Anti-Activism Defense: Quantifying Activists' Costs

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July 9th, 2019

Abstract

There is good reason why corporations reach out to lawyers when they feel besieged by an activist campaign: proxy fights are, in fact, a particular form of litigation (in the sense that they involve a *litis*) where the legal advisors are required to have a keen understanding of both corporate law and litigation strategy. While governance issues are the attorneys' exclusive realm, like in any dispute, the "litigation" aspect of the defense strategy needs to be informed by as accurate as possible a calculus of the activist's costs – the financial advisor's realm. This is not always the case. In fact, it is our observation from decades of investment banking work that, while the target's "defense team" (legal and financial advisors) correctly base their strategy on their perception of the activist's breakeven constraint, such perception is based on flawed assumptions. Indeed, they tend to view the activist's decision problem as both static and linear and try to approximate their calculus of the activist's breakeven constraint from informed "guesstimates" based on their combined experience (e.g, "filing costs $1 mm", "a proxy fight costs $10 mm", etc.) and other anecdotal data points.

This article proves that reality is more nuanced, and definitely not linear. The corollary is that anti-activism campaigns premised on a linear model of the activist's decision-making process and anecdotal data are likely to yield suboptimal results for the target, either through overpaying for anti-activism efforts, giving up to much in negotiation, or outright defeats in proxy contests.

1 The Activist's Decision Process

This article approaches the calculation of the activist's break-even constraint by modeling activism as a sequential decision process consisting of demand negotiations, board representation, and proxy contest.

Our approach consists of two interrelated parts. We first model activism as a sequence of escalating decision steps, in which the activist chooses a more hostile tactic only after less confrontational approaches have failed (i.e. announcement of intentions, followed by negotiations, followed by board representation demands, followed by a proxy fight). The output from this model is the activist's breakeven constraint for monitoring. Then we transform that breakeven constraint into a discrete-choice framework and estimate the cost of activism from empirical observation of activists' decision-making behavior.

The activist's decision problem involves the basic trade-off between the expected benefit from campaign continuation and its expected cost. This decision can be described by the activist's breakeven profit constraint and consist of two steps. First, the activist estimates a net continuation effect by comparing his/her expected reward from the campaign to the cost of intervening with a particular tactic. Then, he/she compares this *net* benefit to the selling value of his/her position. The observed continuation decision defines a minimum cost threshold at which the activist is indifferent between continuation and exit.

The activist's breakeven condition is transformed into a discrete-choice problem under the assumptions of utility theory. The activist's decision is summarized by the expected gross return in a successful campaign, which relies on an estimate of its benefit, and the activist's marked-to-market investment in the target, which captures the opportunity cost of the campaign. The expected reward of a successful campaign equals a target's potential value if the activist's demands are successfully implemented. Although the empirical (second step) estimation of the target's valuation is beyond the scope of this article, we would estimate a target's potential value as the valuation of a matched portfolio of peers with similar fundamentals.

Methodologically, the estimation consists of two simultaneous parts – a system of conditional logistic regressions, which separately derives the cost of each distinct stage, and statistical backward induction, which uses the estimated costs of later stages in the calculation of the cost of the earlier stages. We solve the underidentification problem of the logistic model by using an exogenous identification restriction derived from the activist's breakeven profit constraint. This identifying restriction fixes the scale of utility of each stage, allowing us to derive the absolute magnitude of stage costs.

2 Model Framework

2.1 Activism as a Sequential Process

Gillian and Starks (2007) define shareholder activists as "investors who, dissatisfied with some aspect of a company's management or operations, try to bring about change within the company without a change of control",

A typical campaign starts with the announcement of the activist's intentions, usually via the filing of a Schedule 13D with the SEC. This filing is required from anyone who acquires more than 5% of the voting stock of a public company with the intention of influencing its operations or management. The majority of initial 13D filers terminate their campaigns without announcing demands. These investors may have filed the 13D either out of an excess of caution or in anticipation of an activist campaign later decided against. This sample of activists is instrumental in the estimation of the first stage of the activist process.

