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Ownership structure and financial constraints: Evidence from a structural estimation ☆

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ABSTRACT

This article examines the impact of the divergence between corporate insiders' control rights and cash-flow rights on firms' external finance constraints via generalized method of moments estimation of an investment Euler equation. Using a large sample of U.S. firms during the 1994–2002 period, we find that the shadow value of external funds is significantly higher for companies with a wider insider control-ownership divergence, suggesting that companies whose corporate insiders have larger excess control rights are more financially constrained. The effect of insider excess control rights on external finance constraints is more pronounced for firms with higher degrees of informational opacity and for firms with financial misreporting, and is moderated by institutional ownership. The results show that the agency problems associated with the control-ownership divergence can have a real impact on corporate financial and investment outcomes.

1. Introduction

Recent research in corporate ownership and control has documented a divergence between the control rights and cash-flow rights of corporate insiders in many publicly traded firms around the world (e.g., La Porta, López-de-Silanes, and Shleifer, 1999). Corporate officers and directors often have voting rights substantially in excess of their cash-flow rights, and in many cases, have effective control over all corporate decisions with disproportionately small economic interest in the firm (Gompers, Ishii, and Metrick, 2010). In such firms, the classic agency conflict between managers and shareholders (Jensen and Meckling, 1976) is exacerbated to a conflict between corporate insiders and outside investors since the corporate insiders have the incentives and ability to divert corporate resources for private benefits at the expense of other investors (Shleifer and Vishny, 1997; Djankov, La Porta, López-de-Silanes, and Shleifer, 2008). In line with this view, numerous studies have shown a negative relationship between the control rights-cash-flow rights deviation and corporate valuation in various countries and settings.[1]

While previous studies have tackled the question of whether the divergence between control rights and cash-flow rights (the "control-ownership divergence") affects corporate values, the specific channels behind this relationship are largely unknown. Intuitively, it seems quite implausible that the large valuation discounts noted in

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[1] Gompers, Ishii, and Metrick (2010) provide a recent review of this literature.

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the literature in firms with separation of ownership and control are solely driven by direct expropriation activities. In this paper, we identify an important mechanism through which the insider control-ownership divergence may affect firm values, and show that insider ownership structure has a real impact on corporate financial and investment outcomes. Specifically, using generalized method of moments estimation of an investment Euler equation proposed by Whited and Wu (2006), we examine the impact of the excess control rights of corporate insiders on firms' external finance constraints. External finance is a particularly important channel to investigate because financial constraints prevent firms from funding all desired investment (Stein, 2003; Billett, Garfinkel, and Jiang, in press). As a result, financially constrained firms might be forced to forgo significant investment projects with positive net present values. In fact, Whited and Wu (2006) find that the most financially constrained firms (by quartile) invest 18% less than the least constrained ones.

Corporate finance theories provide a straightforward motivation for the connection between corporate insiders' control-ownership divergence and firms' financing constraints. In pursuit of private benefits, corporate insiders and controlling shareholders may seek to expropriate other investors, including minority shareholders and creditors, through various self-dealing activities including outright theft, transfer pricing, investor dilution, executive perquisite, expropriation of corporate opportunities, investment in unprofitable projects for self-interest, asset sales to insiders or affiliated corporations at favorable prices, loan guarantees using the firm's assets as collateral, and other self-serving financial transactions (Shleifer and Vishny, 1997; La Porta, López-de-Silanes, Shleifer, and Vishny, 2000; Johnson, La Porta, López-de-Silanes, and Shleifer, 2000a; Djankov, La Porta, López-de-Silanes, and Shleifer, 2008). The "private benefits of control" are reflected by the widely documented premium at which shares with superior voting rights trade (Shleifer and Vishny, 1997). Relevant evidence has been shown not only in developing countries where investor protection might be poor, but also in many developed countries including the U.S.[2] In extreme cases, as pointed out by Friedman, Johnson, and Mitton (2003), many bankruptcy cases in both developing and developed countries have been associated with complete looting by corporate insiders and controlling shareholders, leaving the minority shareholders and creditors almost nothing when the firms went bankrupt. Corporate insiders' incentives to engage in self-dealing activities are especially strong when they have control rights in excess of cash-flow rights, as the excess control rights afford them the ability to do so while bearing a relatively small proportion of the financial consequence (Shleifer and Vishny, 1997; Johnson, La Porta, López-de-Silanes, and Shleifer, 2000a). Masulis, Wang, and Xie (2009) find evidence that insiders with excess control rights waste corporate resources at the expense of shareholders in the pursuit of private benefits. Moreover, in effect, the insider control-ownership divergence often creates an extreme example of antitakeover protection (Gompers, Ishii, and Metrick, 2010). The problem of expropriation by insiders is aggravated in such firms without valid takeover threats, as corporate insiders with large control rights get entrenched and managerial discretion cannot be effectively controlled (Jensen, 1993; Shleifer and Vishny, 1997).

In anticipation of the potential expropriation by corporate insiders in firms with a divergence between control rights and cash-flow rights, outside investors (both shareholders and creditors) are less willing to invest in these firms because they face the risk that the returns on their investment will never materialize (La Porta, López-de-Silanes, Shleifer, and Vishny, 2000). As a direct consequence, such firms become financially more constrained due to the very costly or even lack of access to external finance. Despite the theoretical appeal, to the best of our knowledge, no study has examined the link between the control-ownership divergence and external financing constraints.

In this paper, we fill this gap by examining the relationship between the control-ownership divergence of a firm's corporate insiders and the firm's external finance constraints using a newly available data set on insider ownership structure of U.S. firms over the period 1994 to 2002. Following Whited and Wu (2006), we take a structural approach and explore this relationship by estimating the Euler equation of a standard intertemporal investment model augmented to account for financial constraints. Indeed, Whited (1992) shows that the augmentations of the investment equation improve its fit. The basic idea is that finance constraints affect the intertemporal substitution of investment today for investment tomorrow through the shadow value of external funds. Intuitively, firms that are financially constrained have investment *growth* that is too high given their current profitability because they put off projects with positive net present values into the future; that is, they behave as if they have a high discount rate. Therefore, investment today is too low relative to investment tomorrow. The shadow value of external funds can be parameterized as a function of observable firm and industry characteristics, and the parameters can be estimated via generalized method of moments (GMM) estimation. The fitted value of the shadow value will be a measure of external finance constraints (Whited and Wu, 2006). By modifying the specification for the shadow value to include insider ownership structure, we can test whether the insider control-ownership divergence affects financial constraints by examining the relevant parameter estimate as well as the overall model suitability.

The structural approach employed in the paper has significant advantages over the alternative test for financial constraints based on reduced-form regressions of investment on Tobin's q and cash flow in which the investment-cash flow sensitivity from the regression results is interpreted as a measure of financial constraints (e.g., Fazzari, Hubbard, and Petersen, 1988). If investment opportunities are measured with error, the positive link

[2] The evidence has been shown in various contexts including the U.S. savings and loan crisis (Akerlof and Romer, 1993), the Mexican and Asian financial crises (La Porta, López-de-Silanes, and Zamarripa, 2003; Johnson, Boone, Breach, and Friedman, 2000b), and legal disputes over self-dealing in France, Italy, Belgium, and Germany (Johnson, La Porta, López-de-Silanes, and Shleifer, 2000a).