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Company Performance and the Two-Tier Board Structure: Empirical Evidence from France

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Abstract

This study's objective is to assess the impact of board structure on company performance in France, where companies are allowed to choose between a one-tier or a two-tier board structure and to verify the specificities of companies with a two-tier board. To verify the specificities of companies with a two-tier board, we analyze 250 large publicly traded companies and find that the two-tier structure does have a significant impact on long-term performance, measured by Tobin's Q, yet no impact on cash holdings. Supervisory board size and the percentage of shares controlled by supervisors also have a significant impact on performance. Our findings are consistent with agency theory.

Key words: corporate governance; performance; board structure

JEL classification: G34

1. Introduction

What is the impact of corporate governance on firm performance? Most studies are based on the traditional Anglo-Saxon one-tier system. That is, each company has the board of directors, headed by the CEO and the Chairperson; the board's responsibility is to maximize shareholder value and decide on corporate strategy. In the two-tier system, each company has two boards instead. The first board is the management board (MB) which is in charge of running the business; the second one is the supervisory board (SB), which, as its name suggests, monitors and controls the managers' actions. Most countries have adopted either one of these arrangements, but in France companies are free to choose between the one-tier or the two-tier (Millet-Reyes and Zhao, 2010), making comparisons possible. The objective of this study is to empirically assess the impact of the two-tier board structure on companies' long-term and short-term performance in France.

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To reduce agency costs and improve performance, it has long been argued that it is important to monitor managers, to separate the positions of CEO and Chairperson to avoid concentrating power into the hands of one person, to align managers' interests with those of shareholders and to have independent, outside directors on the board (Bhagat and Bolton, 2008; Jensen and Meckling, 1976; Schleifer and Vishny, 1997; Gompers et al., 2003). Having two boards instead of one would seem like the ideal way to separate management from control of the company, but most countries usually opt for either one of the two systems. Common law countries such as the US and the UK have the unitary board system whereas some civil law countries, such as Germany, have the two-tier system. France however, has had both systems since 1966 and companies are free to choose (Cozian et al., 2007).

A two-tier board system is obviously a step ahead of simply separating the positions of CEO and Chairperson. In a two-tier system, the management board is composed of managers acting as insiders who know and run the operations. The supervisory board, which in France is composed exclusively of shareholders, is responsible for making important decisions and of course monitoring the managers. The clear separation between management and control of the company is probably the most important advantage of the two-tier system.

Using a multiple regression analysis for panel data, we first investigate the impact the supervisory board has on Tobin's Q, a proxy for long-term financial performance, and then on company cash holdings, a proxy for short-term performance. We find that having a two-tier board does have a positive effect on Tobin's Q but no significant effect on cash holdings. We then compare the companies in the sample to see if there are any major differences between those with and without a supervisory board and discover that companies with two boards tend to be in the service sector rather than manufacturing. Finally, using a reduced sample comprising only those companies with a two-tier board, we conduct a series of regressions to better understand the characteristics of these companies; it would seem that having a larger supervisory board leads to lower cash holdings and a higher Tobin's Q. The study thus sheds additional light on companies with a two-tier board and lends further support for agency theory, whereby a better control of managers ensures not only that excess cash is returned to its owners, i.e., the shareholders, but also that performance is enhanced.

The rest of the paper is organized as follows. The next two sections look into the governance system in France and review existing literature pertaining to cash holdings and firm performance as they relate to corporate governance. Section 4 presents the hypothesis development. Section 5 presents the data and the results of the study. Sections 6 and 7 discuss findings and conclude.

