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The bright side of CEO-board social ties: Evidence from French firms' cash holdings

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Abstract

We test the hypothesis that CEO-board social ties facilitate corporate financing. Our empirical approach is based on the precautionary motive for holding cash, which implies that firms hold more cash if they have more growth opportunities or if their cash flows are more volatile. Using a sample of French firms over the period 2006-2017, we show that firms with board-connected CEOs are less sensitive to these two factors, suggesting easier access to external finance. The results take into account the dynamic and endogenous nature of the relationship between board composition and cash holdings.

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1. Introduction

Social networks play a powerful role in France (Nguyen 2012; Kramarz & Thesmar 2013; Maclean et al. 2014). None more so than the old school networks based on an education at the highly prestigious Ecole Polytechnique and Ecole Nationale d'Administration (ENA). Alumni draw lifetime benefits long after they graduated. Membership in those networks increases the likelihood of receiving board appointments. It allows CEOs to extract higher compensation and protects them from dismissal following poor results.

Most studies suggest that social networks are detrimental to good governance. They decrease board oversight and promote CEO entrenchment (Hwang & Kim 2009; Nguyen 2012) leading to poor acquisitions (Kramarz & Thesmar 2013), higher risk of fraud (Khanna et al. 2015) and lower firm valuation (Fracassi & Tate 2012). However, social networks can also have benefits. They foster trust among board members, and thus facilitate the candid discussion of sensitive issues (Adams & Ferreira 2007). They give CEOs access to private information and attract their attention to a wider range of business opportunities (Burt 1997; Guo et al. 2020). Last but not least, CEOs can use their connections to procure hard to get resources.

In this paper, we hypothesize that CEO-board social ties help firms access financial resources. To test this point, we analyze the dynamic behavior of the firm's cash holdings in response to changes in investment opportunities and the risk of a cash shortfall. Using a sample of French firms over the period 2006-2017, we observe that firms hold more cash when they have more growth opportunities and when their cash-flows are more volatile. However, the cash holdings of firms with board-connected CEOs are significantly less sensitive to these factors, consistent with lower financing constraints (Han & Qiu 2007).

This study makes two contributions to the literature. It first shows that CEO-board social ties can be valuable and establishes this claim using a new approach. Second, the study contributes to the analysis of cash holdings. Governance, and specifically CEO entrenchment, appears to have mixed effects on cash holdings, which are summarized by the competing "flexibility" and "spending" hypotheses (Harford et al. 2008). We show instead that the CEO's connections have a moderating effect on two key factors that drive the precautionary demand for cash.

2. Background and hypotheses

Nowhere in the world is an elite education more critical to reach the top of the corporate ladder than in France. This is especially true of large firms (Eminet et al. 2009; Nguyen 2012). In fact, a majority of CEOs in large banks and industrial firms that constitute the CAC 40 index come from just two schools: Polytechnique and ENA. The dominance of these two schools is all the more striking that they only produce a tiny fraction of all graduates. In comparison, Harvard Business School accounts for just 6% of top executive positions in US firms (Shue 2013). This creates a "small world effect" whereby everyone knows one another; and call themselves by their first names (Suleiman, 1978; Nguyen 2012).

One distinctive feature of these networks is that group members actively help and protect each other. Kramarz & Thesmar (2013) show that new board appointees are more likely to be graduates of Polytechnique or ENA if the CEO is an alumnus of these schools. This bias is consistent with the observation that CEOs tend to hire directors who share similar socio-demographic characteristics (Westphal et Zajac 1995). It is therefore unrealistic to expect that

directors, who share something as fundamental as the same alma mater as the CEO, can exercise effective monitoring over the latter's decisions.

In fact, empirical studies reveal that board-connected CEOs receive generous compensation packages that do not require them to produce outstanding results (Hwang & Kim 2009). No wonder that they are not incentivized to create value. Kramarz & Thesmar (2013) show that they are prone to make value-destroying acquisitions. Moreover, board-connected CEOs are less likely to be fired despite poor performance. When it happens, they are able to find better jobs compared to other CEOs (Nguyen 2012). Since, intrinsic ability is unlikely to explain that difference, the most obvious explanation is that connected CEOs are able to leverage their social networks to secure better positions.

