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Firm cash holdings and CEO inside debt

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ABSTRACT

We examine the effect of CEO pensions and deferred compensation (inside debt) on firm cash holdings and the value of cash. We document a positive relation between CEO inside debt and firm cash holdings. This positive effect is magnified by firm leverage and mitigated by the presence of financial constraints. We further find that the marginal value of cash to shareholders declines as CEO inside debt increases. Our evidence supports the view that inside debt tilts managerial incentives toward bondholders and helps balance the competing interests of stockholders and bondholders. The evidence also suggests, however, that inside debt can harm shareholder value by encouraging excess cash holdings.

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1. Introduction

Executive compensation packages typically include salaries, bonuses, stock and options, pensions, and deferred compensation. The stock and option components are widely believed to align a manager's interests with those of stockholders. Lesser known are the incentive effects of debt-like components such as pensions and deferred compensation. These compensation components, collectively referred to as inside debt, are unsecured and typically underfunded obligations that resemble debt-like claims against the company and thereby help align managers' incentives with those of the firm's bondholders. Recent studies conclude that inside debt represents a significant component of CEOs' compensation and that it has become increasingly popular to compensate CEOs with inside debt.[3]

In an attempt to understand how inside debt affects corporate decision-making, in this paper we study the effect of inside debt on corporate cash policy. As shown by Edmans and Liu (2011), when CEOs hold debt-like claims they are more likely to behave like bondholders. The closer alignment of CEOs with bondholders as induced by inside debt has important implications for stockholder–bondholder conflicts. Corporate cash policy seems to be an ideal policy in which to explore the links between debt compensation incentives and stockholder–bondholder conflicts. On the one hand, firm cash policy choices have been shown to be significant policy choices for both stockholders and bondholders because of the potentially high impact of firm cash balances on the riskiness of their claims.[4] On the other hand, corporate cash policy, to a large extent, is at the discretion of managers with little scrutiny from outside investors. As such, cash policy can serve as an interesting and useful backdrop with which to study how managerial debt-like compensation incentives affect firm stakeholders.

Using compensation data from ExecuComp, we compute CEO inside debt as the sum of pension value and deferred compensation. Pension value is the aggregate present value of the CEO's

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[3] Bebchuk and Jackson (2005) and Sundaram and Yermack (2007) document the contribution of pensions to CEO compensation and recent studies by Cen (2010), Lee and Tang (2011), Cassell et al. (2012), and Anantharaman et al. (2013) document the increasing contribution of pensions and deferred compensation for the ExecuComp universe of firms starting with the period from 2006 when the SEC's executive compensation disclosure requirements were expanded to include pensions and deferred compensation.

[4] For example, see Acharya et al. (2007) and Acharya et al. (2012). Other papers that examine the determinants and value of corporate cash policy include Kim et al. (1998), Opler et al. (1999), Faulkender and Wang (2006), Pinkowitz et al. (2006), Dittmar and Mahrt-Smith (2007), Harford et al. (2008), Bates et al. (2009), Denis and Sibilkov (2010), Liu and Mauer (2011), and Dittmar and Duchin (2012).

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accumulated benefits under the firm's pension plan at the end of a fiscal year and deferred compensation is the aggregate balance in non-tax-qualified deferred compensation plans at the end of a fiscal year. Excluding financial and utility firms, we then match this data with Compustat and CRSP data, which results in a sample of 6009 firm-year observations over the period of 2006–2011.[5]

We test several hypotheses about the relation between firm cash policy and CEO inside debt. We find that our evidence is more consistent with CEO risk aversion than a spending hypothesis originally put forth by Harford et al. (2008) to explain their finding that cash balances are smaller in firms with weaker corporate governance structures. In particular, we find that inside debt and its components are a greater share of total CEO wealth in firms with weaker governance structures. We document a positive relation between cash holdings and both the proportion of the CEO's wealth represented by inside debt and the relative CEO-firm debt-to-equity ratio. The effect of inside debt on cash balances is economically significantly. In particular, regression estimates indicate that a one standard deviation increase in inside debt increases cash balances by 3.7–6.2% for the mean firm in our samples. This positive influence of inside debt on cash balances is driven by both pension and deferred compensation components, although deferred compensation tends to be more influential. Interestingly, we also find a nonlinear relation between cash balances and inside debt by firm leverage level. As firm leverage increases the magnitude of the positive relation between cash and inside debt increases but eventually turns negative for firms with relatively high levels of leverage.