2. Corporate Governance in France

France differs from other countries in that its companies can choose between two systems of governance: a unitary board or a two-tier board. Where companies

opt for the traditional one board system, the law imposes strict limits on the board membership of management: the maximum number of executive directors is five and only up to one third of board members can be employees of the company, i.e., insiders. Obviously this favors rather than hampers the appointment of independent directors, who according to the French definition can be neither executives nor employees of the firm, nor can they be large shareholders; they are independent in every way to guarantee their judgment is not biased. The unitary board elects a Président Directeur Général (PDG) who acts as both CEO and Chairperson. As in other countries, executive directors are in charge of the daily management of the company. The board meets every two months on average and the members can authorize new capital and corporate restructurings. In theory, shareholders can appoint members of the unitary board, but in practice the PDG chooses them and they are then approved at the annual general assembly of shareholders (Millet-Reyes and Zhao, 2010). This can result in a relatively meek board as the PDG is unlikely to choose people who might challenge his authority.

On the other hand, in a two-tier structure, the supervisory board is in charge of monitoring the activities of the management board which runs the day-to-day operations of the business. In France, the Code of Commerce (Article L225) states that members of the supervisory board have to be shareholders. They are chosen at the annual general assembly and number 3–18. They then elect their own chairperson, who has the final say on decision making whenever the board is evenly split. Supervisors are in charge of choosing the management board's members and then monitor their decisions in a variety of ways. Every three months, they receive a report from the management board; they also control accounts and must authorize asset sales and the establishment of guarantees. This clear demarcation between the responsibilities of both boards is one advantage of the two-tier system. The French management board is relatively small, with only 3–5 members, which makes decision making quick (Aste, 1999).

Whereas the management board takes care of daily operations, the supervisory board is responsible for important decision making. There is therefore a clear separation between management and control of the firm. In addition, there isn't any agency conflict between owners and supervisors as the latter are shareholders. The two-tier system in France has been mostly adopted by large companies; indeed, 20% of the firms in the CAC40 (the benchmark French stock market index representing a capitalization-weighted measure of the 40 most significant values among the 100 highest market capitalizations on the Euronext Paris stock exchange) have a two-tier structure (Vienot, 1999). 35% of the French companies used in this study have a two-tier system.

3. Conceptual Background and Hypothesis Development

The question of whether corporate governance arrangements have an impact on firm performance has received a lot of attention in the corporate governance and finance literature. The measures of firm performance used in the present study

include cash holdings and Tobin's Q. Indeed, a company's cash position is a direct result of its daily operations; therefore, it could be considered as a proxy for short-term financial performance (Bhagat and Black, 2002). Tobin's Q, on the other hand, is a ratio that, by comparing the market to book value of the firm, in effect gives an idea of the company's growth prospects. It can therefore be used as a proxy for long-term performance.

Companies need to finance their daily operations and investments. Funds can either come from the company's cash holdings or from external investors. Free cash flow is the cash in excess of that needed to finance positive net present value projects (Jensen, 1986). Managers can redistribute cash through a special dividend agreement or a stock repurchase, but also by substituting debt for equity, or finally by going private through a leveraged buy-out. However, managers often prefer to keep excess cash for a variety of reasons.

Managers retain cash so as to reduce the need for external financing should future opportunities arise, as debt is expensive (Mikkelson and Partch, 2003). For some companies, transaction costs can be high and can influence cash levels, usually leading to higher levels of cash (Opler et al., 1999). External financing can be expensive, especially for companies that rely on intangible assets, such as human capital, and therefore have little collateral to secure loans. Such companies need instant access to cash to finance investment opportunities and cannot wait to secure a loan that, without physical collateral, would turn out to be expensive. For such firms, it is beneficial to pursue a large cash holdings policy (Opler et al., 1999). These findings were confirmed in another study of small, high-growth companies (Mikkelson and Partch, 2003) where high cash holdings were linked to higher operating performance.

In many companies, however, excess cash leads to sub-optimal performance in a variety of ways as poorly monitored managers use it inefficiently. Excess cash can be spent on capital expenditures or acquisitions; this turns the company into a less attractive take-over target, thus reducing the impact of the market for corporate control on managerial action (Schleifer and Vishny, 1997; Faleye, 2004). Managers may indeed decide to increase the scope of their authority through mergers or acquisitions (Schleifer and Vishny, 1997; Jensen, 1986). Harford (1999) finds that firms with a lot of cash diversify more through acquisitions and that the operating performance of the combined bidder-target decreases significantly after the bid. In companies with high cash holdings, shareholders use proxy contests to force managers to return cash (Faleye, 2004). Where such proxy fights succeed, cash holdings usually decline significantly as a result of a special cash distribution and senior executives are replaced. This confirms that managers do not always maximize firm value.