However, firms can also benefit from their CEO's social ties. Connections with other board members promote trust and facilitates communication. As a result, CEOs are more likely to share inside information with external directors who can then provide more specific and relevant input, which adds value to the firm (Adams & Ferreira 2007). Besides, trust ensures that CEOs have access to better information and are kept abreast of new business opportunities (Burt 1997; Guo et al. 2020). Social networks also help firms secure critical resources. For example, CEO political connections increase firm performance because they give firms greater access to key resources and mitigate constraints (e.g., through friendly regulation). As a result, firms are more likely to survive (Faccio et al. 2006) and grow faster (Zheng et al. 2015).

Another way firms may benefit from their CEO's connections is through improved access to finance. Batjargal & Liu (2004) demonstrate that the investment selection decisions of venture capitalists in China are determined by the entrepreneur's social capital. Bottazzi et al. (2016) show that trust favorably affects the investment decision of European venture capital firms. In the same vein, Gompers et al. (2016) indicate that venture capital managers who share the same background, and in particular the same education, are more likely to co-invest. However, the likelihood of a positive outcome is lower, suggesting that the trust they have for one another, introduces a bias in their judgement.

Following the above arguments, we posit that CEO-board connections affect the firm's access to finance. The first reason is that these social ties reflect the CEO's extensive network, and thus greater ability to secure financing in much the same way as political connections (Faccio et al. 2006). The second reason is that social capital is viewed favorably by capital providers and is taken as a proxy of the CEO's quality, as evidence from entrepreneurial finance suggests (Batjargal & Liu 2004; Bottazzi et al. 2016; Gompers et al. 2016). We can thus state:

Hypothesis: Firms with stronger CEO-board ties have easier access to financial resources.

3. Methodology and data

The firm's cash holdings can be used to evaluate the ease of access to financial resources. In the absence of market frictions, firms do not need to hold a lot of cash since they can readily raise funds to finance their projects (Han & Qiu 2007). However, information asymmetry leads to costly financing (Myers & Majluf 1984). As a result, firms need to maintain cash reserves to ensure they can carry out their good projects and buffer potential cash shortfalls. This explains that firms with more growth opportunities hold more cash (Opler et al. 1999; Harford

et al. 2008). Foregoing these projects due to the inability to secure financing would induce a substantial welfare loss for the firm's shareholders. Likewise, firms whose cash flows are more volatile need to maintain higher cash balances as they are more likely to experience a cash shortfall. Raising funds in a weak financial position would not only be challenging but also involve significant costs.

Following standard practice, we measure the presence of growth options by Tobin's Q and the volatility of the firm's cash flows (CFVOL) by the 5-year standard deviation of operating cash flows over total assets. To reduce the positive skewness in Tobin's Q, we apply a log transform (LNQ). CEO-board connections are measured by the proportion of directors with the same education as the CEO. To illustrate the calculations, consider the board of leading IT consulting firm Capgemini, which consisted of 16 members at the end of 2017. The CEO and chairman, Paul Hermelin, is a graduate of both Ecole Polytechnique and ENA. Examination of board member profiles in the 2017 Annual Report indicates that, beside the CEO, two directors were graduates of Polytechnique, while three were graduates of ENA. The strength of the CEO's connections (TIES) is therefore (2+3)/(16–1) = 33.3%.

If firms with connected CEOs have easier access to financial resources, they should be less concerned by the need to hold large precautionary cash reserves. Accordingly, the coefficient on the two interaction terms TIES × LNQ and TIES × CFVOL should be significantly negative.

The control variables are similar to those found in other studies (Opler et al. 1999; Han & Qiu 2007; Harford et al. 2008). We include firm size, measured by the log of total assets (LNTA), leverage, measured by total debt over total assets (DEBT), capital expenditures (CAPEX), R&D expenses (RD), operating cash flows (OCF), and net working capital (NWC), all scaled by total assets; and dividend status (DIVD), which takes the value 1 if the firm pays dividends and 0 otherwise. Finally, we include two board characteristics, BRDSIZE, indicating the number of directors, and BRDINDP, measuring the proportion of independent directors.

