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RESEARCH NOTES AND COMMENTARIES

DOES GOOD GOVERNANCE PREVENT BAD STRATEGY? A STUDY OF CORPORATE GOVERNANCE, FINANCIAL DIVERSIFICATION, AND VALUE CREATION BY FRENCH CORPORATIONS, 2000–2006

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Building on and extending prior research, we propose a comprehensive framework which posits that free cash flow moderates the impact of corporate governance on financial diversification. We argue that because it increases CEO perceived risk, alignment devices increase rather than decrease financial diversification. In a sample of 59 publicly traded French corporations during 2000–2006, we show that financial diversification negatively impacts shareholder return and firm value. We obtain support for several of our hypotheses: at high levels of free cash flow, CEO variable compensation increases financial diversification, whereas chairman/CEO non-duality reduces it. In contrast, independent directors increase financial diversification at low values of free cash flow (although weakly). We also find that ownership concentration only reduces financial diversification when free cash flow is low.

INTRODUCTION

We investigate whether the corporate governance prescriptions that ensue from agency theory prevent firms from engaging in a corporate strategy, namely financial diversification. This strategy consists of diversifying a firm's business portfolio to allow revenue smoothing between the firm's business lines (Amihud and Lev, 1981; Amit and Livnat, 1988; Lewellen, 1971). Revenue smoothing is supposed to reduce the firm's risk. However, this may not create and may even destroy value for investors, given that investors can equally or even more efficiently diversify their own investment portfolio (e.g. Amihud and Lev, 1981). Assuming managerial opportunism and risk aversion, agency theorists posit that it is poor governance (i.e., interest alignment and control) that leads to value-destroying decisions, such as financial diversification (e.g., Amihud and Lev, 1981; 1999; Goranova *et al*., 2007; Morck, Shleifer, and Vishny, 1990). Jensen (1986) has also claimed that the availability of financial resources—that is, free cash flow (FCF)—stimulates top managers to engage in corporate decisions that reduce shareholder value. We extend and challenge agency theory in two ways.

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First, drawing from Jensen (1986) and Brush, Bromiley, and Hendrickx (2000), we posit that governance devices are only necessary, and thus effective, when there is a situation of potential conflict between chief executive officers (CEOs) and their firms' shareholders (Lane, Cannella, and Lubatkin, 1998), that is, when CEOs have FCF at their disposal. CEOs can return FCF to shareholders (through dividends or share repurchases) or use it to fund new projects to increase their utility (employment risk reduction, increased compensation, and prestige). Thus, we argue for a contingent framework in that governance devices are only necessary, and therefore effective, to prevent poor decisions (financial diversification) when the opportunity exists (FCF). Second, agency theorists prescribe that boards should provide CEOs with compensation schemes that are aligned with shareholders' objectives (e.g., Dalton *et al*., 2007; Jensen and Meckling, 1976; Ross, 1973). However, we argue that CEO interest alignment devices such as variable compensation actually might increase CEOs' perceived risk. Thus, CEOs may attempt to increase their firms' financial diversification when the possibility exists (FCF) to reduce their firms' risk, and hence their own.

We test our hypotheses above in a sample of 59 large, publicly traded French firms in the 2000–2006 period. Our study advances the extant agency models dealing with corporate growth and strategy (e.g., Brush *et al*., 2000; Denis, Denis, and Sarin, 1997; Goranova *et al*., 2007; Lane *et al*., 1998) by positing a contingent model on the effectiveness of both types of corporate governance devices (interest alignment and control) for a distinct type of corporate strategy (financial diversification), as a function of FCF level. Moreover, our study hypothesizes and provides evidence that, interest alignment devices (i.e., incentives) are counterproductive, at least with regard to the use of FCF to fund financial diversification. Further, it shows, rather than assumes like past studies (e.g., Amihud and Lev, 1981), that financial diversification negatively impacts shareholders' wealth and relates to a value discount. Thus, it extends prior research that focused on the effects of financial diversification, solely on accounting performance (Amit and Livnat, 1988). At least for the 2000–2006 French context our results provide a mixed picture about the effectiveness of different agency prescriptions, advocated and legislated as good governance devices. France is a less studied institutional setting than the United States, which has been the main focus of past research (e.g., Amihud and Lev, 1981; Denis *et al*., 1997; Goranova *et al*., 2007; Lane *et al*., 1998). Our study, thus, also contributes to the assessment of the generalizability of agency-based theories of corporate governance and their prescriptions across countries, and to a more recent period.

AGENCY THEORY, CORPORATE GOVERNANCE AND CORPORATE STRATEGY

Prior research on the impact of corporate governance on business diversification has mainly drawn from agency theory (Jensen and Meckling, 1976; Ross, 1973) and has argued that both interest alignment and ownership control should reduce diversification, in particular unrelated and financial diversification (e.g., Amihud and Lev, 1981; Denis *et al*., 1997; Goranova *et al*., 2007), since these two types of corporate strategy do not allow for resource synergies among businesses (e.g., Rumelt, 1982; Palich, Cardinal, and Miller, 2000). Unrelated diversification refers to the extent to which a firm operates in different businesses, that is, have different input–output configurations and thus have little or no resources in common (e.g., Rumelt, 1974; 1982; Montgomery, 1982). In contrast, financial diversification refers to the extent to which a firm operates in different businesses with imperfectly correlated or even countercyclical revenue streams (e.g., Lewellen, 1971).

