Award. ²¹	Engagement with NGOs/activist groups	3 Oct. 2014	0.062	0.882	0.378
9- The CFO of Herbalife states publicly that he expects that the FTC will clear Herbalife at the end of its ongoing investigation. ²²	Engagement with media/PR event	24 Oct. 2014	-0.030+	-1.718	0.086

Notes: + p < 0.10, ** p < 0.05, *** p < 0.001 (two-tailed test)

Table 3 Summary Statistics for Cumulative Abnormal Returns (CARs) for Pershing Square Capital Management's (PSCM) Non-market Actions

Sample	Mean	SD	Min	Max	Obs.
CARs for all significant non-market actions (<i>including the initial investor/analyst PR event</i>)	-0.089	0.084	-0.281	-0.021	9
CARs for all significant non-market actions (<i>excluding the initial investor/analyst PR event</i>)	-0.065	0.045	-0.155	-0.021	8
CAR for all significant political engagement actions	-0.083	0.058	-0.155	-0.027	4
CAR for all significant NGO engagement actions	-0.037	0.016	-0.053	-0.021	3
CAR for all significant media engagement actions	-0.074	-	-	-	1

Table 4 Timeline Extension and Federal Trade Commission (FTC) Settlement Decision

Event	Category of non-market action	Event date	CAR	Test-statistic	P-value
<i>PSCM attacks</i>					
1- Ackman announces in the <i>New York Post</i> that he will start providing information directly to the Hispanic community about Herbalife ²³	Engagement with media	2 Jan. 2015	-0.075	-0.931	0.352
2- Fidelity Investments divests from Herbalife ²⁴	Market event	12 Aug. 2016	-0.009***	-3.652	0.000
<i>Herbalife defenses</i>					
1- Herbalife issues a press release, claiming that Ackman made misleading statements about Herbalife aimed at decreasing Herbalife's stock price. Herbalife also states that Ackman cancelled a scheduled meeting with the company that he had requested. ²⁵	Engagement with media/PR event	7 Jan. 2015	0.068**	2.872	0.004
2- Herbalife creates "vice president for state and local government affairs position" and hires Republican consultant Marcus Reese ²⁶	Engagement with political actors	27 Jan. 2015	0.043	1.425	0.154
3- FBI and federal prosecutors start investigation of PSCM's tactics against Herbalife for possible stock market manipulation ²⁷	Engagement with political/legal actors	13 Mar. 2015	0.024	0.142	0.887
4- Herbalife wins dismissal of class action 'pyramid scheme' lawsuit ²⁸	Engagement with political/legal actors	18 Mar. 2015	0.096	0.856	0.392
5- Herbalife starts anti-Ackman website ²⁹	Engagement with media/PR event	1 Jun. 2015	0.017	0.937	0.349
6- Herbalife adds former staff member of Joe Biden during his time in the Senate to Government Relations Team ³⁰	Engagement with political actors	29 Jun. 2015	0.038	1.392	0.164
<i>FTC settlement</i>					
1- FTC announces settlement with Herbalife that includes commitment by Herbalife to pay \$200 million and to change business practices ³¹	Engagement with political actors	15 Jul. 2016	0.086	0.789	0.430

Notes: + p < 0.10, ** p < 0.05, *** p < 0.001 (two-tailed test)

