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Do CEOs who trade shares adopt more aggressive corporate investment strategies?☆

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ABSTRACT

This paper investigates whether CEOs who have active share trading accounts engage in higher levels of corporate investment. Individuals who allocate a higher proportion of their wealth to equities, as opposed to fixed income assets, are by definition less risk averse. We find that this behavioral attribute is consistent in both the personal and corporate domain. Corporations with trader CEOs have higher capital expenditures and make significantly more acquisitions, and CEOs with higher portfolio turnover engage in riskier forms of corporate investment. The findings shed light on how shareholders can better align CEO preferences with their own. These conclusions are robust to adjustments for potential endogeneity in the choice of CEO for a specific firm and sample selection bias.

1. Introduction

Corporate investment is an integral part of a business strategy. Investments such as research and development, capital expenditure and business acquisitions enable sustained economic growth by expanding and preserving competitive advantage. Previous studies relate the level of investment expenditure to the level of risk aversion of top management and have identified factors that impact the risk level of investment choices by managers and consequently by firms. This may lead corporations with managers who are risk averse in their personal domain to invest less than the optimal level.

These factors can be identified in both the corporate and personal domains of managers. At the corporate level, for example, adverse selection due to the availability of cash flow has been shown to determine the level of investment expenditure (Myers and Majluf, 1984; Fazzari et al., 1987). CEOs are reluctant to invest in positive NPV projects for which they do not have adequate information.[1] At the personal level, managers' personal attributes and traits are investigated to determine whether they are related to corporate decisions (Malmendier and Tate, 2005; Cronqvist et al., 2012). For example, Malmendier et al. (2011) suggest that

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[1] Agency conflicts is another example when different incentives for shareholders and managers lead top management to be cautious about engaging in additional risky but value-enhancing investments, as these may weaken the position of management (Jensen, 1986). However, performance-related compensation schemes are used to bridge the agency conflict between managers and shareholders, creating incentives for risk averse managers to invest more (Jensen and Meckling, 1976; Haugen and Senbet, 1981; Guay, 1999; Manso, 2011; Burkart and Raff, 2014; Bolton et al., 2015).

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certain behavioral traits and characteristics are unconditionally related to effective corporate innovation. Cronqvist et al. (2012) test the hypothesis that individuals behave similarly in various contexts and find that there is a link between CEOs' private home leverage and the debt ratio of the corporations they manage.[2]

In this paper, we study the impact of differences in personal traits of CEOs by examining CEOs' personal equity investments, which is new information compared with the previous literature. We expect the trading behavior of CEOs, as a personal attribute in their investment decisions, to directly impact their investment decisions for the firms they manage.

For this purpose, we identify a new dataset and introduce the share-trading activity of CEOs and turnover of their personal share portfolios as novel factors that impact the risk level and sensation-seeking behavior of CEOs and consequently the investment expenditures of the firms they manage. These factors are more direct proxies of CEOs' investment preferences compared with other variables used in the previous literature (Malmendier and Tate, 2005; Cronqvist et al., 2012, Cain and McKeon, 2014). Malmendier and Tate (2005) suggest a theory that shows an association between investment preferences of CEOs for themselves and for their firms. We focus on this association and use our new factors to show that there is a relation between the personal investment behavior of CEOs and their corporate investment decisions.

Based on the established understanding that stock market participation is negatively related to risk aversion (e.g., Vissing-Jørgensen and Attanasio, 2003), we hypothesize that CEOs who actively trade shares in their personal accounts are less financially conservative. We show that this trait is reflected in both their personal and corporate investment decisions. Furthermore, the literature attributes sensation seeking to higher levels of risk taking (Barber and Odean, 2001; Grinblatt and Keloharju 2009, Sunder et al., 2014). We propose the magnitude of CEOs' personal share portfolio turnover as a proxy for sensation seeking and show that there is a relation between CEOs' trading activity and their corporate investment expenditures.

To the best of our knowledge, this is the first study to relate the personal trading activity of CEOs to their corporate investment decisions. We investigate this association by studying the personal trading activity for Finnish corporate CEOs who trade both their own firm's shares and the shares of other firms over the period of 2005–2011. The sample is constructed using three datasets. The first is the Euroclear database, which contains trade-by-trade changes in all the shareholdings of every registered Finnish investor. The second database is the Finnish Insider Trading Registry (NetSire), which contains the insider transactions by directors of all firms listed on the Nasdaq OMX Helsinki Exchange. The third is the Public Registry of Incorporations (Virre), which contains directors' names and education.

We identify 68 CEO accounts in Euroclear by matching known insider trades from the Insider Trading Register with identical trades by anonymous account holders with the same year of birth in the Euroclear database. We then merge the Euroclear database with Virre to incorporate the name, title and education of all CEOs. This unique dataset allows us, for the first time, to explore the complete share-trading activity of CEOs, both in their own firms' shares and the shares of other firms.

We collect corporations' data on research and development, capital expenditure and business acquisitions expenditure from their annual reports, and adopt the sum of these expenditures as our proxy for total investment. The results show that corporations with trader CEOs (who personally trade shares) invest more in capital expenditure and business acquisitions. The results are robust after controlling for fixed industry, fixed year and firm clustered standard errors. We use logistic regressions to examine the probabilistic outcome that firms engage in higher levels of investment. We find that trader CEOs contribute to the likelihood that firms engage in the highest tranche of total investment, after controlling for fixed industry and year effects. We also investigate the impact of CEO portfolio turnover on the level of investment and show that there is a positive correlation between CEO turnover rates and investments on business acquisitions.

Because we use a non-random sample of CEOs with and without trader CEOs in this study, the results are prone to be affected by sample selection bias. Furthermore, there is potential endogeneity between matching CEOs and firms as companies with higher investments may hire less risk averse i.e., trader CEOs. Therefore, it is necessary to construct an adequate control sample for comparison purposes and hence avoid these biases in estimating the effects of trader CEOs (treatment effect). We utilize propensity score matching (PSM) to efficiently match our treated sample (firms with trader CEOs) with our control sample (firms without trader CEOs) based on multiple firm and CEO characteristics as well as industry and year dummies. The PSM methodology can address potential endogeneity problems associated with CEOs and their firms as well as the sample selection bias. We estimate PSM models based on different matching methods and show that our finding is robust after controlling for endogeneity and sample selection bias. Moreover, we show that our results are robust after controlling for CEO education and other proxies for corporate investments.

Our findings suggest that non-trading CEOs behave with a level of financial conservatism that is reflected across both their individual and corporate domains. With respect to the trading CEOs, those with higher portfolio turnover engage in more corporate investment, indicating that more trade activity is related to lower risk aversion.

This paper contributes to the literature that investigates the behavioral consistency theory, which suggests that CEOs exhibit similar behavioral traits across the individual and corporate domain. Graham et al. (2013) survey 1180 CEOs from both inside and outside the U.S. and find that CEOs who are more risk tolerant are more likely to make acquisitions, and a larger number of acquisitions. Cain and McKeon (2013) analyze the corporate policies of CEOs in possession of a pilot's license and find that pilot CEOs are less risk averse in their corporate decisions and lead firms that tend to take more risks. Hutton et al. (2014) find that Republican managers adopt more conservative corporate policies on average. Chyz (2013) finds that tax aggressive

[2] More examples are Aktas et al. (2009), and Frijns et al. (2013), who present theoretical models that incorporate CEO risk aversion and predict that these CEOs characteristics have an impact on valuation outcomes and their bidding strategies decisions in mergers and acquisitions.

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