Shortly after the initial 13D filing, the activist formally communicates a set of specific demands (such as a sale of the company, restructuring of inefficient operations, additional share repurchases, etc.) to the target's management. This formal announcement of activist demands marks the beginning of the first stage of the activist process – demand negotiations. In spite of its high costs in terms of the activist's time and effort, this stage is rarely successful. Upon failure of the initial demand negotiations the activist may choose to terminate the campaign or to request board representation, which allows for a more direct interaction with the target's management. This second stage of the activist process starts with an official request for board representation, most often accomplished by a nomination notice, a shareholder proposal, or a publicly filed letter. Board representation has a higher success rate than demand negotiations but increases the overall cost of a campaign. As a result, only one-fifth of 13D filers demand a board seat.

If the activist fails to consensually obtain board representation, he/she may start soliciting input from other shareholders by filing a preliminary proxy statement (stage 3) and, eventually, start a proxy fight (stage 4). The proxy contest stage has the highest success rate in terms of implementing the activist's demands but is also the most costly. As a result, less than one-tenth of 13D filers initiate proxy contests.

Defined this way, the activist process evolves from private to more public forms of engagement.

2.2 The Activist's Decision problem

Ralph V. Whitworth of Relational Investors describes their decision about whether to initiate a proxy contest as follows: "Although the credible ability to initiate a proxy contest under the existing rules has been very effective for Relational in many cases, in others, costs and procedural burdens resulted in our electing not to use the process even though we were

convinced that improved board composition would create value for all shareholders. In the latter set of cases, the projects are often abandoned or not taken in the first instance."[1]

The above statement describes the activist's decision problem as a basic trade-off between the expected benefit from an activist intervention (with a specific tactic) and the expected cost of engagement. The activist's choice set – denoted below by $n \in 0, 1, 2, 3$ – corresponds to commonly observed activist tactics as described in the sequential definition of activism. Specifically, 0 = activist intentions but no specific demands, 1 = demand negotiations, 2 = board representation, 3 = (threatened) proxy contest. The activist selects more confrontational tactics only if less hostile approaches fail to convince the target to implement the proposed demands. Intuitively, more aggressive tactics have a higher probability of success but increase the overall cost of a campaign.

The activist's breakeven profit constraint for monitoring compares the expected benefit from campaign continuation against its costs. The expected benefit in a successful campaign is based on an estimate of the target's maximum potential value, which equals its valuation if the activist's demands are successfully executed. This continuation value corresponds to the difference between the target's fundamental value, V_i, and its current market price, M_i, and is a sufficient statistic for the profitability of the campaign. In this empirical analysis, the continuation benefit is measured by the valuation gap between the target firm and its matched peers, and is robust to a variety of definitions and estimation procedures.

The costs of an activist campaign include disclosure, legal, and other fees resulting from the retention of proxy advisors and solicitors, corporate governance experts, investment banks, public relations and advertising firms, in addition to unobservable costs such as the time and effort of the activist. This article assumes that costs vary with the choice of tactic but are independent of campaign characteristics, i.e. the costs of each stage are fixed across activists.

The activist's decision involves two steps. First, he/she estimates a net continuation benefit by comparing his/her expected return from campaign continuation to the cost of intervening with a particular tactic. Then, he/she compares this benefit to the selling value of his/her ownership stake. A binding break-even profit constraint defines a minimum cost threshold associated with the stage, at which the activist terminates the campaign. We are able to derive a sequence of (minimum) cost thresholds implied by the observed decision-making behavior by collecting data about activists' exit decisions over time.

Consider the activist's decision at stage n. Upon failure of this stage, he/she has to decide whether to sell at the current market price, M_{min}, or continue with a more confrontational tactic $(n + 1)$, which has a higher probability of success but will increase the cost of the campaign. At stage $(n + 1)$, the activist eliminates the target's discount with some probability, $p_{i,n+1}$, or fails with a complementary probability. In the latter case,

[1] Letter from Ralph V. Whitworth, Principal, Relational Investors LLC to the SEC, August 14, 2009 (http://www.sec.gov/comments/s7-10-09/s71009-185.pdf).

he/she is faced with a similar choice between continuation and exit.[2]