REFERENCES

- Alden, W. 2012. "Ackman Outlines Bet Against Herbalife." *The New York Times*, December 20, 2012. <http://dealbook.nytimes.com/2012/12/20/ackman-outlines-bet-against-herbalife/>.
- Alden, W. 2014. "Herbalife increases share buyback plan." *The New York Times*, February 3, 2014. <http://dealbook.nytimes.com/2014/02/03/herbalife-increases-share-buyback-plan/>.
- Anand, B.N., and T. Khanna. 2000. "Do firms learn to create value? The case of alliances." *Strateg. Manag. J.* 21: 295–315. [https://doi.org/10.1002/\(SICI\)1097-0266\(200003\)21:3<295::AID-SMJ91>3.0.CO;2-O](https://doi.org/10.1002/(SICI)1097-0266(200003)21:3<295::AID-SMJ91>3.0.CO;2-O).
- Badger, E., and Z.A. Goldfarb. 2014. "Uber hired David Plouffe when it realized 'techies' can't do politics." *Washington Post*, August 19, 2014. <https://www.washingtonpost.com/news/wonk/wp/2014/08/19/uber-hired-david-plouffe-when-it-realized-techies-cant-do-politics/>.
- Balakrishnan, A. 2016. "Herbalife, Ackman cleared by govt probes: WSJ." *CNBC*. February 1, 2016. <http://www.cnn.com/2016/02/01/herbalife-ackman-cleared-by-government-probes-report.html>.
- Bierman, N. 2014. "Senator Edward Markey did little to vet claims of constituents he cited as victims of Herbalife sales practices." *Boston Globe*, March 15, 2014. <https://www.bostonglobe.com/news/nation/2014/03/14/senator-edward-markey-did-little-vet-claims-constituents-cited-victims-herbalife-sales-practices/RuIG4D1ABp3hmOTXxQ0oWK/story.html>.
- Bloomberg. 2014. "Icahn: Ackman is 'completely wrong' on Herbalife." YouTube video, 1:59. April 10, 2014. <https://www.youtube.com/watch?v=uiog67FTQs>
- Bonardi, J.P. 2002. "Global and political strategies in deregulated industries: the asymmetric behaviors of former monopolies." *Strateg. Manag. J.* 25, no. 2:101–120. <https://doi.org/10.1002/smj.367>.
- Booton, J. 2015. "Herbalife adds key member to government relations team." *MarketWatch*, June 29, 2015. <http://www.marketwatch.com/story/herbalife-adds-key-member-to-government-relations-team-2015-06-29>.
- Celarier, M. 2014. "Hedge funds dumped 5M Herbalife shares in Q2." *New York Post*, August 15, 2014. <http://nypost.com/2014/08/15/hedge-funds-dumped-5m-herbalife-shares-in-q2/>.
- Celarier, M. 2015. "Bill Ackman taking Herbalife fight to Hispanic community." *New York Post*, January 2, 2015. <http://nypost.com/2015/01/01/bill-ackman-taking-herbalife-fight-to-hispanic-community/>.
- Cheok, D. 2015. "The current state of Uber's global challenges, mapped." *Bloomberg*, June 29, 2015. <http://www.bloomberg.com/news/articles/2015-06-29/the-current-state-of-uber-s-global-challenges-mapped>.
- Cox, J. 2016. "Bill Ackman is taking a beating over the Herbalife ruling." *CNBC*, July 15, 2016. <http://www.cnn.com/2016/07/15/bill-ackman-is-taking-a-beating-over-the-herbalife-ruling.html>.
- Das, S., P.K. Sen, and S. Sengupta. 1998. "Impact of strategic alliances on firm valuation." *Acad. Manage. J.* 41, no. 1:27–41. <https://doi.org/10.5465/256895>.
- Davies, R. 2015. "Uber says five-minute delay for minicabs 'huge mistake' for London." *The Guardian*, November 3, 2015. <https://www.theguardian.com/technology/2015/nov/03/uber-five-minute-delay-minicabs-mistake-london-tfl>.
- Davies, R. 2016. "Uber suffers legal setbacks in France and Germany." *The Guardian*, June 9, 2016. <https://www.theguardian.com/technology/2016/jun/09/uber-suffers-legal-setbacks-in-france-and-germany>.
- Farrell, M. 2014. "Bill Ackman's Two-Year Herbalife Bet: By The Numbers." *Wall Street Journal*, December 19, 2014. <http://blogs.wsj.com/moneybeat/2014/12/19/bill-ackmans-two-year-herbalife-bet-by-the-numbers/>.
- Greater Washington Hispanic Chamber of Commerce. 2014. "GWHCC Honors Jay Haddock With Chairman's Award at Their Hispanic Heritage Celebration." *GlobeNewswire News Room*, October 3, 2014. <http://globenewswire.com/news->

