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Social learning and corporate peer effects ☆

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ABSTRACT

We find that firms are more likely to split their stock if their peer firms have recently done so. The effect is comparable to an increase of 40–50% in the share price. Splitting probability is also increasing in the announcement returns of peer splits. These results are consistent with social learning from peers' actions and outcomes. The unique features of the setting and various further tests render alternative explanations unlikely. We find no clear benefit in following successful peer splitters. Firms are sometimes suspected to succumb to imitation, and the effect we show could be a case in point.

1. Introduction

Peer effects are a subject of increasing attention in many areas of economics and finance.[1] Peer influence is interesting as it can create social multiplier effects, whereby a small initial shock can lead to larger changes as individuals are directly influenced by each other's actions. Corporate actions are a potential domain for such peer effects, as anyone having experience with corporate management knows that firms pay close attention to what their peer firms, such as competitors, are doing (see also Porter, 1980). For example, 96% of firms report utilizing peer groups to set executive pay (Bizjak, Lemmon, and Naveen, 2008).

In this paper, we ask whether a company is more likely to execute a stock split after its peer firms have done so. Splits provide a reasonably clean setting for studying corporate peer effects.[2] First, the split decision is unlikely to be related to unobservable fundamentals. While in

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[1] Empirical evidence comes from agriculture (Foster and Rosenzweig, 1995), criminal activity (Glaeser, Sacerdote, and Scheinkman, 1996), labor market (Woittiez and Kapteyn, 1998; Topa, Bayer, and Ross, 2008), use of welfare benefits (Bertrand, Luttmer, and Mullainathan, 2000), individuals' investment choices (Duflo and Saez, 2002; and Hong, Kubik, and Stein, 2004), consumption decisions (Grinblatt, Keloharju, and Ikäheimo, 2008; Cai, Chen, and Fang, 2009), and other domains.

[2] In a similar vein, some prior studies also utilize the setting provided by stock splits to investigate other broader phenomena. Ikenberry and Ramnath (2002) analyze market underreaction and self-selection in corporate news events. Baker, Greenwood, and Wurgler (2009) study firms' catering behavior. Greenwood (2009) focuses on the effect of trading restrictions on stock prices. Green and Hwang (2009) find excess co-movement of similar stocks.

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many domains peer effects can be difficult to identify due to common shocks or unobserved heterogeneity (Manski, 1993), the prospects are much brighter in the case of stock splits. This is because the strongest fundamental driver of the decision to split is the stock price, which can be directly observed. Second, it is very rare that a firm would face a binding constraint preventing it from splitting. Such constraints are relevant with other types of corporate actions, and they are likely to be correlated across firms. Therefore, in this setting, standard panel regressions go a long way in identifying a peer effect, and we are able to rule out alternative explanations with additional analysis.

The main analysis uses a logit regression on a firm-month panel of split activity observations. The dependent variable takes the value of one if a firm has announced a split in a month. The explanatory variable is based on the number of earlier splits by peer firms. To form the peer groups, we employ a new method based on identifying common sell-side analysts between firms. Because of analysts' specialization in certain types of firms, their coverage choices directly reflect informed views on firm relatedness. Conventional industry classifications tend to produce groups that are much too large to effectively identify the set of peers subject to managers' constant attention. For example, Fama and French industries consist of firm groups that are significantly larger than the typical benchmark peer groups used in executive compensation (Faulkender and Yang, 2010; Bizjak, Lemmon, and Nguyen, 2011). More detailed classifications, such as four-digit standard industrial classification (SIC) codes, emphasize the specific nature of firms' product-market operations and might not capture other possible aspects of similarity and relatedness. A particular benefit of our method is that peer identification is based on actual links between firms. A companion paper (Kaustia and Rantala, 2013) shows that the analyst-based method outperforms conventional industry classifications in producing homogenous groups.

To remove the influence of contemporaneous common shocks, we record peer firm split activity during the 12 months prior to the current month. We include control variables related to stock price, market capitalization, past return, and the firm's recent split history. The coefficient on the peer split variable then identifies a peer effect on the propensity to split, under the assumption that other motives for executing a split are perfectly controlled for. This assumption would be violated if there were motives to split that are not captured by these controls or related to peer splits. Time-varying motives to cater to investor demand for low-priced stocks, suggested by Baker, Greenwood, and Wurgler (2009), are one possibility. To deal with this possibility, we include fixed month effects to capture all common time-varying shocks affecting the perceived desirability of a split. The baseline specification clusters standard errors by firm. The data set consists of all NYSE-listed US firms with sufficient data available, and it covers the years 1983–2009.

The main results show that firms are significantly more likely to split when their peers have recently done so. Based on regression coefficients, a peer split dummy has the same effect size as a 45% stock return over the previous year does, clearly an economically significant magnitude. This result is robust in a number of different specifications, including, but not limited to, models with time-varying catering incentives, models addressing general time-varying firm- or industry-specific shocks, fixed effects based on various conventional industry classifications, placebo regressions, and within two subsamples dividing the time period in half. We also address group-specific shocks to benefits of splitting. Although the mechanism by which splits add value is not completely understood, tangible benefits should be associated with higher future market values.[3] Corporate managers also often mention improving stock liquidity as a motive (Baker and Gallagher, 1980). Thus, adding future stock returns and liquidity as peer group-level controls should drive out the effect of the peer split dummy if it was merely proxying for such effects. But this is not what happens. The results from these specifications are similar to the baseline.

A scenario that could undermine this identification strategy is time-varying peer group-specific shocks to unobservable benefits of splitting, i.e., unrelated to future market values and liquidity, common time effects, and other controls, that would cause peer firms to split, but at different times and independent of each other's actions. We address this alternative explanation by instrumenting the peers' splitting activity by a variable that records the percentage of peers trading above their past firm-specific split prices. This aggregates firm-specific information on past nominal prices and split actions in a manner that strongly predicts peer group splits and is sufficiently exogenous for our purposes. In contrast, merely having a high nominal price (i.e., without considering the firms' idiosyncratic split histories) does not predict peer group splits. The instrument does not suffer from a weak instrument problem and satisfies the exclusion restriction of affecting firm *i*'s likelihood of splitting only through its effect on firm *i*'s peers' tendency to split. A significant peer effect comes through in these instrumental variables (IV) regressions as well, giving credence to a causal interpretation of the effect.

Our second set of results concerns the effect of peer firms' split announcement returns on the tendency to split. The benefit of this analysis is that it can provide additional information on the nature of the peer effect shown in the main results. If the nature of social interaction involves observational learning from peers' outcomes, one would expect that firms are particularly likely to follow suit and split when their peers have done so with a favorable impact on their stock price. Consistent with this idea, we find that recent peer splits with positive average announcement returns increase the propensity to split twice as strongly as peer splits with negative average announcement returns do.

The results so far are best characterized by social learning, and they are hard to reconcile with alternative stories based on correlated effects or unobserved

[3] The standard explanations are signaling (Brennan and Copeland, 1988; Asquith, Healy, and Palepu, 1989; Ikenberry, Rankine, and Stice, 1996) and optimal trading range (Lakonishok and Lev, 1987; Angel, 1997). However, Weld, Michaely, Thaler, and Benartzi (2009) present several pieces of evidence against these hypotheses.