While pooled OLS regressions have often been used to study why firms hold cash, they are likely to produce biased results due to unobserved firm heterogeneity. A solution may be to use fixed firm effects with time-invariant firm-specific dummies. However, this framework does not account for the fact that governance is endogenous. Indeed, unobserved factors may simultaneously determine the level of cash that firms hold and the type of CEO they choose. For example, a firm may choose a connected CEO (e.g., a graduate of ENA with a previous career in the French Treasury or in the Finance Ministry) to facilitate its access to financial resources. Besides, financial difficulties, which are obviously associated with a shortage of cash, may lead to a board that is closer to the CEO. In order to account for the possibility that CEO-board ties are influenced by past shocks to cash holdings, we include the lagged value of the dependent variable in the model (Wintoki et al. 2012) and use the dynamic panel GMM estimator of Arellano & Bover (1995) and Blundell & Bond (1998).

Our sample consists of a panel of 136 French firms listed on Euronext Paris over the period 2006-2017, representing a total of 1,312 firm-year observations. Information regarding the education of the CEO and directors was collected manually from each firm's annual reports. Financial and corporate governance data are sourced from FactSet. We focus on large firms because CEOs with elite degrees are mostly found in large firms which offer greater prestige and compensation (Eminet et al. 2009).

4. Results

Table 1 presents the descriptive statistics for the sample. Cash holdings (CASH) represent on average 10.76% of total assets. The average proportion of directors with the same education as the CEO (TIES) is 8.74%. However, this proportion varies between 15% and 100% in more than a quarter of all cases. R&D is also positively skewed as it tends to be carried out by specific firms. The other variables appear to be more symmetrically distributed.

Table 2 provides the correlation between the variables. Cash holdings (CASH) appear to be lower in firms with connected CEOs (TIES) consistent with the latter's ability to relax the firm's financial constraints. In line with the trade-off theory, firms with more valuable projects (LNQ), riskier cash flows (CFVOL) and more intangible investments (RD), tend to hold more cash, while larger firms (LNTA) and firms with more NWC maintain lower cash balances. In contrast, the pecking order theory explains that firms with higher capital expenditures (CAPEX), higher leverage (DEBT), lower cash flows (OCF), and paying dividend (DIVD), have lower cash balances. Column 2 shows that connected CEOs are found mostly in larger firms (LNTA) with lower R&D (RD) and fewer growth opportunities (LNQ). The remaining results confirm that large firms have larger boards and less volatile cash flows, and that high R&D firms use less debt and are less likely to pay dividends.

Table 3 presents the results of the system GMM regressions. The dynamic relationship between cash holdings and CEO-board ties appears to be well specified. The AR (2) test shows the absence of second-order serial correlation in the residuals, which indicates that the use of one lag of the dependent variable is sufficient to control for the reverse influence of cash holdings on CEO-board ties. Besides, the Sargan test confirms that the internal instruments are valid. In all cases, the proportion of assets held in cash is relatively persistent. Column 1 underscores that high cash flow volatility is a strong reason for holding cash. This result is consistent with the precautionary motive for holding cash (Opler et al. 1999; Han & Qiu 2007). On the other hand, firms do not appear to hold more cash when they have more growth opportunities.

Column 2 includes the interaction term between CEO-board ties and Tobin's Q. The effect is that the coefficient on Tobin's Q becomes significantly positive, while the coefficient on the interaction term TIES × LNQ is negative and highly significant. This result confirms that firms hold more cash when they have more growth opportunities knowing that they will need funds to carry out their investments. However, firms with board-connected CEOs do not increase their cash balances as much, signaling their greater ability to procure funds. Column 3 includes an interaction term between CEO-board ties and cash flow volatility. While the coefficient on cash flow volatility was already significantly positive, the interaction term causes that coefficient to become larger and more significant. We interpret the negative coefficient on TIES × CFVOL as implying that firms with board-connected CEO hold less cash because of their greater ability to raise funds in the event of a cash shortfall. This result is in line with the precautionary motive for holding cash and underlines the benefit of CEO-board connections in relaxing the firm's financial constraints (Han & Qiu 2007). Finally, Column 4 includes both interaction terms. The results are broadly unchanged aside from the fact that the coefficient on TIES × CFVOL is less significant as some of its effect appears to be subsumed by the other interaction term TIES × LNQ.