- release/2014/10/03/670652/10101235/en/GWHCC-Honors-Jay-Haddock-With-Chairman-s-Award-at-Their-Hispanic-Heritage-Celebration.html.
- Goldstein, H., and P.J. Sirkis. 2013. "Raising antitrust merger challenges: Third-party strategies." *Pract. Law J.* <https://www.stblaw.com/docs/default-source/cold-fusion-existing-content/publications/pub1588.pdf?sfvrsn=2>.
- Goldstein, M., and A. Stevenson. 2016. "Herbalife settlement with F.T.C. ends billionaires' battle." *The New York Times*, July 15, 2016. <http://www.nytimes.com/2016/07/16/business/dealbook/herbalife-ftc-inquiry-settlement-william-ackman.html>.
- Herbalife. 2013. "Former Los Angeles Mayor Villaraigosa joins Herbalife as senior advisor." *Herbalife*, September 5, 2013. <https://ir.herbalife.com/news-events/press-releases/detail/408/former-los-angeles-mayor-villaraigosa-joins-herbalife-as>.
- Herbalife. 2014. "Herbalife announces partnership with Asian Pacific American Institute for Congressional Studies to support a congressional fellow." *Herbalife*, October 21, 2016. <https://ir.herbalife.com/news-events/press-releases/detail/337/herbalife-announces-partnership-with-asian-pacific-american>.
- Herbalife. 2015a. "Herbalife responds to Bill Ackman's latest misrepresentations." *Herbalife*, December 10, 2016. <https://ir.herbalife.com/news-events/press-releases/detail/305/herbalife-responds-to-bill-ackmans-latest>.
- Herbalife. 2015b. "Herbalife further strengthens its corporate affairs team." *Herbalife*, December 10, 2016. <https://ir.herbalife.com/news-events/press-releases/detail/302/herbalife-further-strengthens-its-corporate-affairs-team>.
- Herbst-Bayliss, S. 2014a. "Ackman outspent by Herbalife in lobbying battle." *Reuters*, March 9, 2014. <http://www.reuters.com/article/us-herbalife-idUSBREA280OH20140309>.
- Herbst-Bayliss, S. 2014b. "Top Herbalife salesman acknowledges high failure rate in video." *Reuters*, December 17, 2014. <http://www.reuters.com/article/us-herbalife-pershingsquare-idUSKBN0JV2S320141217>.
- Hillman, A.J., A. Zardkoohi, and L. Bierman. 1999. "Corporate political strategies and firm performance: Indications of firm-specific benefits from personal service in the US government." *Strateg. Manag. J.* 20, no.1:67–81. [https://doi.org/10.1002/\(SICI\)1097-0266\(199901\)20:1<67::AID-SMJ22>3.0.CO;2-T](https://doi.org/10.1002/(SICI)1097-0266(199901)20:1<67::AID-SMJ22>3.0.CO;2-T).
- Jeffries, A. 2012. "Uber wins unanimously in Washington, DC, which is now rewriting its taxi laws." *The Verge*, December 4, 2012. <http://www.theverge.com/2012/12/4/3728850/washington-dc-taxi-uber-regulations>.
- Ketcham-Colwill, G. 2013. "Herbalife Battle Weapons Include Lobbyists, Campaign Dollars." *OpenSecrets Blog*, October 19, 2016. <https://www.opensecrets.org/news/2013/12/herbalife-battle-weapons-include-lobbyists-campaign-dollars/>.
- La Monica, P.R. 2018. "Bill Ackman's Herbalife disaster is finally over." *CNNMoney*, March 1, 2018. <http://money.cnn.com/2018/03/01/investing/herbalife-bill-ackman-carl-icahn/index.html>.
- La Roche, J. 2014a. "Suddenly, Bill Ackman isn't doing so bad on Herbalife." *Business Insider*, August 6, 2014. <http://www.businessinsider.com/ackman-closer-to-break-even-on-herbalife-2014-8>.
- La Roche, J. 2014b. "Bill Ackman hasn't sounded this confident about Herbalife in a long time." *Business Insider*, December 17, 2014. <http://www.businessinsider.com/bill-ackman-on-herbalife-2014-12>.
- La Roche, J. 2015. "Herbalife shares are up 43% this month, and Bill Ackman is getting stomped." *Business Insider*, March 23, 2015. <http://www.businessinsider.com/ackman-losing-money-on-herbalife-short-2015-3>.
- Lipton, E. 2014. "The Herbalife War." *The New York Times*, March 9, 2014. <http://www.nytimes.com/interactive/2014/03/10/business/10ackman-herbalife-documents.html>.
- Schmidt, M.S, E. Lipton, and A. Stevenson. 2014. "Staking \$1 billion that Herbalife will fail, then lobbying to bring it down." *The New York Times*, March 9, 2014.