3.1 Hypotheses

It is thus undeniable that governance structure has an effect on cash holdings. On the one hand, in companies with high growth prospects, good corporate governance and management monitoring should lead to higher levels of cash.

Companies with more outside directors hold more cash as it is not wasted on perquisites and other wasteful investments (Lorsch, 1989; Monks and Minow, 1996). On the other hand, in companies with lower growth prospects, good corporate governance should ensure that excess cash gets returned to shareholders instead of being hoarded or misspent, which means lower levels of cash. As previously discussed, a two-tier board structure provides for a clear separation of management and control of the company, which is achieved by strict rules governing the disclosure of information that managers must provide to supervisors. The sample used in the study consists of 250 of the largest publicly traded companies in France; it is probably safe to assume that these firms have large enough assets to use as collateral for debt and are different from the companies relying on human capital for growth studied by Opler et al. (1999). So, if a two-tier board system leads to better corporate governance, this thus leads us to the first hypothesis:

Hypothesis 1: The presence of a supervisory board leads to lower cash holdings.

Based on the definition of Tobin's Q, a Q ratio of less than one does not really indicate that a firm is undervalued; rather, it means that a firm's future prospects are not promising. A firm's market value is investors' assessment of the net present value of the firm's future cash flow. In other words, it is a measure of a firm's future earning and growth potential. The book value, on the other hand, is the replacement cost of capital on a given date and it is based on a firm's past activities. Therefore, a Q ratio below one is indicative of a firm with few, if any, future growth prospects, whereas the contrary is true if the ratio is above one. In fact, the higher the Q ratio, the better the prospects. This is why Tobin's Q is often used as a measure of firm performance (Gompers et al., 2003; Bhagat and Bolton, 2008).

Independent board members, i.e., outsiders who have no connection with the day-to-day operations of the firm, are more likely to exert oversight and control over the CEO (Lorsch, 1989; Monks and Minow, 1996) ensuring that company resources are not wasted on perquisites or other negative net present-value projects, thus enhancing firm performance. When firm managers dominate boards, they stop boards from exercising their legitimate governance role (Fama and Jensen, 1983). Having a two-tier system of governance, with a management board to see to daily operations and a supervisory board to monitor and control managers, is quite obviously a step ahead of appointing outsiders to the board to keep agency problems under control. Reduced agency costs and better control should thus enhance long-term firm performance. Therefore, the second hypothesis to be made is:

Hypothesis 2: The presence of a supervisory board will lead to a higher Tobin's Q.

Board size is widely believed to affect firm performance through two channels. First, from an agency theory perspective, a large board may be too unwieldy to carry out its duties effectively. Jensen (1993) states that when there are more than seven or eight directors, communication problems impede consensus building, while logistical problems pose a major obstacle to the scheduling of meetings. Directors

must exercise due diligence in monitoring management, and as board size increases, there is a commensurate drop in the cost to an individual director of shirking this duty (Cheng, 2008). Numerous empirical studies suggest a negative association between board size and performance among publicly listed firms (Yermack, 1996). In a nutshell, larger boards' slow decision making process lead to less board efficiency and negatively affect firm performance.

On the other hand, the resource dependence theory sees the board as a provider of resources in the form of human capital, i.e., experience, expertise, and reputation, but also relational capital, i.e., a network of ties to other firms and external entities. Such studies link larger boards to better performance (Dalton et al., 1999). Larger boards have been found to lower variability of firm performance; Cheng (2008) finds reduced volatility of financial measures such as Tobin's Q, Return On Assets, and monthly stock returns, but also of R&D spending and acquisition/restructuring activities. It would therefore seem that larger boards need to negotiate and compromise more before reaching decisions that are less likely to be extreme. This translates into increased stability, rather than volatility. Furthermore, board members can use their connections to the outside world and become facilitators that help firm performance: Hillman and Dalziel (2003) combine both agency theory and resource dependence theory to show that a board's monitoring duties are balanced out by its human and relational capital.