Table 1. Descriptive statistics

	Mean	Std dev	Q1	Median	Q3	Min	Max
CASH	0.1076	0.0760	0.0571	0.0867	0.1379	0.0005	0.5285
TIES	0.0874	0.1386	0	0	0.1538	0	1
LNTA	8.2875	1.7644	6.9394	8.2771	9.6551	3.6562	12.554
LNQ	0.2691	0.3867	0.0090	0.1942	0.4544	-0.9527	2.1241
DEBT	0.1989	0.1345	0.1014	0.1875	0.2726	0	0.6588
CAPEX	0.0388	0.0378	0.0155	0.0291	0.0496	0	0.3416
OCF	0.0810	0.0595	0.0488	0.0748	0.1060	-0.3790	0.6057
CFVOL	0.0380	0.0347	0.0175	0.0278	0.0457	0.0036	0.2229
RD	0.0134	0.0357	0	0	0.0088	0	0.3494
NWC	0.0359	0.1381	-0.0478	0.0256	0.1067	-0.5641	0.6346
DIVD	0.8555	0.3517	1	1	1	0	1
BRDSIZE	10.984	3.6603	9	11	13	3	22
BRDINDP	0.4934	0.2120	0.3636	0.4706	0.6154	0	1

Table 2. Correlations

		[1]	[2]	[3]	[4]	[5]	[6]
CASH	[1]	1					
TIES	[2]	-0.1064*	1				
LNTA	[3]	-0.2389*	0.1299*	1			
LNQ	[4]	0.1900*	-0.0842*	-0.0824*	1		
DEBT	[5]	-0.2926*	0.1396*	0.0816*	-0.0611	1	
CAPEX	[6]	-0.0464	0.0047	0.0442	0.1213*	0.1124*	1
OCF	[7]	0.1635*	-0.0524	-0.0592	0.4647*	0.031	0.3584*
CFVOL	[8]	0.3453*	0.0526	-0.2982*	0.1330*	-0.1117*	0.0368
RD	[9]	0.2579*	-0.0889*	-0.0333	0.1135*	-0.2073*	-0.0125
NWC	[10]	-0.1254*	-0.0401	-0.3277*	-0.0778*	-0.1260*	-0.0740*
DIVD	[11]	-0.0776*	-0.0437	0.2259*	0.1450*	-0.0089	0.0498
BRDSIZE	[12]	-0.1434*	0.0675*	0.7081*	-0.0368	0.0728*	0.0256
BRDINDP	[13]	-0.0346	-0.0094	0.2398*	-0.0376	0.0208	0.0389

		[7]	[8]	[9]	[10]	[11]	[12]
OCF	[7]	1					
CFVOL	[8]	0.1015*	1				
RD	[9]	0.2263*	0.1318*	1			
NWC	[10]	-0.1144*	-0.0343	0.0207	1		
DIVD	[11]	0.0699*	-0.1968*	-0.1642*	-0.026	1	
BRDSIZE	[12]	-0.0276	-0.1908*	-0.0841*	-0.2463*	0.1898*	1
BRDINDP	[13]	-0.0371	0.0115	0.0947*	-0.0577	0.0659	0.0897*

CASH = cash/ total assets; LNTA = log of total assets; LNQ = log of Tobin's Q; DEBT = total debt/ total assets; NWC = net working capital/ total assets; OCF = operating cash flows/ total assets; CFVOL = standard deviation of OCF over the past 5 years; CAPEX = capital expenditures/ total assets; RD = R&D expenses/ total assets; DIVD = 1 if the firm pays dividends; BRDSIZE = number of directors; BRDINDEP = proportion of independent directors; TIES = proportion of directors with the same education as the CEO. * indicates statistical significance at the 1% level.