The extant evidence of the effect of interest alignment devices on business diversification is limited, only addressing unrelated but not financial diversification (e.g., Denis, Denis, and Sarin, 1999). With regard to the effect of control on financial diversification, for their sample of 309 United States 1965 *Fortune* 500 firms that conducted acquisitions in the 1961–1970 period, Amihud and Lev (1981) found that 'management-controlled' firms (in which there was no single ownership block of more than 10%) exhibited, on average, a higher degree of financial diversification (using the R square measure of firm's return correlation with the market) than firms with greater ownership concentration (when controlling only for sales). Amihud and Lev (1981) interpreted this result as supporting evidence for their agency argument that top managers, when not appropriately monitored, are

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likely to reduce the firm's unsystematic risk and thus their own personal unemployment risk, to the detriment of the shareholders. Lane *et al*. (1998) replicated Amihud and Lev's (1981) study and found the same results when using Amihud and Lev's R square measure. For the same sample used by Amihud and Lev (1981), Lane and colleagues (1998) also assessed the effect of ownership concentration on another measure of unsystematic risk (the standard deviation of the error term in the market model estimated for 1964–1966), finding the model nonsignificant. In their second study of 286 *Fortune* 500 firms that conducted acquisitions between 1980 and 1987, Lane and colleagues (1998) found, consistently with agency theory and Amihud and Lev (1981), that outside (nonmanagement) ownership concentration (with a lower, 5% cutoff) had a positive and significant effect on unsystematic risk.[1] In contrast, they found no significant effect of board independence on unsystematic risk. The fact that the temporal structure of their model is not clear (i.e., they do not specify when they measure board vigilance) precludes a more solid (causal) interpretation and conclusion.

From our review, we identify five gaps and related possible improvement areas. First, the fact that extant studies have looked at the impact of different governance devices separately makes it necessary for future research to consider as many corporate governance devices as possible to clearly establish the relative explanatory power of each. Second, although Jensen (1986) argued that CEOs might undertake non-value creating projects when FCF is available, to the best of our knowledge, we don't know of past studies that test this hypothesis on diversification. Furthermore, Jensen's (1986) argument leads us to suggest that poor control conditions are more likely to lead to poor corporate expansion *if* managers have FCF at their disposal to carry out such projects. Third, most studies that examine the corporate governance-diversification linkage and draw on agency theory paradoxically assume that interest alignment (i.e., tying a CEO's compensation to a firm's shareholder value through a variable compensation scheme or stock) should deter a CEO from making poor corporate decisions, even though such studies also assume that managers are risk averse and precisely engage in financial diversification in order to reduce their employment risk (e.g. Jensen and Meckling, 1976; Amihud and Lev, 1981). However, interest alignment increases CEOs' risk and, hence, is likely to incite them to make decisions that might reduce their employment risk (e.g., Hoskisson and Hitt, 1994; Wright *et al*., 2002). Fourth, drawing on the capital asset pricing model (CAPM), past research has assumed that financial diversification destroys shareholder value (e.g., Amihud and Lev, 1981). That said, it is imperative to empirically establish whether financial diversification impacts shareholder wealth and value creation and assess whether it is indeed a non-value creating strategy, as posited by agency theory.[2] Finally, it is also necessary to guarantee temporal precedence so directionality in statistical relations concerning the impact of corporate governance devices on diversification can be established. In this paper, we address these gaps.

The role of FCF on the necessity and effectiveness of agency theory-based governance prescriptions in preventing financial diversification

Jensen (1986) argues that an agency problem may arise when a CEO can use FCF to fund projects with negative net present value.[3] Empirical evidence confirms that the availability of firm financial resources fuels unrelated diversification (Chatterjee and Wernerfelt, 1991; Gibbs, 1993), with negative consequences for firm profitability (e.g., Amit and Livnat, 1988; Palich *et al*., 2000; Robins and Wiersema, 1995).[4] Further, because both unrelated or financial diversification need the presence in multiple businesses, through them CEOs can increase the size and diversity of the corporations they manage and, thus, are usually

[1] We agree with Lane and colleagues (1998) that Amihud and Lev's (1981) findings have to be interpreted with caution given the fact that ownership in Amihud and Lev includes both insiders and outsiders. Inside ownership refers to managers who are also owners (CEO ownership). Hence the positive effect of strong ownership in preventing financial diversification in Amihud and Lev refers to the effectiveness of both alignment and control devices.

[2] We thank an anonymous reviewer and the editor for encouraging us to do so.

[3] Publicly traded firms can also expand using their own stock to make equity-based acquisitions rather than cash-based purchases. To do so, however, they have to convince both acquiring and target shareholders.

[4] It is interesting to note that in the presence of available financial resources, corporate sales' growth in general is associated with lower gains (Brush *et al*., 2000).

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able to increase their compensation (Hoskisson and Hitt, 1990; Murphy, 1999), and enhance their social prestige (Denis *et al*., 1999; Jensen, 1989). Regarding financial diversification, CEOs might also be able to stabilize corporate earnings (Amit and Livnat, 1988), thus decrease their unemployment risk (Amihud and Lev, 1981). We argue that FCF provides a CEO with the possibility to pursue such objectives. However, the likelihood the CEO will be able to act on this possibility—if we assume away stewardship behavior (Donaldson, 1990)—depends on whether there are no effective corporate governance devices in place. Thus, we view FCF as triggering the necessity for proper governance devices. Consequently, proper corporate governance devices will be effective in preventing poor expansion projects when FCF is substantial.