- <http://www.nytimes.com/2014/03/10/business/staking-1-billion-that-herbalife-will-fail-then-ackman-lobbying-to-bring-it-down.html>.
- Maijoor, S., and A. Van Witteloostuijn. 1996. "An empirical test of the resource-based theory: Strategic regulation in the Dutch audit industry." *Strateg. Manag. J.* 17:549–569.
[https://doi.org/10.1002/\(SICI\)1097-0266\(199607\)17:7%3C549::AID-SMJ827%3E3.0.CO;2-R](https://doi.org/10.1002/(SICI)1097-0266(199607)17:7%3C549::AID-SMJ827%3E3.0.CO;2-R).
- Markey, E. 2014. "Markey calls for investigation into Herbalife business practices." *Senator Ed Markey*, December 8, 2016. <http://www.markey.senate.gov/news/press-releases/markey-calls-for-investigation-into-herbalife-business-practices>.
- Matthews, C.M. 2015. "Prosecutors interview people tied to Ackman in probe of potential Herbalife manipulation." *Wall Street Journal*, March 12, 2015. <http://www.wsj.com/articles/prosecutors-interview-people-tied-to-ackman-in-probe-of-potential-herbalife-manipulation-1426196822>.
- McLaughlin, D., and M. Townsend. 2016. "Herbalife forced to retool after FTC review sought by Ackman." *Bloomberg*, July 15, 2016. <http://www.Bloomberg.com/news/articles/2016-07-15/herbalife-rises-after-report-of-200-million-settlement-with-ftc>.
- McLaughlin, T., and S. Herbst-Bayliss. 2016. "Ackman cheers as Fidelity funds unload more Herbalife shares." *Reuters*, August 12, 2016. <http://www.reuters.com/article/us-herbalife-fidelity-idUSKCN10N2BR>.
- Nathan, C.M. 2013. "What to do when an activist comes knocking." *CLS Blue Sky Blog*, September 16, 2013. <https://clsbluesky.law.columbia.edu/2013/09/16/what-to-do-when-an-activist-comes-knocking/>
- OpenSecrets.org. 2014. "Herbalife Nutrition." <https://www.opensecrets.org/orgs/herbalife-international/summary?toprecipcycle=2014&contribcycle=2014&lobcycle=2014&outspendcycle=2014&id=D000022026&topnumcycle=2014>.
- Oxley, J.E., and K.E. Schnietz. 2001. "Globalization Derailed? Multinational Investors' Response to the 1997 Denial of Fast-Track Trade Negotiating Authority." *J. Int. Bus. Stud.* 32, no. 3:479–496. <https://doi.org/10.1057/palgrave.jibs.8490979>.
- Pfeifer, S. 2013. "Herbalife says Belgian appeals court reversed pyramid scheme finding." *LA Times*, December 3, 2013. <http://www.latimes.com/business/la-fi-mo-herbalife-pyramid-scheme-20131203-story.html>.
- Ro, S. 2013. "A major consumer protection organization wants the FTC to check out Herbalife." *Business Insider*, March 3, 2013. <http://www.businessinsider.com/ncl-requests-ftc-herbalife-investigation-2013-3>.
- Schuler, D.A. 1996. "Corporate political strategy and foreign competition: The case of the steel industry." *Acad. Manage. J.* 39(3):720–737. <https://doi.org/10.5465/256661>.
- Schuler, D.A., K. Rehbein, and R.D. Cramer. 2002. "Pursuing Strategic Advantage through Political Means: A Multivariate Approach." *Acad. Manage. J.* 45, no. 4:659–672. <https://doi.org/10.5465/3069303>.
- Securities and Exchange Commission (SEC). 2014. "SEC charges two with insider trading on Pershing Square's announcement on Herbalife." <http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370543071733#.VDGFbCldUWx>.
- Shen, L. 2016. "Bill Ackman is gearing up another campaign against Herbalife." *Fortune*, June 21, 2016. <http://fortune.com/2016/06/21/bill-ackman-herbalife-videos/>.
- Southern California Public Radio. 2013. "Villaraigosa's surprising new job at Herbalife." *Southern California Public Radio*, December 15, 2016. <http://www.scpr.org/news/2013/09/06/39101/villaraigosa-s-new-gig-with-herbalife-surprises-di/>.
- Stanford, D.D. 2014. "Herbalife will be exonerated after FTC probe." *Bloomberg*, October 24, 2014. <http://www.Bloomberg.com/news/articles/2014-10-24/herbalife-will-be-exonerated-after-ftc-probe-cfo-says>.
- Stanford, D.D. 2015. "Herbalife unveils website ripping into Bill Ackman." *Bloomberg*, June 1, 2015. <http://www.Bloomberg.com/news/articles/2015-06-01/herbalife-takes-ackman-cue-with-post-of-its-own-slam-site>.

