Journal of Financial Economics 97 (2010) 174–189

Contents lists available at ScienceDirect

Journal of Financial Economics

journal homepage: www.elsevier.com/locate/jfec

# Board interlocks and the propensity to be targeted in private equity transactions ☆

Toby E. Stuart *, Soojin Yim

[a] Harvard Business School, Soldiers Field, Boston, MA 02163, USA

ARTICLE INFO

*Article history:*
Received 2 February 2009
Received in revised form
29 June 2009
Accepted 29 July 2009
Available online 27 March 2010

*JEL classification:*
G34

*Keywords:*
Board interlocks
Board networks
Social networks
Private equity
Corporate governance

ABSTRACT

We examine how board networks affect change-of-control transactions by investigating whether directors' deal exposure acquired through board service at different companies affect their current firms' likelihood of being targeted in a private equity-backed, take-private transaction. In our sample of all US publicly traded firms in 2000–2007, we find that companies which have directors with private equity deal exposure gained from interlocking directorships are approximately 42% more likely to receive private equity offers. The magnitude of this effect varies with the influence of directors on their current boards and the quality of these directors' previous take-private experience, and it is robust to the most likely classes of alternative explanations—endogenous matching between directors and firms and proactive stacking of board composition by management. The analysis shows that board members and their social networks influence which companies become targets in change-of-control transactions.



## 1. Introduction

A large body of literature has examined the monitoring and advisory roles of boards, as well as how board characteristics affect firm value. Recently, a number of papers have extended this work to gauge the ramifications of social relationships among board members. One subset of this work studies social ties between boards and Chief Executive Officers (CEOs), finding that such connections enhance a board's advising ability but possibly at the cost of diminished efficacy in its monitoring function (Kramarz and Thesmar, 2006; Schmidt, 2008; Hwang and Kim, 2009). Another subset investigates the effectiveness of boards made up of directors who hold multiple board seats. This work suggests that boards with more "interlocked" directors could be poor monitors either because directors' independence is compromised (Hallock, 1997; Fich and White, 2003; Larcker, Richardson, Seary, and Tuna, 2005) or because board members are simply too busy to keep a watchful eye on management (Fich and Shivdasani, 2006).

Investigating the governance implications of directors' social ties is a natural extension of the corporate governance literature. However, a second perspective on the role of directors' social networks has received less attention in the corporate finance literature: the board network as a means for information transmission. Sociologists have long viewed each company's board as a node in a firm-to-firm network (overall, the board interlock network) that arises because a large fraction of public company directors are either directors or executives of other firms (Burt, 1983; Palmer, 1983; Mizruchi, 1992).

☆ We would like to thank Tracy Li for helpful research assistance. As well, we thank Pierre Azoulay, Guido Imbens, Bill Kerr, Rakesh Khurana, Josh Lerner, Steve Kaplan, Ramana Nanda, David Robinson, Bill Simpson, Jeremy Stein, David Scharfstein, Julie Wulf, Matthew Rhodes-Kropf, Mitchell Petersen, Scott Stern, and Yael Hochberg for helpful comments. We acknowledge Erika McCaffery's assistance in locating data for this project.

* Corresponding author.
*E-mail address:* tstuart@hbs.edu (T.E. Stuart).

0304-405X/$ - see front matter © 2010 Elsevier B.V. All rights reserved.
doi:10.1016/j.jfineco.2010.03.012

Individuals who are officers or directors at two or more companies—interlocked directors—become conduits for information, knowledge, and experiences that travel across the active links in the boardroom network.

A number of papers have analyzed the impact of the interlock network on financial variables. Davis (1991) examines the diffusion of poison pills in the 1980s, finding that companies with board interlocks to firms that had already adopted the poison pill were more likely to adopt themselves. Khurana (2002) finds that the CEO search process unfolds across the board interlock network as well, as directors consult board-level contacts to identify and vet potential CEO candidates. Cohen, Frazzini, and Malloy (2008) show that mutual fund managers have superior performance on holdings when the investor shares an educational affiliation with a director of the portfolio company, suggesting that membership in an exclusive educational network conveys access to privileged information. Bizjak, Lemmon, and Whitby (2009) trace the spread of options backdating through the board interlock network. Of the work in corporate finance, this paper most resembles ours in its emphasis on the board network as the transmission route for the diffusion of a financial practice. More generally, our paper contributes to the growing stream of research on the effects of social networks in different areas of finance, such as venture capital (Sorenson and Stuart, 2001; Hochberg, Ljungqvist, and Lu, 2007), strategic alliances (Robinson and Stuart, 2007; Lindsey, 2008), and lending markets (Garmaise and Moskowitz, 2003). These works provide empirical support for the idea that social networks are the pipes through which private information flows, and the fact that the agents in (or outside) a network have differential access to this information can influence diverse financial behaviors and outcomes.