FCF and interest alignment. Agency theorists propose to (1) tie CEOs' salary to shareholders' objectives through variable compensation, (2) grant stock options to CEOs as part of their salary, and/or (3) make CEOs shareholders (e.g., Fama, 1980; Agrawal and Mandelker, 1987). If interest alignment is the first best solution to the assumed agency problem (Murphy, 1985; 1999), each one of the three alignment devices mentioned above should prevent a CEO from using corporate FCF for value-destroying projects. Past studies, though, have hypothesized and tested a direct relationship between alignment devices and unrelated diversification without assessing whether CEOs have FCF at their disposal, as indicated in our literature review (see Denis *et al*., 1997; Goranova *et al*., 2007; Lane, Cannella, and Lubatkin, 1999).

Alignment devices may have a negative, counterproductive effect because they represent more risk for the CEO, who, as noted, agency theorists treat as risk-averse (e.g., Amihud and Lev, 1981; Fama and Jensen, 1983). Interest alignment through either device (variable compensation, stock options or shares) more strongly links CEOs' wealth to firms' performance (e.g., Wiseman and Gómez-Mejía, 1998; Wright *et al*., 2002). As a result, CEOs whose interests are more 'aligned' with those of shareholders might actually be more motivated to engage in financial diversification, in order to reduce the firm's risk and hence their personal employment risk. Similarly, the greater the FCF, the more a CEO can carry out financial diversification by diversifying into businesses that are imperfectly correlated with existing ones—the opportunity is present. However, the mere presence of FCF does not entail that the CEO will be motivated to pursue financial diversification. As argued, the motivation to undertake financial diversification stems from CEOs' risk perception, heightened by the importance of variable compensation in their compensation packages. Likewise, the mere fact that CEOs are motivated to engage in financial diversification because of their variable compensation does not mean that they will pursue financial diversification without having the means to do so. Thus, we argue that a CEO will pursue financial diversification when both the motivation and the opportunity are present.

Hypothesis 1: The greater the FCF, the more will interest alignment devices encourage subsequent financial diversification.

FCF and control. Agency theorists have postulated that ownership concentration is likely to allow a better control of the corporation and its management in the interest of shareholders (Amihud and Lev, 1981; Lane *et al*., 1998) and that blockholders are likely to exercise their influence through the board of directors (Fama and Jensen, 1983). The board of directors is the apex of the internal control system (e.g., Jensen, 1993; Mizruchi, 1983), and holds the ultimate responsibility for the firm's direction, including business diversification (e.g., Johnson, Daily, and Ellstrand, 1996). The greater the board's monitoring intensity, the less able will the CEO be to have the board approve value-destroying strategies (Fama and Jensen, 1983; Kosnik, 1987), such as financial diversification. Thus, an independent board will be more able to curtail or impede the use of FCF for projects such as financial diversification, which do not serve shareholders' interests. However, board independence is a necessary, but not a sufficient, condition for the proper monitoring of the CEO's proposals. Its mere presence does not necessarily entail effective board monitoring and, specifically, the disapproval of value-destroying proposals. As mentioned, the existence of FCF indicates a possible agency problem (Jensen, 1986), an opportunity for the CEO to engage in non-value creating projects rather than paying back to the shareholders. We argue that an independent board is more likely to exert its monitoring role when FCF is available, that

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is, when the board is cognizant of a situation that may trigger opportunism, which is the existence of (non-returned to shareholders) cash. In view of potential misuse of such resources, an independent board is thus likely to increase its vigilance over the CEO proposals and prevent the use of FCF to fund financial diversification. Therefore,

Hypothesis 2: The greater the FCF, the more effective control devices are in preventing subsequent financial diversification.

METHODOLOGY

Population, sample, and data

The population for this study is the 100 largest French firms (in annual turnover) for 2000–2006, according to '*Le Guide des Etats-Majors*,' an annual publication that scans the largest French companies since 1993. From our population, we selected all publicly traded firms with available data that were independent enterprises (i.e., the majority of their shares were not owned by another operating firm) during the entire period. The final dataset contains 59 firms for 2000–2006. To allow for temporal precedence, there is a one-year lag between the dependent and the explanatory and control variables, resulting in 354 firm/year observations.

To assess the effect of financial diversification on the shareholders' value, we used two measures: shareholder return and excess value. *Shareholder return* is defined as the yearly change in shareholder return, which is measured as the firm's stock price at the end of the year minus the firm's stock price at the beginning of the year plus dividends, divided by the firm's stock price at the beginning of the year. *Excess value* compares a firm's value to its imputed value, that is, the sum of the values of the firm's businesses, if each of its businesses operated as a stand-alone, single-business firm.[5] As in prior research (Berger and Ofek, 1995; Campa and Kedia, 2002; Villalonga, 2004), we define excess value as the log of the ratio of firm value to its imputed value. A negative excess value implies that the firm destroys value (i.e., trades at a discount) while a positive excess value implies that the firm creates value (i.e., trades at a premium). Values for this measure range between −2.31 and 2.71, with a mean of 0.10. In addition to the controls used for the financial diversification model (see below), in our performance analysis, we control for the fact that investors tend to positively react to relay, planned CEO successions (e.g., Zajac, 1990). We do so with a dummy (*relay CEO succession*) which equals 1 when the firm experienced a relay CEO succession event in a given year and 0 if no such event occurred. Relay CEO succession events were identified from '*Le Guide des Etats-Majors*' and press reports with the necessary information.