- Stanford, D.D, and D. McLaughlin. 2014. "Herbalife discloses civil investigation by FTC." *Bloomberg*, March 12, 2014. <http://www.Bloomberg.com/news/articles/2014-03-12/herbalife-discloses-civil-investigation-by-ftc>.
- Stempel, J. 2015. "Herbalife wins dismissal of U.S. "pyramid scheme" lawsuit." *Reuters*, March 18, 2015. <http://www.reuters.com/article/us-herbalife-lawsuit-idUSKBN0ME1LE20150318>.
- Stevenson, A., and B. Protess. 2014. "Insider case by S.E.C. is a step removed from Herbalife itself." *New York Times*, September 30, 2014. <http://dealbook.nytimes.com/2014/09/30/s-e-c-accuses-2-of-insider-trading-in-herbalife/>.
- Townsend, M. 2016. "Ackman maintains bet against Herbalife after FTC settlement." *Bloomberg*, July 20, 2016. <http://www.Bloomberg.com/news/articles/2016-07-20/ackman-said-to-maintain-bet-against-herbalife-after-ftc-deal>.
- Vaccaro, A. 2016. "A new law would thwart Uber's quest to allow more drivers at Logan Airport." *Boston.com*, March 24, 2016. <https://www.boston.com/news/business/2016/03/24/uber-is-already-banned-from-logan-airport-sort-of>.
- Vardi, N. 2014a. "Bill Ackman's Herbalife short bet gets 30 percent better." *Forbes*, March 18, 2014. <http://www.forbes.com/sites/nathanvardi/2014/03/18/bill-ackmans-herbalife-short-bet-gets-30-percent-better/>.
- Vardi, N. 2014b. "Herbalife shares tumble as Bill Ackman promises game changer." *Forbes*, July 21, 2014. <http://www.forbes.com/sites/nathanvardi/2014/07/21/herbalife-shares-tumble-as-bill-ackman-promises-game-changer/>.
- Wapner, S. 2015. "Herbalife contacted by law enforcement agencies." *CNBC*, April 5, 2015. <http://www.cnbc.com/2015/04/05/herbalife-contacted-by-law-enforcement-agencies.html>.

APPENDIX: THEORETICAL DEVELOPMENT OF THREE-PLAYER INFLUENCE GAME

Based on the insights from the empirical analysis, we now develop a more general model to illustrate an influence game between an attacking firm, a target firm, and a non-market actor. A non-market actor could be, for example, a regulator, lawmaker, NGO, or judiciary. In particular, a non-market actor R seeks to obtain a benefit that comes in exchange for imposing a cost on some target firm, Firm T . This cost comes in the form of removing some advantage, measured by delta profit D that Firm T enjoys. This extra firm profit could come from engaging in certain activities (e.g., producing high environmental emissions or operating in a high-risk manner) and/or from *not* engaging in costly activities (e.g., increasing staff to abide by new regulations or paying increased taxes and fees). The non-market actor can exert effort, or resources, e to increase the chances of successfully imposing new conditions of operation on Firm T . The non-market actor has probability e in succeeding in imposing the new condition(s).

An attacking firm, Firm A can exert effort I_A to make it *easier* for the non-market actor R to impose a cost on Firm T . This form of influence can be thought of as competitive influence. In particular, the payoff for such influence affects the profits of Firm A through affecting Firm T . That is, Firm T has some degree of impact γ on Firm A 's profit.

In addition, Firm T can exert effort I_T to influence R , which makes it more difficult for the non-market actor to impose new conditions. This firm effort could, for instance, take the form of influencing legislators to pass a law assuring continued favorable operations, enabling it to earn D . Alternatively, a regulator could be sued, preventing it from imposing a new fee. Yet another example would be if a firm recruits an NGO to pressure a regulator to protect the firm's practices. We simply take I_T as a reduced form way to capture all efforts by the Firm T to protect its generating D .

By conjecture, we propose two assumptions:

Assumption 1a: A strategic non-market attack by Firm A against a target Firm T will affect the financial performance of Firm T negatively.

Assumption 1b: By deploying a strategic non-market attack against the target Firm T, Firm A can improve its own performance and gain positive payoffs.

Further, Firm $i \in \{T, A\}$ has some level of influencing capability β_i . To isolate our forces of interest, we focus on endogenizing e , I_A , and I_T and take the other parameters as given. The payoff function for the non-market actor is as follows:

$$\pi_R = e \times B + (1 - e)(-D) - \frac{e^2}{2}(I_T - I_A),$$

where B is the benefit to the non-market actor when Firm T's advantage is removed. However, if the non-market actor fails to remove advantage D , she has a cost of D . In practice, we would expect that she would realize at least some portion of this value, as she is charged to look after the interests of "the people." Nonetheless, we could assume instead that the non-market actor only receives a private benefit B from removing Firm T's advantage and no cost (or some partial cost) when failing to do so, and the results would qualitatively be the same. However, our current setup allows for more general analysis consisting of a potential stick and a carrot for the non-market actor.