The activist's problem can be summarized by the expected utility of each alternative. The activist compares his/her utility from continuation, $U_{i,n}^{cont}$, to the utility of selling at the current price, $U_{i,n}^{exit}$.

$$\begin{aligned} U_{i,n}^{cont} &= -c_n + p_{i,n+1}E(\pi_{i,n+1}V_{i,n+1}) + (1-p_{i,n+1})E[max\{\pi_{i,n+1}M_{i,n+1}U_{i,n+1}^{cont}\}] \\ U_{i,n}^{exit} &= \pi_{i,n}M_{i,n} \end{aligned} \tag{1}$$

Here, $\pi_{i,n}$ denotes the current activist ownership and c_n is the cost of stage n. $U_{i,n+1}^{cont}$ is the utility from continuation to the next stage, if applicable. The activist's breakeven constraint can be written as:

$$U_{i,n}^{cont} = U_{i,n}^{exit} \Longleftrightarrow \widetilde{U_{i,n}} = U_{i,n}^{cont} - U_{i,n}^{exit} = 0 \tag{2}$$

For example, consider the activist's choice at the last decision stage – the decision node before the proxy contest stage. The activist compares the utility from the two available alternatives – continue to a proxy fight, $U_{i,3}^{cont}$, or sell at the current market price, $U_{i,3}^{exit}$, as follows:

$$\begin{aligned} U_{i,3}^{cont} &= -c_3 + p_{i,3}\pi_i V_{i,3} + (1-p_{i,3})\pi_i M_{i,3} \\ U_{i,3}^{exit} &= \pi_i M_{i,2} \end{aligned} \tag{3}$$

The activist continues to the proxy stage if:

$$\begin{aligned} \widetilde{U_{i,3}} &= -c_3 + p_{i,3}\pi_i V_i + (1-p_{i,3})\pi_i M_i - \pi_i M_i \geq 0 \\ \widetilde{U_{i,3}} &= \Big(-\frac{c_3}{p_{i,3}}\Big)\Big(\frac{1}{\pi_i M_i}\Big) + \Big(V_i M_i\Big) - 1 \geq 0 \end{aligned} \tag{4}$$

The above transformation summarizes the activist's decision by two explanatory variables – the expected gross return from a successful campaign, $\left(\frac{V_i}{M_i}\right)$ (continuation decision), and the current value of the investment in the target, $\left(\frac{1}{\pi_i M_i}\right)$ (exit decision). The transformation assumes that the activist's best estimate of his/her continuation reward equals the target's current gap from potential firm value, i.e. the activist does not time the market. This assumption is reasonable if we believe that any attempt by the activist to manipulate the market's perception of his/her success will result in an immediate negative correction of the target's price to its current market value, M_i. This reasoning is supported by findings in Brav et al. (2008) who show that the market reacts very negatively to activists' exits in failed campaigns resulting in negative abnormal returns of -4% in the (-20, +20) window for exit.

[2]The model assumes that each stage of the activist process has a fixed duration, which allows us to replace the time subscript t with the stage subscript n in the rest of this section.

More generally, the activist's stage-specific breakeven constraint is

$$\widetilde{U_{i,n}} = \chi_n\Big(\frac{1}{\pi_i M_i}\Big) + \Big(\frac{V_i}{M_i}\Big) - 1 = 0 \tag{5}$$

where

$$\begin{aligned}
\chi_3 &= -\frac{c_3}{p_{i3}} \\
\chi_2 &= max\Big\{\frac{-c_2-(1-p_{i,2})}{c_3},\ \frac{-c_2}{p_{i,2}}\Big\} \\
\chi_1 &= max\Big\{\frac{-c_1-(1-p_{i,1})c_2-(1-p_{i,1})(1-p_{i,2})c_3}{p_{i,1}+p_{i,2}+p_{i,3}-p_{i,1}p_{i,2}-p_{i,1}p_{i,3}-p_{i,2}p_{i,3}+p_{i,1}p_{i,2}p_{i,3}}r,\ \frac{-c_1-(1-p_{i,1})c_2}{p_{i,1}+p_{i,2}-p_{i,1}p_{i,2}},\ \frac{-c_1}{p_{i,1}}\Big\}
\end{aligned} \tag{6}$$

The next section converts the activist's stage-specific breakeven condition into a discrete-choice model by adding an error structure which captures the econometrician's imperfect knowledge of the utility from each alternative. This allows us to estimate the activist's costs without imposing additional assumptions about the parameter distributions.