We obtained firm financial data from the Thomson database, MergentOnLine, and Datastream. We collected firm ownership-, board-, and CEO-level data from '*Le Guide des Etats-Majors*' and, specifically for CEO compensation and stock options, from Proxinvest. In the few cases where data were unavailable from these sources, corporate annual reports provided the necessary information. We gathered data on whether a sample firm was listed on the New York Stock Exchange (NYSE) during the period under study from the NYSE.

Dependent variable

We measured *financial diversification* by adding the correlations for the years t-3 to t included of industry-level sales (i.e., the aggregate amount of sales of all publicly traded firms operating in each given two-digit SIC industry) among each pair of two-digit SIC industries in which each sample firm operates for a given year, and dividing the result by the number of its distinctive pairs of two-digit SIC industries to assure comparability across firm/years.[6] This measure captures the extent to which sales' changes in the industries a firm operates mutually compensate each other[7] (e.g., Amihud and Lev, 1981, see also Bergh, 1997);

[5] We multiplied each business sale with the median sales multiplier of all publicly traded single-business firms available in the Thomson database in the corresponding two-digit Standard Industrial Classification (SIC) industry, in a given year. The sales multipliers are the median of the ratio of total capital over sales for all single-business firms in the corresponding two-digit SIC industry, at a given year. Total capital is the sum of market value of equity, long-term and short-term debt, and preferred stock (Campa and Kedia, 2002: 1736).

[6] Amit and Livnat (1988) used another measure of financial diversification, which, due to insufficient information in their article, we were unable to replicate.

[7] For instance, if a firm operates in two two-digit SIC industries 35 and 16: the yearly value of the industry-level sales in 35 evolved from 84,844.0493 (t-3) to 73,700.0549 (t-2), then to

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that is, it captures the extent to which the corporation engages in revenue smoothing. To facilitate interpretation of the results, we multiplied this measure by −1. Therefore, when financial diversification equals −1, it indicates there is no financial diversification or revenue smoothing: the sales of all the businesses of the corporate portfolio move in the same direction and with the same intensity. When financial diversification equals 1, it indicates perfect smoothing among firm businesses.

Independent variables

FCF is defined as operating cash flow minus cash dividends minus capital expenditures (e.g., Brush *et al*., 2000). Operating cash flow is defined as the net cash receipts and disbursements resulting from the operations of the firm, and measured as net cash flow minus operating activities. Thus, operating cash flow is the sum of funds from operations, funds from/used for other operating activities (which accounts for changes in working capital), and extraordinary items, as per Thomson database.

We considered three interest alignment devices. First, *CEO variable compensation* is the ratio of variable compensation over total CEO compensation for a given year, indicating the extent to which the salary of the CEO is contingent upon some measure of firm performance (e.g., Beatty and Zajac, 1994; Tosi and Gomez-Mejia, 1989). Second, due to the apparent major importance for the board to offer stock options or not to the CEO, we created a dichotomous measure for *CEO stock options* (e.g., Beatty and Zajac, 1994). We attributed 1 when the CEO had stock options in a given year and 0 otherwise. Third, we measure *CEO ownership* as the percentage of the firm's stock held by the CEO in a given year (e.g., Goranova *et al*., 2007).

We also take into account two control devices. First, we measured *ownership concentration* as the share of stock owned by the largest owner in the given year (Amihud and Lev, 1981; Bethel and Liebeskind, 1993; Lane *et al*., 1998). Second, we capture board independence with two board features: the proportion of *independent directors* (i.e., outside non-CEO), and *chairman/CEO non-duality*. Outside directors are directors who are not employees of the firm (e.g., Goodstein, Gautam, and Boeker, 1994; Zahra and Pearce, 1989). This is a commonly used measure of a board's monitoring propensity (e.g., Beatty and Zajac, 1994; Daily, Dalton, and Cannella, 2003; Morck, Shleifer, and Vishny, 1988; Hill and Snell, 1988). From outside directors we excluded CEOs in other French companies because when an outside board director serves concurrently as a CEO for another firm, including cases of mutual board interlocks (e.g. Mizruchi, 1996), he or she may be less inclined to intervene independently on behalf of the focal firm's shareholders because of 'solidarity' with the focal CEO. This is especially true in France, where strong ties and cohesion among top executives are prevalent (e.g., Lubatkin *et al*., 2005). Chairman/CEO non-duality refers to a board leadership structure in which the positions of the chairperson of the board and of the CEO are split. Agency theory advocates the split of the chairman and the CEO positions, as an important condition for board independence (e.g., Daily *et al*., 2003; Fama and Jensen, 1983; Rechner and Dalton, 1991). We created a dummy to indicate whether the chairman and CEO positions are split (value of 1, 0 otherwise) (e.g., Beatty and Zajac, 1994; Zajac and Westphal, 1996).