The payoff function for Firm T is as follows:

$$\pi_T = (1 - e)(\pi_{T0} + D) + e \frac{\pi_{T0}}{p} - \frac{I_T^2}{2\beta_T},$$

where π_{T0} is some status quo profit for Firm T and p reflects the possibility of a penalty if restricted in obtaining D . If $p=1$, then there is no cost for Firm T being restricted by the non-market actor beyond losing out on earning an extra D . However, if $p>1$ the firm receives a further reduction in profits beyond just losing out on D . For example, if Firm T obtained D from unethical (or illegal)

means, $p > 1$ would be expected in the form of penalties (in addition to losing D). Again, we use this setup to allow for more general analysis than if we always assumed $p=1$.

The attacking Firm A has the following payoff function:

$$\pi_A = \pi_{A0} - \gamma\pi_T - \frac{I_A^2}{2\beta_A},$$

where $\gamma > 0$ means firm T 's profits take away from firm A 's profits (i.e., competitive substitutes), $\gamma=0$ captures the case of no competitive effects, and $\gamma < 0$ represents those cases where the firms have complementary profits. The payoff π_{A0} is the status quo payoff for the attacking firm.

Equilibrium Outcomes

We assume that the firms engage in influence and then the non-market actor responds to these efforts. We first solve for the non-market actor's effort and then the firms' efforts.

The non-market actor's first order condition is as follows:

$$\begin{aligned} 0 &= B + D = e(I_T - I_A) \\ \Rightarrow e^* &= \frac{(B+D)}{(I_T - I_A)}. \end{aligned}$$

As one would intuit, in this model, as B , the benefit to the non-market actor and D , the advantage to Firm T increase, so too does the non-market actor's effort. Meanwhile, as Firm T increases influence activities or as Firm A reduces its influence activities, the efforts of the non-market actor decrease.

Firm T has the following first order condition:

$$\begin{aligned} \frac{-de^*}{dI_T} \left(\pi_{T0} + D - \frac{\pi_{T0}}{p} \right) - \frac{I_T}{\beta_T} &= 0 \\ \Rightarrow I_T(I_T - I_A)^2 &= \beta_T \left(\left(1 - \frac{1}{p} \right) \pi_{T0} + D \right) (B + D) \end{aligned}$$

Holding the influencing effort of Firm A constant, the greater the influencing capability β_T , the greater the influencing effort chosen. Similarly, the greater the total incentive of the non-market actor for removing Firm T 's advantage ($B+D$), the greater the influencing effort. Also, the greater

the status quo profits π_{T0} and the greater the degree of penalty p , the more Firm T engages in influence. Finally, the greater the influence effort from Firm A , the greater the influence effort from Firm T . Firm A has the following first order condition:

$$-\gamma \left(\frac{-de^*}{dI_A} \left(\pi_{T0} + D - \frac{\pi_{T0}}{p} \right) \right) - \frac{I_A}{\beta_A} = 0$$

$$\Rightarrow I_A(I_T - I_A)^2 = \gamma\beta_A \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)$$

As can be seen, if $\gamma=0$, Firm A does not engage in influence, as Firm T 's success does not affect A 's success. However, if $\gamma<0$, Firm T has influencing level $I_A < 0$, which means Firm T influences to help Firm A . This would be the case where the firms' fortunes are positively related. Thus, for the balance of our analysis, we will instead assume $I_A \in (0,1)$, which means Firm A has adverse effects on Firm T , but competition is not a zero-sum market (i.e., there is some form of differentiation).

One Firm

We begin by analyzing the case when there is only a target firm. In this case, the non-market actor exerts the following effort:

$$e^* = \frac{(B+D)}{I_T},$$

as now $I_T=0$. This means Firm T solves

$$I_T^3 = \beta_T \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)$$

$$\Rightarrow I_T^* = \left(\beta_T \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \right)^{\frac{1}{3}}$$

From this solution, we see that the increased benefit from removing Firm T 's advantage D , increased degree of penalty p , increased influencing capability β_T , and increased incentive for the non-market actor to act $(B+D)$ all increase target firm effort I_T^* . We can also see that the larger the

status quo profits π_{T0} , the greater the effort. If firm size is correlated positively with profits, then larger firms should also engage in higher levels of influencing. Note also that we need great enough π_{T0} , B and D to generate positive I_T^* . That is, if there are not enough stakes involved, the firm will not engage in influencing.