Therefore, board size matters in that larger boards are less likely to be dominated by any one individual. Also, larger boards have more resources and experience to draw from in order to make decisions. Presumably, these decisions should also lead to enhanced performance and are less likely to involve the wasting of cash, especially when there are more outside directors (Lorsch, 1989). Keeping in mind that the sample comprises large companies, if less cash is wasted, a larger board will ensure that this cash gets returned to the shareholders and that performance is enhanced.

Furthermore, in France, the proportion of managers on a unitary board is limited to a third and an absolute maximum of five managers. Larger boards can thus exert more control over managers' and the CEO's decisions as they find their individual power diluted, and it seems safe to assume that the same would apply to the size of the supervisory board. This leads to the third and fourth hypotheses.

Hypothesis 3: A larger supervisory board leads to lower cash holdings.

Hypothesis 4: The larger the size of the supervisory board, the higher Tobin's Q.

Firms with stronger shareholder rights, as opposed to management rights, have higher firm value, higher profits, higher sales growth, lower capital expenditures, and make fewer corporate acquisitions (Gompers et al., 2003). The influence of shareholders on firm performance is important, and aligning the interests of both shareholders and managers by giving managers a stake in the company in the form of shares is often seen as a good way to reduce agency costs and thus maximize firm performance. Where there is a unitary board structure, shareholders are better served

if the interests of board members are aligned with those of managers, i.e., a "management friendly board," but in the case of a two-tier board structure, shareholder value is maximized where supervisory board members' interests are aligned with those of the shareholders (Adams and Ferreira, 2007). It therefore seems that company performance is enhanced when supervisory board members are shareholders; since this is the law in France, the interests of both groups are perfectly aligned. We argue that the more shares supervisory board members own, the more influence they will have on managers' decisions. In the present study, this means excess cash is returned to shareholders instead of being hoarded and misspent, which leads to the fifth hypothesis.

Hypothesis 5: The more shares supervisory board members own, the lower the cash holdings.

Finally, larger shareholdings by supervisors should also lead to more control of managers and better performance. The last hypothesis is as follows.

Hypothesis 6: The more shares supervisory board members hold, the higher Tobin's Q.

4. Methodology and Data Description

4.1 Sample Data and Summary Statistics

The sample consists of 452 firm-year observations covering the largest 250 publicly traded French firms, based on 2008 total sales, over the period 2006–2008. Ownership and board structure information was obtained from the database Dafsaliens for each of the three years. Financial data were collected from Les Echos, a French weekly business publication. All the firms in the sample are non-financial. The data were all hand collected by the researchers on a firm-by-firm and year-by-year basis, and the firm-level governance data were then merged with the financial data. A description of the variables used in the study, along with summary statistics, is found in Table 1.

Table 1 also reports the sample means for all response and predictor variables used in the regression analysis. We can see that a little over 31% of the companies in the sample have a two-tier structure. Furthermore, these companies have both lower mean cash holdings and lower mean Tobin's Q. At first glance, where other variables are concerned, there doesn't seem to be much difference between the two types of firms, so further inquiry is necessary.

Table 1. Variable Description and Summary Statistics (N=452)

Variables	Description	Unitary Board (N=310)	Two-Tier Board (N=142)	Whole Sample (N=452)
Response Variables:		Mean	Mean	Mean
Tobin's Q	(Market capitalization + Debt) / Total assets	2.087	1.483	1.900