Control variables

We include a detailed set of controls. We control for *firm accounting performance* (e.g., Bergh and Lawless, 1998; Goranova *et al*., 2007; Markides, 1995) with the industry-adjusted firm return on assets (ROA) at t-1, that is, firm ROA minus the median industry ROA (e.g. Denis and Kruse, 2000), based on each firm's primary two-digit SIC code, *firm size* with the log of firm total sales at t-1 (e.g., Amihud and Lev, 1981; Lane *et al*., 1998; Wright *et al*., 2002), and *firm risk* (e.g., Amihud and Lev, 1981), with the standard deviation of firm ROA (e.g., Goranova *et al*., 2007) for the years t-3 to t-1 included. We also include as controls *firm leverage* measured with the debt to equity ratio for t-1 (see also Bergh, 1997; Jensen, 1986), and *firm unrelated diversification*, measured with the number of two-digit SIC codes in the firm portfolio at t-1. We use a dummy for *NYSE listing*, which takes the value of 1 if the firm is listed on the

84,646.3260 (t-1), and to 86,544.8498 (t). The yearly value of the industry-level sales in 16 evolved from 40,309.6876 (year t-3) to 34,192.2152 (t-2), then to 29,355.3686 (t-1), and to 27,220.5251 (t). The correlation between the yearly values of the industry-level sales for 35 and 16 equals −0.240, suggesting that this firm engages to some extent in financial diversification.

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NYSE and 0 otherwise, because in the United States, analyst scrutiny is intense and there is an anti-diversification paradigm among analysts and investors (Zuckerman, 2000). *State ownership* is a dummy, which equals 1 when the French state is the largest owner and 0 otherwise (Lubatkin *et al*., 2005; Ramaswamy, Li, and Veliyath, 2002). *Family ownership* is a dummy, which equals 1 when a family is the largest owner and 0 otherwise (Schulze *et al*., 2001), and *foreign ownership* is a dummy, which equals 1 when a foreign owner is the largest owner and 0 otherwise (e.g., Ramaswamy *et al*., 2002). *Finance CEO* (e.g., Hambrick and Mason, 1984; Jensen and Zajac, 2004) is a dummy, which equals 1 when the firm's CEO has a dominant functional experience in finance (or accounting and law) and 0 otherwise. *CEO tenure* (e.g., Hambrick and Fukutomi, 1991) is the log of number of years a CEO served in the CEO position at each given year, given extreme skewness of the variable when measured in years. The *bank industry* dummy equals 1 when the focal firm's primary two-digit SIC code is 60 and 0 otherwise, because compared to incumbents in other industries, banks tend to enjoy greater financial resources and be more concerned about risk because of regulatory reasons. We also included *year dummies*.

Model specification

Given the panel character of our dataset, unobserved heterogeneity is a potential problem (Hsiao, 2003). Both fixed and random effects specifications are unbiased, but the random effects one is more efficient. The Hausman procedure tests for the more demanding distributional assumptions in the random effects model by assessing whether the differences between the estimates of the fixed and random effects models are significant (Greene, 2003). The Hausman test for our full model of financial diversification indicates that the random effects model holds, that is, the differences are not significant. Thus, we report the random effects' results.

To test the effects of financial diversification on shareholder return and firm excess value, we employed instrumental variables (2SLS) regression models, which account for the endogeneity of the models' predictor (Shaver, 1998). The first stage consists of regressing financial diversification on a set of instruments that must satisfy the conditions of relevance and exogeneity (Bascle, 2008; Hall, Rudebusch, and Wilcox, 1996; Wooldridge, 2002). We identified three instruments that meet these criteria. The first is elite CEO education, an indicator of power of the CEO (Finkelstein, 1992). The second is mutual fund ownership, a 'pressure-resistant' category of owners (Brickley, Lease, and Smith, 1988; Ramaswamy *et al*., 2002), likely to exercise active monitoring against potentially value-destroying strategies. The third consists of family CEO (i.e., a CEO belonging to a family that owns shares of the firm) who can put forward family objectives, which might differ from those of other owners (Schulze *et al*., 2001). We report the first-stage F-statistic, the Anderson statistic, which tests for the relevance of the instruments, and the Sargan statistic, which tests for the instruments' exogeneity.

RESULTS

Table 1 presents descriptive statistics and correlations. Table 2 displays the results of model estimation for shareholder return (Model 1) and firm value (Model 2) to assess whether financial diversification is value destroying. In both models, the first-stage F statistic and the Anderson statistic are significant, indicating the relevance of the instruments employed. Further, in Models 1 and 2, the lack of significance for the Sargan statistic indicates that our instruments are exogenous. Table 2 shows that financial diversification negatively impacts shareholder return ($p \leq 0.05$) and firm value ($p \leq 0.10$) respectively, thus confirming the value-destroying character of financial diversification, in contrast to unrelated diversification (see Model 2).