Two Firms

We now add the attacking firm A . Recall that Firm T solves the equation

$$I_T(I_T - I_A)^2 = \beta_T \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \quad (1)$$

With the addition of Firm A influencing at intensity I_A , the left-hand side of the equation grows more slowly, which means it will take a greater equilibrium influence effort I_T from Firm T to maintain equality the right-hand side of the equation, which are all fixed parameters. Thus, when Firm A enters and begins influencing, influence effort by Firm T should increase.

Next consider Firm A 's equation:

$$I_A(I_A - I_T)^2 = \gamma\beta_A \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \quad (2)$$

Inspection of Equations (1) and (2) suggests a solution such that the influencing effort of Firm T is some multiple of Firm A 's lobbying effort. We will first posit such a real-valued solution exists; then we will later substitute our result into the original equations and show that it is indeed the solution.

First, suppose that Firm T exerts some multiple of Firm A 's effort in equilibrium, call it θI_A . We then solve:

$$I_A(I_A - \theta I_A)^2 = \gamma\beta_A \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)$$

$$I_A((1 - \theta)I_A)^2 = \gamma\beta_A \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)$$

$$I_A^3 = \frac{\gamma\beta_A}{(1-\theta)^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \quad (3)$$

Similarly, we obtain the following for Firm T:

$$\begin{aligned} I_T (I_T - \frac{1}{\theta} I_T)^2 &= \beta_T \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \\ I_T \left(\left(1 - \frac{1}{\theta}\right) I_T \right)^2 &= \beta_T \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \\ I_T^3 &= \frac{\beta_T}{(1-\frac{1}{\theta})^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \\ I_T^3 &= \frac{\beta_T}{\left(\frac{\theta-1}{\theta}\right)^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \\ I_T^3 &= \frac{\theta^2 \beta_T}{(1-\theta)^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D) \end{aligned} \quad (4)$$

If our original assumption of efforts being proportional is true, it must also be true that we have the following results from Equations (3) and (4):

$$\begin{aligned} \theta &= \frac{\left(\frac{\theta^2 \beta_T}{(1-\theta)^2}\right)^{\frac{1}{3}}}{\left(\frac{\gamma\beta_A}{(1-\theta)^2}\right)^{\frac{1}{3}}} \\ \theta &= \frac{(\theta^2 \beta_T)^{\frac{1}{3}}}{(\gamma\beta_A)^{\frac{1}{3}}} \\ \theta^3 &= \frac{(\theta^2 \beta_T)}{(\gamma\beta_A)} \\ \theta &= \frac{\beta_T}{\gamma\beta_A} \end{aligned}$$

Thus, we can now solve for I_A and I_T knowing the value of θ . It can readily be shown then that we obtain the following:

$$I_T^* = \beta_T^{\frac{1}{3}} \sqrt[3]{\frac{1}{(\beta_T - \gamma\beta_A)^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)} \quad (5)$$

$$I_A^* = \gamma\beta_A \sqrt[3]{\frac{1}{(\beta_T - \gamma\beta_A)^2} \left(\left(1 - \frac{1}{p}\right) \pi_{T0} + D \right) (B + D)} \quad (6)$$

As can readily be shown from these equations, and as suggested previously, influencing by Firm T now increases since Firm A enters by influencing. Further, as can be verified, Equations (5) and (6) are real-valued solutions to Equations (1) and (2).

Now we generate some comparative statics. For Firm T , increased penalty p , increased status quote profit π_{T0} , increased advantage D to Firm T , increased benefit to the non-market actor of restricting Firm T (i.e., $B+D$), all increase Firm T 's influence efforts. When Firm T is an increased competitive threat to Firm A (i.e., larger γ) or Firm A has greater influence capability β_A , Firm T also increases influence effort. Firm T 's influencing level is non-monotonic in its own influence capability β_T . In particular, Firm T 's influencing effort first decreases as influence capability improves, but then ultimately increases. This can be seen by calculating the derivative as follows:

$$\begin{aligned} \frac{d}{d\beta_T} \frac{\beta_T}{(\beta_T - \gamma\beta_A)^{\frac{2}{3}}} \\ = \frac{\frac{1}{3}\beta_T - \gamma\beta_A}{(\beta_T - \gamma\beta_A)^{\frac{5}{3}}} \end{aligned}$$

The condition for the function to increase is $\frac{1}{3}\beta_T - \gamma\beta_A > 0$. Before this point (i.e., where $\frac{1}{3}\beta_T - \gamma\beta_A = 0$), it decreases. Thus, the function increases when:

$$\beta_T > 3\gamma\beta_A.$$

Intuitively, when firms are similarly able, slightly increased influencing ability allows the target Firm T to slightly reduce influence effort due to a greater threat of head-to-head influencing competition, as both firms are keen to avoid a massive influence war. However, when Firm T is

sufficiently more capable than Firm A , increased effort has the effect of winning the influence game and is, thus, worthwhile.