3 Econometric Design

3.1 Random Utility Specification

The activist's breakeven constraint for monitoring can be rewritten into a regression framework under the general assumptions of random utility theory. This step transforms the activist's decision into a discrete-choice problem, in which his choice between continuation and exit at each stage is summarized by the utility of each alternative.[3]

The activist knows the utility of campaign continuation, $U^*_{i,n}$, as well as the utility of exit, $U^*_{i,n'}$. The econometrician estimates the activist's representative utilities, $U_{i,n}$ and $U_{i,n'}$, respectively, based on some observable characteristics of each alternative, such as the expected gross return of a successful campaign and the present value of the investment in the target. These estimates differ from the activist's actual utility by an error term, which captures unobservable factors that may vary among activists with the same representative utility such as preference for (or experience with) a specific tactic.

$$\begin{aligned}
U^*_{i,n} &= U_{i,n} + \epsilon_{i,n} \\
U^*_{i,n'} &= U_{i,n'} + \epsilon_{i,n'}
\end{aligned} \tag{7}$$

[3]See Eckstein and Wolpin (1989) and Train (2003) for surveys of the literature on discrete-choice models.

Assuming an exogenous sample of activists whose decisions are independent, we write the probability of activist i choosing alternative n as:

$$\begin{aligned} P_r\{U^*_{i,n} > U^*_{i,n'}\} &= P_r\{U_{i,n} + \epsilon_{i,n} > U_{i,n'} + \epsilon_{i,n'}\} = P_r\{\epsilon_{i,n'} - \epsilon_{i,n} < U_{i,n} - U_{i,n'}\} \\ &= \int_{\epsilon} I\{\epsilon_{i,n'} < \epsilon_{i,n} + U_{i,n} - U_{i,n'}\} f(\epsilon) d\epsilon \end{aligned} \tag{8}$$

where I is an indicator function equal to one when the expression in the parentheses is correct.

Assuming iid Type I extreme value errors results in the logit formulation, which further simplifies the above expression:

$$\begin{aligned} P_r\{U^*_{i,n} > U^*_{i,n'} | \epsilon_{i,n}\}_{i \neq j} &= \prod_{i \neq j} e^{-e^{-(\epsilon_{i,n} + U_{i,n} - U_{i,n'})}} \\ P_r\{U^*_{i,n} > U_{i,n'}\}_{i \neq j} &= \int \Big(\prod_{i \neq j} e^{-e^{-(\epsilon_{i,n} + U_{i,n} - U_{i,n'})}} \Big) e^{-\epsilon_{i,n}} e^{-e^{-\epsilon_{i,n}}} d\epsilon_{i,n} \end{aligned} \tag{9}$$

Using the fact that the difference between two extreme values is distributed logistically, the above expression takes the following closed form for a binary choice:

$$P_r\{U^*_{i,n} > U^*_{i,n'}\} = \frac{e^{U_{i,n}}}{1 + e^{U_{i,n}}} \tag{10}$$

We derive the standard logistic regression model assuming a linear probability specification:

$$\begin{aligned} P_r\{U^*_{i,n} > U^*_{i,n'}\} &= \frac{e^{x'\beta}}{1 + e^{x'\beta}} \\ \frac{\{P_r U^*_{i,n} > U^*_{i,n'}\}}{P_r\{U^*_{i,n} \leq U^*_{i,n'}\}} &= e^{x'\beta} \\ log\Big(\frac{P_r\{u^*_{i,n} > U^*_{i,n'}\}}{P_r\{U^*_{i,n} \leq U^*_{i,n'}\}}\Big) &= x'\beta \end{aligned} \tag{11}$$

As a result, the activist's *stage-specific* breakeven constraint can be rewritten into a regression equation, which takes an analogous form for each stage:

$$log\Big(\frac{continue}{exit}\Big) = \hat{\beta}_1 \Big(\frac{1}{\pi_{i,n} Mi, n}\Big) + \hat{\beta}_2 \Big(\frac{V_{i,n}}{M_{i,n}}\Big) \tag{12}$$

Activist costs are estimated using the above regression equation for each stage of activism.