Table 2 also presents the results of model estimation for financial diversification. Model 3 is the control model and Model 4 refers to the full model. Our findings are in line with our contingency model: no governance device appears to have a significantly direct effect on financial diversification, that is, regardless of the FCF level—although the direct effect of chairman/CEO non-duality is significant, when appropriately assessing its effect when FCF is unavailable, chairman/CEO non-duality does not have a significant independent effect on financial diversification. Regarding interest alignment (Hypothesis 1), Model 4 shows that only the interaction of FCF

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Table 1. Descriptive statistics and correlation matrix (for the entire sample)

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11
1. Shareholder return	7.11	2.00	1.00										
2. Financial diversification	−0.17	0.44	0.07	1.00									
3. Firm accounting performance	−0.69	4.53	0.34***	0.00	1.00								
4. Firm size	9.26	1.08	0.11*	−0.10†	−0.10†	1.00							
5. Firm risk	1.99	2.69	−0.20***	0.02	−0.42***	0.07	1.00						
6. Firm leverage	2.16	8.65	−0.22***	−0.07	−0.21***	0.06	0.07	1.00					
7. Firm unrelated diversification	2.51	1.26	0.00	−0.05	−0.06	0.12*	−0.11*	0.05	1.00				
8. Firm NYSE listing	0.24	0.43	−0.07	−0.05	−0.23***	0.33***	0.33***	0.11*	−0.14**	1.00			
9. FCF	0.51	3.00	0.10†	0.10†	0.06	0.20***	0.02	−0.04	−0.04	0.12*	1.00		
10. State ownership	0.17	0.38	−0.11*	−0.11*	−0.14**	0.08	0.11*	−0.04	−0.07	0.08	−0.07	1.00	
11. Family ownership	0.15	0.35	0.31***	0.04	0.10†	−0.01	−0.06	−0.04	−0.16**	−0.08	−0.04	−0.19***	1.00
12. Foreign ownership	0.21	0.41	−0.02	0.03	0.03	0.01	0.15**	−0.05	0.00	0.04	0.00	−0.21***	−0.17**
13. Mutual fund ownership	0.09	0.29	0.02	−0.03	0.09	−0.02	0.02	−0.05	0.00	0.03	−0.02	−0.12*	−0.13*
14. Ownership concentration	0.26	0.21	−0.03	0.01	0.04	−0.17**	−0.16**	−0.08	−0.09	−0.26***	−0.01	0.14**	0.16**
15. Independent directors	0.82	0.14	−0.19***	0.03	−0.02	−0.20***	0.03	−0.03	−0.08	−0.02	−0.04	0.03	0.11*
16. Chairman/CEO non-duality	0.40	0.49	−0.05	−0.02	0.06	−0.16**	−0.07	0.00	0.10†	−0.09†	0.11*	−0.14**	0.00
17. Finance CEO	0.45	0.50	−0.19***	0.06	−0.03	−0.15**	−0.09†	0.00	−0.01	0.00	0.01	0.00	−0.09†
18. CEO tenure	1.71	0.90	0.15**	0.04	0.14**	0.04	−0.16*	−0.12*	−0.01	−0.02	−0.05	−0.05	0.12*
19. Family CEO	0.03	0.18	0.06	0.04	0.06	−0.04	−0.07	−0.02	−0.20***	−0.10	−0.02	−0.08	0.28***
20. CEO elite education	0.59	0.49	0.05	−0.17	−0.20***	0.29***	0.01	0.08	0.05	0.16**	−0.02	0.25***	−0.27***
21. Relay CEO succession	0.06	0.24	−0.04	0.04	−0.08	−0.04	0.02	−0.03	0.03	0.03	0.04	−0.05	−0.04
22. CEO variable compensation	0.31	0.26	0.19***	0.04	0.16**	0.31***	−0.04	0.07	−0.09†	0.16**	0.21***	−0.08	0.07
23. CEO stock-options	0.55	0.50	0.13*	0.06	0.05	0.22***	0.05	0.04	−0.06	0.15**	0.12*	−0.07	−0.01
24. CEO ownership	0.04	0.12	0.04	0.05	0.02	−0.09	−0.14**	−0.04	0.17**	−0.09†	−0.02	−0.15*	−0.04
25. Bank industry	0.05	0.22	−0.14**	−0.02	0.02	0.10†	−0.16**	0.17**	0.11*	−0.13*	0.02	−0.11*	−0.10†

Variable	12	13	14	15	16	17	18	19	20	21	22	23	24	25
12. Foreign ownership	1.00													
13. Mutual fund ownership	0.32***	1.00												
14. Ownership concentration	−0.18***	−0.19***	1.00											
15. Independent directors	0.13*	−0.05	0.18***	1.00										
16. Chairman/CEO non-duality	0.24***	−0.02	−0.01	0.48***	1.00									
17. Finance CEO	−0.22***	−0.13*	0.08	0.02	0.03	1.00								
18. CEO tenure	−0.12**	−0.04	−0.06	−0.02	−0.16**	−0.08	1.00							
19. Family CEO	0.06	0.16**	−0.10†	0.03	0.04	−0.17**	0.12*	1.00						
20. CEO elite education	−0.13*	−0.20***	−0.13*	−0.24***	−0.15**	0.09†	−0.04	−0.23***	1.00					
21. Relay CEO succession	0.02	0.05	0.01	0.04	0.13**	−0.06	0.06	0.02	0.01	1.00				
22. CEO variable compensation	0.15**	0.11*	−0.29***	−0.13*	0.04	−0.05	0.01	0.22***	0.02	−0.06	1.00			
23. CEO stock options	0.22***	0.03	−0.29***	−0.08	−0.05	−0.05	−0.03	0.01	0.14**	−0.06	0.37***	1.00		
24. CEO ownership	−0.17**	−0.10†	0.22***	−0.19***	−0.12*	0.06	0.28***	0.13*	−0.09†	−0.02	−0.09†	−0.15**	1.00	
25. Bank industry	−0.12*	−0.07	0.02	−0.04	0.04	0.25***	−0.07	−0.04	0.03	0.00	0.22***	−0.05	−0.08	1.00

N = 354; † $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$.