Now conditional on β_T , Firm A is a positive multiple of T 's influence effort. Hence, as can be shown, Firm A has the same comparative statics as Firm T . That is, these firms represent strategic complements. We also see from Equations (1) and (2) that the influence level approaches infinity as equilibrium efforts become similar. In practice, this means any influence budget binds at this level.

We can also think of all of the comparative statics above as applying to the decision to begin any influencing activities at all for either firm. Simply assume that there are some fixed costs that must be paid to engage in influence. Thus, there needs to be sufficient incentive to exert influence effort at all. This increased likelihood is essentially equivalent to the comparative statics for increasing influence effort as discussed above. Similar logic applies to the non-market actor's likelihood of entering.

Finally, we could conceptualize influence as a stock rather than a flow, as we have done thus far. Assume influence I is a function of all historical influence efforts and I could also decay over time. For this setting of influence as a stock rather than a flow, a firm that has a head start in influencing activities will be difficult to overtake, as additional influence has less of an effect.

We now collect these additional results in the following propositions:

Proposition 2: The non-market actor has increased likelihood of involvement and will increase involvement with increased private benefit, increased advantage to target Firm T , decreased influencing from Firm T , and increased influencing by the attacking Firm A .

Proposition 3: The target Firm T will increase its influencing efforts with any of the following: increased penalty for wrongdoing p , increased status quo profit π_{T0} , larger advantage D ,

larger benefit to the non-market actor for removing advantage B, and increased adverse effect to Firm A's profits by Firm T's increased profits, as captured by γ .

Proposition 4: The target firm T's influence effort is non-monotonic in its own influencing ability. When ability is similar to Firm A's influencing ability, influencing decreases in increased ability of Firm T and both influencing efforts of Firm A and Firm T go down. However, as Firm T becomes sufficiently more capable than Firm A, influencing effort is again increased.

Proposition 5: The attacking Firm A exerts influence effort proportional to Firm T at the rate of $\frac{\gamma\beta_A}{\beta_T}$ of Firm T's efforts. Consequently, all of the above comparative statics for Firm T's influence efforts apply to Firm A's influence efforts. All such comparative statics also predict the likelihood that Firm A becomes involved in influence activities. Finally, by similar argument, Firm T will respond in kind to Firm A.

Proposition 6: If a firm enjoys a first-mover advantage, the late-mover firm will find it more difficult to influence the non-market actor.

Our model is sufficiently general that it can be applied to any three-way interactions between two market actors through a non-market actor. It is our hope that future research will build on this model to test additional aspects of our theory that conceptualizes the deployment of non-market actors as strategic weapons.

ENDNOTES

- ¹ Alden 2012; Lipton 2014, p. 1
- ² Ro 2013
- ³ Lipton 2014, p. 82
- ⁴ Lipton 2014, p. 94
- ⁵ Lipton 2014, p. 8
- ⁶ Lipton 2014, p. 70
- ⁷ Lipton 2014, p. 34
- ⁸ Lipton 2014, p. 27
- ⁹ Lipton 2014, p. 97; Markey 2014
- ¹⁰ Stanford and D. McLaughlin 2014
- ¹¹ Vardi 2014b
- ¹² Celarier 2014
- ¹³ Herbst-Bayliss 2014b; La Roche 2014b
- ¹⁴ Herbalife 2013
- ¹⁵ Pfeifer 2013
- ¹⁶ Alden 2014
- ¹⁷ Schmidt, Lipton, and Stevenson 2014, p. 110
- ¹⁸ Bloomberg 2014
- ¹⁹ Herbalife 2014
- ²⁰ SEC 2014; Stevenson and Protes 2014
- ²¹ Greater Washington Hispanic Chamber of Commerce 2014
- ²² Stanford 2014
- ²³ Celarier 2015
- ²⁴ T. McLaughlin and Herbst-Bayliss 2016
- ²⁵ Herbalife 2015a
- ²⁶ Herbalife 2015b
- ²⁷ Matthews 2015
- ²⁸ Stempel 2015
- ²⁹ Stanford 2015
- ³⁰ Booton 2015
- ³¹ M. Goldstein and Stevenson 2016

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