The first coefficient in each regression estimates relative stage costs. The second coefficient identifies a stage-specific scale parameter, which is required to find the absolute magnitude of each cost threshold (as described next).

3.2 Identification

Monitoring costs are estimated using the activist's breakeven profit condition (as defined in Eq. 12). The empirical procedure we would follow consists of two simultaneous parts: a system of conditional logistic regressions, which separately derives the costs of each stage, and statistical backward induction, which uses the estimated costs of later stages in the calculation of the costs of the earlier stages of activism.[4] That is, the activist's decision problem is estimated equation by equation following a recursive system of substitutions.

Each stage logistic regression uses the conditional sample of activists who have reached the current decision step and are choosing whether to continue to the next stage.[5] The starting point of the estimation is the last decision stage, where the activist chooses whether to initiate a proxy contest.[6] The activist's breakeven profit constraint (Eq. 4) defines a minimum cost threshold associated with the continuation to a proxy. Then, the estimated costs of the proxy stage are used as inputs in the calculation of the costs of board representation and demand negotiations.

A significant advantage of this empirical design versus other structural methods is that costs can be estimated without imposing any additional assumptions on the parameter distributions. The first coefficient estimate, $\hat{\beta_{1,n}}$, in each logistic regression determines (up to scale) stage-specific costs. $\hat{\beta_{1,n}}$ can be given the following general interpretation:

$$\hat{\beta_{1,n}} = \hat{\chi_n} = \frac{stage\,cost\,function}{stage\,continuation\,probability} \tag{13}$$

The first regression coefficient determines *relative* stage costs but does not identify the *absolute* magnitudes of these costs. This is due to the underidentification of the logistic regression model. In brief, estimation of the logistic model requires imposing a restriction on the variance of the random error term. Typically, it is assumed that the random utility component is distributed as Type I extreme value with variance $\bar{\sigma}^2 = \pi^2/6$. This is equivalent to normalizing the scale of utility, or scaling each regression coefficient by $1/\hat{\sigma}$ (see Train 2003). Most empirical studies using logistic estimation are interested in the relative magnitudes of the regression coefficients and are not affected by this underidentification problem.

However, we cannot determine the net returns to activism without knowing the absolute magnitudes of monitoring costs. Absolute costs can be estimated by using an exogenous identification restriction derived from the activist's breakeven constraint:

$$\sigma_{\epsilon^*_{i,n}} = \frac{1}{\hat{\beta_{2,n}}} \tag{14}$$

[4] See Bas, Signorino and Walker (2008) for a discussion of statistical backward induction.

[5] This technique is qualitatively similar to using a sequential response model, a limiting case of the nested logit model, in which the probability of making a transition from stage n of the activist process to stage $n+1$ is conditional on having reached n.

[6] The estimation sample includes only failed activist campaigns, i.e. campaigns in which the activist faces the decision whether to continue or exit at a specific stage in the process.

This identifying restriction fixes the scale of utility of each stage and provides an additional degree of freedom to pin down the magnitude of stage costs. The stage-specific scale parameters control for unobserved heterogeneity in the activist sample and lead to more precise cost estimates. Intuitively, we expect the scale parameters to become smaller with every consecutive stage because the activists employing more confrontational tactics are more homogeneous.

4 Conclusion

The goal of this article was to disavow the widely-held notion (including by professional activism defense practitioners) that the activist's next steps can be anticipated by a linear process consisting of approximating the activist's cost at each stage by anecdotal data about the cost of such stage. We proved that the linear assumption is misguided, with the corollary being that any anti-activism defense relying in such linear assumption is likely to yield suboptimal results for the target.

We proved that through an approach consisting of two interrelated parts. First, we modeled activism as a sequential decision process consisting of demand negotiations, board representation, and proxy contest, and defined the activist's breakeven constraint for monitoring. We then transformed the activist's breakeven condition into a discrete-choice framework and derived the parameters to be used in an empirical study of such costs.