Variables	Description	Unitary Board (N=310)	Two-Tier Board (N=142)	Whole Sample (N=452)
Cash Holding	Ratio of cash to total assets minus cash	0.149	0.125	1.089
Predictor Variables:				
Super	Equal to 1 if company has a supervisory board; 0 otherwise	0.000	1.000	0.310
Predictor Variables:				
SuperSize	Ratio of the number of members in supervisory board divided by the natural log of total assets	0.000	0.269	0.084
ShareSuper	Percentage of shares controlled by supervisory board members	0.000	9.274	2.933
ShareSuper05	Equal to 1 if ShareSuper is less than 5%; 0 otherwise	0.000	0.697	0.214
ShareSuper15	Equal to 1 if ShareSuper is more than 15%; 0 otherwise	0.000	0.211	0.067
Firm Control Variables: (Harford et al., 2008; Yang and Zhao, 2012)				
FamilyOwned	Equal to 1 if the firm is family owned; 0 otherwise.	0.429	0.387	0.405
BoardSize	Ratio of the number of board members to the natural log of total assets (where there is a supervisory board, the total number of managers and supervisors is used).	0.385	0.495	0.420
Top2	Percentage of shares owned by the two largest shareholders	55.447	50.805	53.888
Independance	Ratio of the number of outside directors to the total number of directors	0.828	0.466	0.715
BoardControl	Percentage of shares controlled by board members, including the CEO	18.580	20.970	19.460
SIC1	Food and textiles processing	0.042	0.106	0.062
SIC2	Industrial machines manufacturing	0.200	0.183	0.196
SIC3	Consumer goods manufacturing	0.097	0.063	0.080
SIC4	Construction	0.139	0.077	0.120
SIC5	Wholesale/retail	0.068	0.049	0.062
SIC6	Transport/logistics	0.226	0.218	0.225
SIC 7	*Services (ref.)*			
Financial Control Variables:				
FirmSize	Natural log of total assets	19.620	19.588	19.621
Leverage	Ratio of total debts to total assets	0.479	0.476	0.476
MVEBVA	Ratio of the market value of equity to the book value of assets	2.122	1.497	1.932
CFR	Cash flow ratio: ratio of earnings after interest, dividends and tax but before depreciation to total assets	0.122	0.145	0.139
NWK	Net working capital: ratio of current assets minus cash and minus current liabilities to total assets	0.090	0.153	0.109

4.2 Methodology and Results

We evaluate a feasible generalized least square regression model relating cash holdings and Tobin's Q to the presence of a two-tier structure. The baseline regression model with Tobin's Q as response variable is as follows:

$$\begin{aligned} TobinQ = {} & \alpha + \beta_1 Super + \beta_2 BoardSize + \beta_3 BoardControl \\ & + \beta_4 Indepenedance + \beta_5 Top2 + \beta_{6\sim11} SIC1 \sim 6 + \beta_{12} FirmSize \\ & + \beta_{13} Leverage + \beta_{14} CFR + \beta_{15} NWK + \varepsilon. \end{aligned} \quad (1)$$

The baseline regression model with CashHolding as response variable follows the same format except that the variable of MVEBVA is added.

In Table 2, the results show that having a two-tier board has no statistically significant impact on cash holdings. Hypothesis 1 is not supported. Most of the firm control variables are insignificant or have no impact. Only the board independence ratio has a significant negative effect on cash holdings; this is normal given that the sample comprises large companies that presumably do not need to retain large amounts of cash as they have enough assets to guarantee debts. In turn, as expected, independent directors ensure that excess cash is returned to shareholders. More

importantly, this could be a reflection of the fact that supervisory boards are not in charge of daily operations, of which cash levels are a direct result. The supervisory board's responsibilities lie elsewhere, in the monitoring of managers. The financial control variables, however, mostly have a significant impact on cash holdings, which is to be expected.

