Journal of Financial Economics 108 (2013) 822–839

Contents lists available at SciVerse ScienceDirect

Journal of Financial Economics

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

Gender and corporate finance: Are male executives overconfident relative to female executives?☆

Jiekun Huang[a,]*, Darren J. Kisgen[b]

[a] National University of Singapore, Singapore
[b] Carroll School of Management, Boston College, Chestnut Hill, MA 02467, USA

ARTICLE INFO

Article history:
Received 28 February 2011
Received in revised form
21 June 2012
Accepted 17 July 2012
Available online 22 December 2012

JEL classification:
G30
G34
J16

Keywords:
Corporate policies
Gender
Overconfidence
Mergers and acquisitions

ABSTRACT

We examine corporate financial and investment decisions made by female executives compared with male executives. Male executives undertake more acquisitions and issue debt more often than female executives. Further, acquisitions made by firms with male executives have announcement returns approximately 2% lower than those made by female executive firms, and debt issues also have lower announcement returns for firms with male executives. Female executives place wider bounds on earnings estimates and are more likely to exercise stock options early. This evidence suggests men exhibit relative overconfidence in significant corporate decision making compared with women.

1. Introduction

Traditional corporate finance largely ignores the influence a specific manager has on decision making, focusing on firm characteristics instead of managerial characteristics. Nevertheless, few would argue that Apple would be the same company if someone other than Steve Jobs had been Chief Executive Officer (CEO), or that General Electric would be the same if not led by Jack Welch. We examine executive heterogeneity by focusing on one potentially important characteristic of executives: their gender. Behavioral differences in gender have been studied extensively in psychology and other fields, but not in corporate finance. In this paper, we examine whether the gender of an executive has a material impact on corporate decision making. We then examine whether the differences in behavior we identify have an impact on shareholder value.

The number of female top executives in the U.S. has increased significantly. Among major U.S. corporations in 2005, 7.5% of Chief Financial Officers (CFOs) and 1.5% of CEOs were women, versus 3.0% and 0.5% in 1994, respectively. Despite this increase in female representation, previous research has not examined whether gender plays a role in corporate decisions. Examining this is important not only because it provides more insights into corporate behavior generally, but also because the representation of women in higher ranking executive positions continues to

☆ We thank Brad Barber, Clifford Holderness, Mitchell Petersen, Jeffrey Pontiff, and Philip Strahan, and seminar participants at State University of New York at Binghamton, Boston College, National University of Singapore, and University of Southern California for helpful comments. Jiekun Huang acknowledges support from Ministry of Education Academic Research Fund (R-315-000-082-133). We are responsible for all errors and omissions.
* Corresponding author.
E-mail address: huangjk@nus.edu.sg (J. Huang).

0304-405X/$ - see front matter
http://dx.doi.org/10.1016/j.jfineco.2012.12.005

be relatively small. We test whether firms with female executives (CEOs and CFOs) make different financing or acquisition decisions compared with firms with male executives[1]. We then examine whether any differences in decisions identified for women are better or worse for shareholder value. The primary hypothesis we test, based on previous literature in other contexts, is that male executives are overconfident in corporate finance decisions compared with women.

Using a difference-in-differences empirical framework on a hand collected data set of executive transitions, we identify several key differences for female executives relative to male executives. We find that firms with female executives grow more slowly and are less likely to make acquisitions. We also find that acquisitions made by female executives have higher announcement returns compared with those made by firms with male executives. We find analogous results for capital structure decisions. Female executives are less likely to issue debt, and announcement returns for debt offerings are higher when the firm has a female executive. Female executives do not, however, make significantly different changes to leverage overall.

These main results are consistent with relative overconfidence for male executives compared with female executives, yet other explanations could also be consistent with this evidence[2]. We conduct a number of additional tests to distinguish the overconfidence interpretation from other explanations consistent with these key results. First, we test whether male executives are overconfident directly by examining their earnings forecasts. We find that earnings forecasts made by firms with male executives have significantly narrower bands than those with female executives. Second, we examine the likelihood that male executives are replaced relative to female executives. Overconfident executives should be more likely to be replaced, because overconfident decisions lead to non shareholder value-enhancing decisions. We find that male executives, especially CFOs, are more likely to be replaced (i.e., serving less than four years in tenure), consistent with men being overconfident. Third, we replicate measures of overconfidence based on stock option exercise decisions used in Malmendier and Tate (2005) for male and female executives. Male executives are less likely to exercise deep-in-the-money options early, which is consistent with male overconfidence. Finally, we examine the likelihood of an acquisition being acquirer shareholder value destroying. If male executives are overconfident, they should sometimes inadvertently undertake value-destroying acquisitions. Consistent with male overconfidence, we find that acquisitions undertaken by men are significantly more likely to have negative announcement returns than those undertaken by firms with female executives. The evidence from these four tests supports the interpretation that male executives are overconfident relative to female executives in major corporate decisions.

While our main identification strategy of difference-in-differences around executive transitions largely excludes alternate explanations for our main results, we conduct one additional set of tests to rule out any lingering concerns. These tests rely on an instrumental variable approach, in which the instrument we use for a firm having a female executive is based on a previous study that calibrates a state's level of gender status equality (Sugarman and Straus, 1988). We conjecture that the more friendly a state is to women's equality generally, the more likely a firm located in that state is to have a female executive. We use as an instrument the state's gender status equality value for each firm based on the firm's headquarters location (this continuous measure ranges from 0 to 100). So, for example, a firm headquartered in Mississippi (the lowest scoring state) gets a significantly lower score than a firm headquartered in Oregon (the highest scoring state). We find that this measure is significantly related to the decision to hire a female executive in the first stage. Second-stage results from a two-stage least squares (2SLS) instrumental variable (IV) design confirm the results from the primary difference-in-differences approach.

To our knowledge, ours is one of the first papers to study gender differences in the corporate setting. Gender has been examined in other business settings, including stock trading behavior (Barber and Odean, 2001), the mutual fund industry (Atkinson, Baird, and Frye, 2003), start-up firms (Verheul and Thurik, 2001), and competitive environments in laboratory settings (Niederle and Versterlund, 2007). Graham, Harvey, and Puri (forthcoming) use a survey-based approach to identify differences in CEO risk aversion and optimism and then relate those differences to corporate financial decisions. Sapienza, Zingales, and Maestripieri (2009) examine the impact of testosterone levels in men and women and the impact of that testosterone on career choices. Bharath, Narayanan, and Seyhun (2009) examine insider trading by female versus male executives, and Adams and Ferreira (2009) examine the impact of female board members on firm governance and stock performance. Our paper differs from previous literature as we examine different aspects of executive behavior including mergers and financing decisions, we use a difference-in-differences empirical approach, we hand collect data to obtain a larger sample of female executives, and we examine not only executive decision making but also the market's reaction to that decision making.

The rest of the paper is organized as follows. In Section 2, we state our hypotheses; in Section 3, we provide our main empirical tests; in Section 4, we conduct additional tests to evaluate why gender differences exist; and in Section 5, we conclude.

[1] We include female CEOs and CFOs in our sample, but the sample is heavily weighted toward female CFOs given their greater representation in firms. Both CEOs and CFOs are integral players in the decisions we examine in this paper. For example, Bertrand and Schoar (2003) find that the CFO of a firm significantly affects both capital structure and acquisition policy. Frank and Goyal (2010) find that CFOs are at least as important, if not more important, for capital structure decisions as CEOs.

[2] We use the term "overconfidence" to encompass both overconfidence and optimism as in previous literature (see, e.g., Malmendier and Tate, 2005; Camerer and Lovallo, 1999).