Table 2. 2SLS/IV regression of shareholder return (Model 1) and of excess value (Model 2)[a] Random-effects GLS regression of financial diversification (Model 3 and Model 4)

	Model 1	Model 2[b]	Model 3	Model 4
Constant	7.088 (1.476)***	1.105 (0.545)*	0.390 (0.319)	0.798 (0.354)*
Firm accounting performance	0.067 (0.036)†	0.006 (0.011)	−0.009 (0.005)†	−0.009 (0.006)
Firm size	−0.044 (0.161)	−0.145 (0.072)*	−0.063 (0.033)†	−0.098 (0.037)**
Firm risk	−0.077 (0.060)	0.016 (0.018)	0.007 (0.010)	0.005 (0.011)
Firm leverage	−0.057 (0.018)**	−0.006 (0.005)	−0.004 (0.002)	−0.004 (0.002)†
Firm unrelated diversification	0.075 (0.117)	0.143 (0.079)†	−0.012 (0.026)	−0.008 (0.028)
Firm NYSE listing	−0.299 (0.405)	−0.123 (0.129)	−0.037 (0.080)	−0.042 (0.085)
Bank industry	−1.127 (0.713)	0.011 (0.206)	0.008 (0.179)	0.058 (0.198)
Finance CEO	−0.287 (0.308)	0.190 (0.093)*	0.065 (0.060)	0.027 (0.064)
CEO tenure	0.128 (0.166)	0.098 (0.054)†	0.025 (0.027)	−0.005 (0.029)
Relay CEO succession	0.280 (0.609)	−0.055 (0.173)		
Year 2000	−1.264 (0.655)†	−0.135 (0.193)	−0.199 (0.066)**	−0.206 (0.077)**
Year 2001	−1.453 (0.613)*	−0.184 (0.201)	−0.182 (0.066)**	−0.166 (0.072)*
Year 2002	−0.091 (0.489)	0.057 (0.149)	0.045 (0.065)	0.071 (0.069)
Year 2003	0.132 (0.507)	0.062 (0.152)	0.103 (0.065)	0.111 (0.065)†
Year 2004	0.641 (0.534)	0.092 (0.166)	0.131 (0.064)*	0.134 (0.064)*
FCF	0.097 (0.055)†	−0.044 (0.033)		−0.006 (0.032)
State ownership	−0.693 (0.475)	−0.538 (0.161)***		−0.052 (0.097)
Family ownership	1.708 (0.438)***	0.089 (0.155)		0.073 (0.113)
Foreign ownership	−0.141 (0.396)	−0.212 (0.115)†		−0.036 (0.076)
CEO variable compensation	0.215 (0.704)	0.401 (0.248)		0.113 (0.127)
CEO stock options	0.274 (0.316)	0.168 (0.107)		0.012 (0.051)
CEO ownership	−0.092 (1.356)	−0.006 (0.004)		0.245 (0.311)
Ownership concentration	0.025 (0.808)	−0.002 (0.003)		−0.032 (0.190)
Independent directors	−2.374 (1.215)†	−0.708 (0.337)*		0.080 (0.237)
Chairman/CEO non-duality	−0.206 (0.390)	0.132 (0.117)		−0.163 (0.075)*
Financial diversification	−4.468 (1.947)*	−0.829 (0.500)†		
FCF x state ownership				0.009 (0.037)
FCF x family ownership				0.017 (0.073)
FCF x foreign ownership				−0.098 (0.063)
FCF x CEO variable compensation				0.157 (0.078)*
FCF x CEO stock-options				0.019 (0.033)
FCF x CEO ownership				0.113 (0.156)
FCF x ownership concentration				0.181 (0.106)†
FCF x independent directors				−0.209 (0.117)†
FCF x chairman/CEO non-duality				−0.038 (0.037)
F statistic	2.97***	1.70*		
F Statistic (first-stage regression)	3.13*	2.57†		
Anderson statistic	9.94*	8.44*		
Sargan statistic	0.97	0.23		
Wald Chi2			62.99***	90.97***
R2 (within)			0.19	0.25
Hausman chi2			12.82	19.19

Std Errors are in parentheses; N = 354; † $p \leq 0.10$; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$ [a] Instrumental variables (IV) employed: CEO elite education; mutual fund ownership; family CEO. [b] N = 251 (only diversified observations).

and CEO variable compensation is positive and significant ($p \leq 0$ .05). Following Friedrich (1982), we calculated the joint effect at different values of FCF (one standard deviation above and below the mean) and tested for significance for all the interest alignment devices. The results again yield only significant results for CEO variable compensation that has a positive and significant effect on financial diversification at high values of FCF ($p \leq 0.05$). This supports our Hypothesis 1 for one of the three alignment devices. Figure 1 displays the moderation effect of FCF on the impact of variable compensation on financial diversification.