Our paper investigates the influence of the board network on change-of-control transactions. Specifically, we study the role of board interlocks on a firm's likelihood of being targeted in a private equity (PE)-backed take-private transaction (take private). We capture the spread of PE-relevant experience via the board interlock network by creating a measure of PE Interlocks, which flags director interlocks that occur when a firm has a current director who is interlocked to a past take-private experience through his service as a director or executive of a second company. To illustrate, Eugene Davis was a director of Metals USA in 2005 when it received a take-private offer from a PE firm. Davis also served on the board of Knology Inc. from 2002 to 2007. In years 2006 and 2007 (but not 2002–2005), we treat Knology as having a PE Interlock because it was connected to the Metals USA buyout via Davis. We believe that the presence of a PE Interlocked director on the board (such as Davis on the Knology board after 2006) can increase the likelihood that a company becomes a PE target.

We study PE-backed take privates for a few reasons. First is their magnitude. The 473 deals in our sample total to $790 billion in transaction volume, and at the peak of activity in 2007, PE deals made up 45% of all merger and acquisition (M&A) deal value involving public targets. Second, a supportive board facilitates take-private transactions. Although this is also true of M&As, analyzing the take private process is more tractable. Specifically, M&As are strategic transactions in which acquirer–target pairs match through a search process that occurs over a restricted set of firms within which synergies are plausible (Rhodes-Kropf and Robinson, 2008). In contrast, PE deals are often financially oriented transactions in which PE acquirers can (simplistically) be viewed as interchangeable, bringing similar capabilities to the table.[1] This allows us to analyze the firm-level hazard rate of going private, instead of modeling matches between specific acquirer–target pairs.

We argue that deal experience transmitted through the board interlock network can increase the likelihood that a firm receives a PE offer. A central assumption of our analysis is that prior experience with a private equity deal often favorably disposes a director to future deals, either because it lowers the incremental cost of acquiring deal-relevant information or simply because familiarity with this type of major transaction breeds comfort. In turn, the PE-friendliness of the board matters in the takeover process. Target boards can invoke state-level anti-takeover laws or enact defensive tactics such as poison pills to deter hostile acquirers.[2] In addition, as advisers to senior management, directors wield informal power in the take-private process. Given these sources of influence, a PE firm considering a formal offer for a target company is likely to take into account the board's disposition. A favorable board facilitates a quick transaction, whereas an antagonistic one could cause costly and protracted negotiations.

Among all US public companies in 2000–2007, we find that firms with one or more directors who have experienced a PE offer at another company are ~42% more likely to become targets of PE-backed take privates. Also, we show that specific director characteristics and experiences contour the magnitude of the effect of having a PE Interlock. For still-public companies with PE Interlocked directors who had relatively unsuccessful experiences in their past take-private transactions, the PE Interlock effect largely disappears. Likewise, the effect attenuates when the PE Interlocked director has less influence on the board of the still at-risk firm. Thus, PE

[1] This is a simplifying assumption, but it is consistent with evidence that there is greater selectivity of target search in M&A relative to PE deals. Specifically, Boone and Mulherin (2009) find that the pool of potential acquirers is much smaller in M&As than in PE transactions. Public targets acquired by public firms were in contact with an average of nine bidders and signed confidentiality agreements with four. In contrast, targets acquired by PE firms were in contact with 32 bidders and signed confidentiality agreements with 13.

[2] State-level anti-takeover laws include so-called merger moratorium provisions that prohibit mergers between a target and another party that controls a threshold percentage of shares for 3–5 years after the controlling interest is acquired. Because unfriendly boards can invoke these and other defensive tactics, hostile acquirers increasingly have pursued proxy fights in attempts to unseat the target company's board. Given the obstacles, however, PE acquirers in recent years have avoided hostile takeovers. In fact, members of three of the largest PE firms told us that their placement memoranda specifically prohibit them from pursuing hostile buyouts, and only 2% of all PE-backed take-private transactions in our data are classified as hostile.