Our finding that CEO debt-like compensation is associated with higher firm cash balances is consistent with the view that CEOs have incentives to reduce risk as they become more aligned with bondholders. In their study of CEO equity-compensation, Liu and Mauer (2011) document that greater equity incentives as measured by the sensitivity of equity compensation to volatility (vega) are also associated with higher corporate cash holdings. Given that both CEO debt- and equity-compensation incentives increase cash holdings, it is interesting to ask whether the effect of inside debt is independent of the vega effect. We find that the inside debt has a positive effect on cash holdings regardless of whether we control for vega. This suggests that inside debt and vega influence cash holdings through different channels.

If inside debt encourages greater risk aversion, and therefore induces CEOs to hold excess cash, CEOs may face constraints in their ability to do so. One constraining factor could be the financial constraint status at the firm level. Unlike CEOs at financially unconstrained firms that can raise capital relatively easily, CEOs in financially constrained firms may face difficulty accumulating cash reserves as their inside debt increases, simply because capital is limited. This argument implies a mitigating effect of the firm's financial constraint status on the relation between inside debt and cash holdings. To investigate, we interact several measures of financial constraint with CEO inside debt in our cash holding regressions. We generally find significantly negative coefficients on the interaction terms, lending support to the mitigating role of financial constraints on the cash-inside debt relation.

Our cash results suggest but are insufficient to show that although the cash policy of managers may better align them with bondholders, the excess cash attributable to inside debt may harm shareholder wealth and thereby portend greater stockholder–bondholder conflicts. Using the methodology in Faulkender and Wang (2006), we examine the marginal value of cash as a function of CEO inside debt holdings. We find the marginal value of cash to shareholders is decreasing in CEO inside debt. For example, we find that the value of an additional dollar of cash for the mean firm with below median inside debt is $1.89, while the value of an additional dollar of cash for the mean firm with above median inside debt is $1.01, which is a decrease of 47%. This evidence strongly suggests that stockholders internalize the negative effect of inside debt on managerial incentives and discount the value of cash when inside debt is high.

Our paper makes several contributions to the literature. First, we contribute to the emerging literature on how managerial debt-like compensation influences the policy choices of firms. For example, Lee and Tang (2011) and Cassell et al. (2012) find that firm leverage, R&D expenditures, and stock return volatility are decreasing in inside debt, while firm diversification is increasing in inside debt. We are the first paper, however, to examine the influence of inside debt on firm cash policy.[6] Second, to our knowledge we are the first paper that examines the joint influence of CEO equity compensation incentives and debt compensation incentives on firm policy decisions. We find that the effect of inside debt on cash policy is independent of the effect of equity compensation on cash policy, with both having a positive effect on cash policy.[7] Third, we are the first to document that the marginal value of cash to equityholders is decreasing in inside debt, which suggests that inside debt may exacerbate stockholder–bondholder conflicts by inducing firms to hold excessive amounts of cash. The finding that inside debt increases as shareholder rights decrease and that cash holdings are increasing in inside debt supports this view.

The remainder of the paper is organized as follows. We develop our hypotheses in Section 2 and provide a brief review of the cash literature and discussion of CEO inside debt. Section 3 describes our data and the variables that we use in our empirical analysis. Section 4 reports our results, and Section 5 concludes.

2. CEO inside debt and corporate cash balances

We start with a brief discussion of the literature on the determinants of cash balances. We then discuss the concept of inside debt and the two types of CEO inside debt. This is followed by a discussion of hypotheses on how CEO inside debt will influence corporate cash balances.

2.1. Determinants of corporate cash balances

There is a large literature examining the determinants of corporate cash holdings. The early studies by Kim et al. (1998) and Opler et al. (1999) find strong evidence that cash balances are built to hedge external financing frictions. In particular, these studies find that smaller firms with strong growth opportunities, riskier cash flows, and higher information asymmetry hold more cash, while larger firms with ready access to external sources of finance hold less cash. Denis and Sibilkov (2010) extend this literature by examining the relation between cash holdings, investment, and financial constraints. They find that high cash balances are used by financially constrained firms to finance positive net present value investments and not simply to pursue empire building. Along other dimensions, Harford et al. (2008) find that poorly governed firms hold less cash – the spending hypothesis – and Dittmar and Duchin (2012) find that managerial conservatism can help explain large

[5] The sample starts in 2006 because it is the first year the SEC required firms to report executive pension benefits and deferred compensation plans.

[6] Cassell et al. (2012) find that working capital is increasing in inside debt.

[7] Liu and Mauer (2011) find that CEO equity compensation incentives as measured by vega have a positive effect on cash holdings and attribute their finding to bondholders anticipating greater risk-taking in high vega firms and thereby requiring greater liquidity. Our results suggest that the positive relation between cash holdings and CEO inside debt is attributable to the separate effect of CEO risk aversion.

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