Table 2. Effects of the Two-Tier Board on Tobin's Q and on Cash Holdings

N=452	**Cash Holdings**		**Tobin's Q**	
	Coefficient	Std. Err.	Coefficient	Std. Err.
Constant	1.189	(0.211)***	0.009	(0.043)
Predictor Variable:				
Super	−0.034	(0.042)	0.014	(0.009)*
Firm Control Variables:				
BoardSize	0.004	(0.089)	−0.041	(0.018)**
BoardControl	−0.001	(0.001)	0.000	(0.000)
Independence	−0.127	(0.068)*	0.012	(0.014)
Top2	0.000	(0.001)	0.000	(0.000)***
SIC1	−0.048	(0.069)	−0.023	(0.014)
SIC2	−0.107	(0.046)**	−0.016	(0.009)*
SIC3	0.023	(0.059)	−0.097	(0.012)***
SIC4	−0.045	(0.052)	0.002	(0.011)
SIC5	−0.120	(0.063)*	0.005	(0.013)
SIC6	−0.122	(0.042)***	−0.003	(0.009)
Financial Control Variables:				
Firmsize	−0.043	(0.010)***	−0.001	(0.002)
Leverage	−0.026	(0.071)	0.047	(0.015)***
MVEBVA	0.017	(0.004)***	1.001	(0.001)***
CFR	0.099	(0.023)***	0.014	(0.005)***
NWK	−0.579	(0.097)***	−0.005	(0.020)
Log Likelihood	−81.328		629.669	

Notes: *, **, and *** denote significance at 10%, 5%, and 1% levels.

For the response variable Tobin's Q, having a supervisory board has a positive and statistically significant (10% level) impact on firm performance. Hypothesis 2 is therefore supported. Of the firm control variables, BoardSize has a statistically negative (5% level) impact on Tobin's Q, whereas Top2 has a statistically significant positive (1% level) impact. Larger boards may find decision making problematic, leading to reduced performance and obviously have a vested interest in the good performance of their company.

The dataset is composed of two types of companies, either with a unitary or a two-tier board. The choice of governance system is made when the company is founded and it is rarely, if ever, changed as this means modifying the company's articles of incorporation. It is however possible that the selection of system of governance, one board or two boards, is not entirely random and that the estimation of parameters is biased. To control for endogeneity and correct the sample selection bias, a two-step Heckman selection model is run (Heckman, 1979), the results of which show that Lambda is insignificant, so we can assume that the estimation of parameters using only observed data is probably not biased.

4.3 Two-Tier Board Sub-Sample Regression Results

Using a series of feasible generalized least-squares regressions, the effects of the size of the supervisory board and the percentage of shares controlled by supervisors on cash holdings and Tobin's Q are investigated. The regression model using Tobin's Q as response variable is as follows:

$$\begin{aligned} TobinQ = {} & \alpha + \beta_1 SuperSize + \beta_2 ShareSuper + \beta_3 BoardSize \\ & + \beta_4 BoardControl + \beta_5 Independance + \beta_6 FamilyOwn \\ & + \beta_7 Top2 + \beta_{8\sim13} SIC1 \sim 6 + \beta_{14} FirmSize + \beta_{15} Leverage \\ & + \beta_{16} CFR + \beta_{17} NWK + \varepsilon. \end{aligned} \quad (2)$$

The model where CashHolding is the response variable is similar but with an additional variable of MVEBVA.

The empirical results presented in Table 3 show that, for companies with a two-tier system, the size of the supervisory board has a statistically significant (1% level) and negative impact on cash holdings; hypothesis 3 is therefore supported. On the other hand, the impact of the supervisory board size on Tobin's Q is statistically significant (1%) but positive, meaning that hypothesis 4 is also supported. Results for the companies with a one-tier board are presented as a reference only.