Table 3. System GMM regressions

	Dependent variable: CASH (t)			
	(1)	(2)	(3)	(4)
CASH (t-1)	0.4258 ***	0.3730 ***	0.3063 ***	0.3431 ***
	(14.13)	(21.97)	(23.82)	(36.35)
LNTA	-0.0053	-0.0064 ***	-0.0050 ***	-0.0083 ***
	(-1.20)	(-3.82)	(-3.62)	(-8.41)
LNQ	0.0119	0.0176 ***	-0.0018	0.0121 ***
	(1.50)	(4.36)	(-0.58)	(4.24)
DEBT	0.0215	-0.0059	0.0239 ***	0.0000
	(1.02)	(-0.51)	(2.74)	(-0.01)
NWC	-0.0506	-0.0642 ***	-0.1222 ***	-0.0545 ***
	(-1.55)	(-3.59)	(-6.74)	(-5.77)
OCF	0.2091 ***	0.2409 ***	0.2004 ***	0.2263 ***
	(6.05)	(12.45)	(14.54)	(21.57)
CFVOL	0.1721 ***	0.1211 ***	0.2077 ***	0.0326
	(3.11)	(3.70)	(6.84)	(1.53)
CAPEX	-0.0862	-0.0834 ***	-0.0550 *	-0.0612 ***
	(-1.41)	(-2.82)	(-1.95)	(-4.15)
RD	0.2744 *	0.2455 ***	0.3483 ***	0.2554 ***
	(1.83)	(4.93)	(6.14)	(9.58)
DIVD	-0.0060	-0.0026	-0.0078 ***	-0.0057 ***
	(-1.40)	(-0.91)	(-3.65)	(-2.91)
BRDSIZE	-0.0009	-0.0012 **	-0.0010 **	-0.0008 **
	(-0.98)	(-2.46)	(-2.13)	(-2.51)
BRDINDEP	-0.0199 **	-0.0294 ***	-0.0101 *	-0.0248 ***
	(-2.19)	(-7.11)	(-1.84)	(-9.30)
TIES	0.0020	-0.0061	-0.0081	0.0071
	(0.14)	(-0.59)	(-1.01)	(1.50)
TIES × LNQ		-0.0758 ***		-0.0624 ***
		(-3.84)		(-5.43)
TIES × CFVOL			-0.5161 ***	-0.1603 **
			(-5.05)	(-2.15)
AR (1)	-5.9322 ***	-5.6928 ***	-5.5327 ***	-5.5126 ***
p-value	0.0000	0.0000	0.0000	0.0000
AR (2)	0.9497	0.8907	0.6597	0.80313
p-value	0.3422	0.3731	0.5095	0.4219
Sargan test	49.322	94.065	96.013	108.1075
p-value	0.3805	0.2588	0.2159	0.8284

CASH = cash/ total assets; LNTA = log of total assets; LNQ = log of Tobin's Q; DEBT = total debt/ total assets; NWC = net working capital/ total assets; OCF = operating cash flows/ total assets; CFVOL = standard deviation of OCF over the past 5 years; CAPEX = capital expenditures/ total assets; RD = R&D expenses/ total assets; DIVD = 1 if the firm pays dividends; BRDSIZE = number of directors; BRDINDEP = proportion of independent directors; TIES = proportion of directors with the same education as the CEO. The model includes year dummies. *Z*-statistics are reported between brackets below the point estimates. ***, ** and * indicates statistical significance at the 1%, 5% and 10% level.

5. Conclusion

Social networks impair the board's monitoring and promote CEO entrenchment (Nguyen 2012; Kramarz & Thesmar 2013). However, they also bring value. By fostering trust, they facilitate communication and enable the CEO to receive more relevant information (Burt 1997; Adams & Ferreira 2007). As in the case of political connections (Faccio et al. 2006; Zheng et al. 2015), they may help the firm access hard to get resources. In this study based on a sample of French companies, we provide evidence suggesting that CEO connections with other board members facilitate firm financing. While other firms need to hold higher cash balances in view of funding their investments or to protect against cash shortfalls, firms with board-connected CEOs hold significantly less cash, highlighting their greater ability to source cash when needed (Han & Qiu 2007). Although these funds may not be put to their best use, they are likely to enhance the firm's survival (Faccio et al. 2006).

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