Table 3. Two-Tier Board Characteristics' Effect on Company Performance

Response Variable	Companies with a Supervisory Board (N=138)				Companies with One Tier Board (N=310)			
	Cash Holding		Tobin's Q		Cash Holding		Tobin's Q	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Constant	1.052	(0.210)***	0.017	(0.039)**	0.913	(0.557)	7.244	(0.5995)***
Predictor Variables:								
SuperSize	−1.533	(0.305)***	0.189	(0.057)***	Omitted	Omitted	Omitted	Omitted
ShareSuper	−0.001	(0.001)	0.000	(0.000)	Omitted	Omitted	Omitted	Omitted
Firm Control Variables:								
Boardsize	0.828	(0.193)***	−0.137	(0.036)***	1.534	(0.328)***	3.090	(0.479)***
Boardcontrol	0.000	(0.001)	0.000	(0.000)	−0.001	(0.001)	−0.011	(0.002)***
Independance	−0.720	(0.136)***	0.068	(0.026)***	−0.502	(0.147***)	0.572	(0.231)**
Familyown	0.036	(0.025)	0.000	(0.005)	0.353	(0.084)***	−0.014	(0.114)
Top2	−0.001	(0.000)***	0.000	(0.000)***	−0.005	(0.001)***	0.000	(0.002)
SIC1	−0.090	(0.059)	0.013	(0.011)	−0.851	(0.167)***	−0.565	(0.316)*
SIC2	−0.084	(0.040)**	0.002	(0.007)	−1.230	(0.158)***	−0.100	(0.167)
SIC3	−0.062	(0.069)	−0.030	(0.013)**	−1.179	(0.157)***	−0.375	(0.257)
SIC4	−0.003	(0.044)	0.003	(0.008)	−1.074	(0.155)***	−0.651	(0.203)***
SIC5	−0.053	(0.050)	−0.006	(0.009)	−1.103	(0.248)***	−0.431	(0.229)*
SIC6	−0.034	(0.030)	−0.005	(0.006)	−1.087	(0.149)***	0.009	(0.185)
Financial Control Variables:								
Firmsize	−0.022	(0.008)***	−0.002	(0.002)	0.016	(0.024)	−0.353	(0.052)***
Leverage	−0.267	(0.060)***	0.028	(0.011)**	0.240	(0.231)	0.713	(0.277)**
MVEBVA	0.014	(0.007)**	Omitted		0.001	(0.013)	Omitted	
CFR	0.121	(0.015)***	0.003	(0.003)	−0.069	(0.123)	1.403	(0.209)***
NWK	0.062	(0.083)	−0.080	(0.016)***	−0.538	(0.217)**	−4.438	(0.522)***
Log Likelihood	100.511		331.289		160.78		256.15	

Notes: *, **, and *** denote significance at 10%, 5%, and 1% levels.

The impact of the percentage of shares held by supervisory board members on both cash holdings and Tobin's Q, however, is not statistically significant. It therefore seems that hypotheses 5 and 6 do not hold.

Most of the firm control variables are insignificant or have no impact. Where the response variable CashHolding is concerned, the board size has a significant

positive effect on cash holdings. For companies with a two-tier board, the variable BoardSize is the ratio of the total number of members who sit on the management board and on the supervisory board to the natural log of total assets. It differs from SuperSize in that managers are included. Since hypothesis 3 is supported, whereby a higher number of supervisors ensures excess cash gets returned to shareholders, thereby leading to lower cash holdings; the fact that BoardSize has a positive impact on CashHolding may show that managers prefer a high cash policy. Similarly, Independence is the ratio of the number of supervisors to the total number of board members, including both boards. Independence has a significant negative impact on CashHolding, which is in line with the expectations. Counterintuitively, the percentage of shares held by the two largest shareholders has a significant negative impact on CashHolding. The impact, however, is minimal.

As in the first regression, the financial control variables mostly have a significant impact on cash holdings and no discrepancy is observed as to the sign (positive or negative) of the effect. Firm size has a significant negative impact, meaning that the larger the firm, the less cash it holds relative to its assets. Leverage has a significant negative impact on cash holdings. MVEBVA and CFR both have positive and significant impacts on cash holdings, consistent with earlier findings.

In the second regression with Tobin's Q as the response variable, both the firm and the financial control variables behave in a similar manner to the full sample regression; no discrepancy is observed as to the sign (positive or negative) of the effects. MVEBVA is dropped as it is too highly correlated to Tobin's Q. Whereas SuperSize has a positive impact on Tobin's Q, BoardSize, which includes the managers, has a significant negative impact. This could be a direct reflection of the negative impact of agency conflict on firm performance. Furthermore, this argument could be further supported by the significant impact of both Independence and Top2 on Tobin's Q. More supervisors control managers better and lead to enhanced long-term performance. Large shareholders also want the companies they own to perform well. The next section discusses the implications and possible conclusions to be drawn from this study.

5. Discussion

This study first looks at the impact that a supervisory board might have on a company's cash holdings and Tobin's Q ratio. The differences between companies with a unitary board of directors and those with two boards, one to manage the business and one to supervise the managers, are then investigated. Finally, more emphasis is placed on companies with a two-tier system of governance.

The findings are that, while having a supervisory board has no impact on a company's cash holdings, it does positively affect Tobin's Q. What's more, the only apparent difference between companies with and without a supervisory board is that the former are more likely to be in the service sector rather than manufacturing. Finally, for companies that have chosen a two-tier system of governance, the supervisory board size relative to company size has a significant negative effect on

cash holdings and a significant positive effect on Tobin's Q. The percentage of shares owned by supervisors, however, seems to have no significant impact on either.

Jensen and Meckling (1976) recommend ways to avoid concentrating power into too few hands, such as separating the positions of CEO and Chairperson, but also to align the interest of shareholders with those of managers in order to reduce agency costs. Their conclusions were based on the study of American companies which can only have one board of directors. In other countries, it is possible to have two boards. Having a supervisory board whose job is to monitor the management board is obviously one step ahead of simply separating the positions of CEO and Chair in order to avoid concentrating power into the hands of one person.

Based on the literature findings, corporate governance arrangements should have an impact on cash levels. Indeed, companies with strong corporate governance mechanisms can better control and oversee managers, thus reducing their opportunities to waste cash and other corporate resources on perquisites and empire building, i.e., acquisitions (Harford, 1999; Harford et al., 2008; Schleifer and Vishny, 1997). One such control mechanism is the separation of the positions of CEO and Chairperson of the board. Having a two-tier arrangement where a supervisory board actually watches over managers' decisions would seem like a better way to achieve control than the more usual one-tier system. When the whole sample is considered, it would seem that having a supervisory board has no statistically significant impact on corporate cash holdings. However, in the reduced sample of companies with a two-tier system only, the results show that a larger supervisory board has a negative impact on cash holdings. The companies in this study are very large publicly traded companies; they do not fit the profile of high growth companies that need to pursue a high-cash policy to fund future growth opportunities. For our companies, excess cash should be returned to shareholders rather than hoarded and possibly misspent. The fact that a larger supervisory board has a negative impact on cash holdings shows that supervisors do in fact ensure that cash gets returned to its rightful owners.

Having a supervisory board also has a definite impact on Tobin's Q. Companies with a supervisory board seem to outperform those without using Tobin's Q as the performance measure. In addition, in the reduced sample of companies with a two-tier system only, a larger supervisory board also leads to a higher Tobin's Q. Agency theory predicts that better control and oversight of managers leads to reduced agency costs and thus to better performance. It would seem that the results of the study provide further support for this theory.

The percentage of shares owned by supervisory board members should have had an impact on cash holdings and Tobin's Q. In this respect, the study findings are inconclusive and further research is therefore needed.

6. Conclusion

Based on a sample of 250 large French companies, this study first looks at the impact having a supervisory board has on cash holdings and firm performance measured by Tobin's Q. Where cash holdings are concerned, no significant effect is

found, but having a two-tier board does have positive effect on Tobin's Q. It then investigates the differences between companies with a traditional unitary board system of governance and those with two boards, a management board and a supervisory board. Results show that companies with two boards tend to be in the service sector rather than manufacturing. Finally, taking the sub-sample of companies with a two-tier system only, findings show that a larger supervisory board leads to lower cash holdings and a higher Tobin's Q. The percentage of shares controlled by supervisors apparently has no significant impact on either measure. The study thus lends further support for agency theory, whereby a better control of managers ensures not only that excess cash is returned to its owners, i.e., the shareholders, but also that performance is enhanced.

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