With regard to control devices, Model 4 also shows two significant interaction terms: for ownership concentration (positive, contrary to

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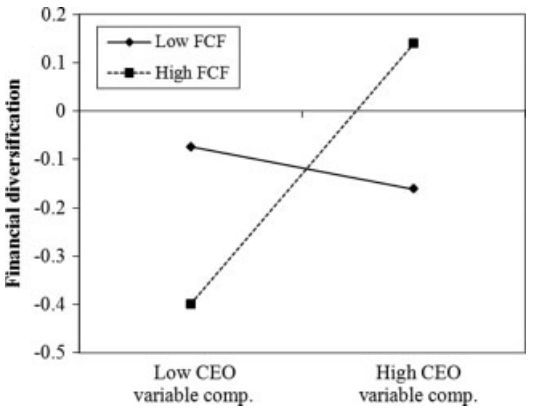

Figure 1. Moderation effect of FCF on the impact of variable compensation on financial diversification.

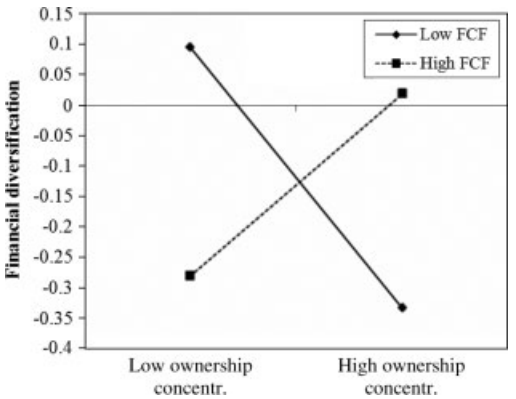

Figure 2. Moderation effect of FCF on the impact of ownership concentration on financial diversification.

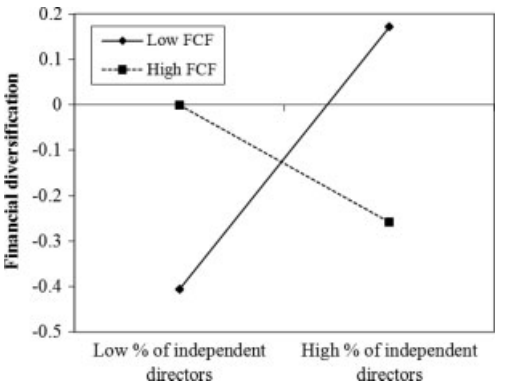

Figure 3. Moderation effect of FCF on the impact of % of independent directors on financial diversification.

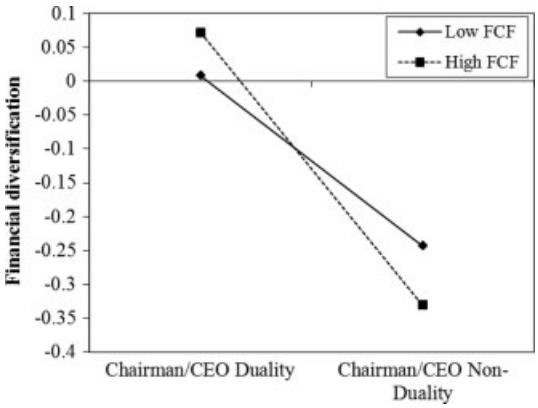

Figure 4. Moderation effect of FCF on the impact of chairman/CEO duality on financial diversification.

expectations) and for independent directors (negative as expected). Again, we calculated the joint effect at different values of FCF (one standard deviation above and below the mean) and tested for significance for all three control devices. Figures 2, 3 and 4 display the moderation impact of FCF on the effect of ownership concentration, % of independent directors and chairman/CEO duality respectively on financial diversification. The results show that ownership concentration has a negative and weakly significant effect on financial diversification at low values of FCF ($p \leq 0.10$). The percentage of independent directors has a positive and significant effect on financial diversification at low values of FCF ($p \leq 0.10$), whereas, consistent with agency theory, chairman/CEO non-duality has a negative and significant effect on financial diversification at high values of FCF ($p \leq 0.05$). Thus, our findings partially support Hypothesis 2. They suggest that the separation of the chairman and CEO roles effectively prevents CEOs from obtaining board approval, and carrying out financial diversification projects when FCF is substantial; and that the existence of blockholders reduces financial diversification when FCF is low, possibly through business divestment to obtain greater FCF. [8]

[8] In supplemental analyses, the inclusion of one publicly traded firm for the period 2000–2004, before it merged with another sample firm, did not change the hypothesized effects. Furthermore, when employing a profit-based measure (based on aggregate net income at a two-digit SIC industry level) and a profitability-based measure (based on median two-digit SIC industry earnings per share) of financial diversification, the results are in line with our models employing a sales-based measure. Our choice to employ the sales-based measure as the primary one is consistent with the original conceptualization of financial diversification (Amihud and Lev, 1981; Lewellen, 1971).

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CONTRIBUTIONS AND CONCLUSION

We challenge and expand agency theory to develop and test a more comprehensive model linking FCF, interest alignment, and control devices as antecedents of non-value creating strategies, such as financial diversification. Building on and going beyond prior studies, we propose and find support for a contingent framework, in which corporate governance devices have a significant effect on financial diversification depending on the FCF level. When an opportunity for potential opportunism arises, that is, the existence of FCF, only one control corporate governance device (the separation of CEO and chairman roles) appears to be effective in preventing financial diversification. In contrast, and contrary to what traditional agency theory has argued, one alignment device—CEO variable compensation—leads to an increase rather than a decrease of financial diversification, when the firm has substantial FCF.

Contributions

The agency literature on business diversification (Amihud and Lev, 1981; Lane *et al*., 1998; Goranova *et al*., 2007) paradoxically does not test the agency model of corporate behavior that Jensen (1986) proposed. That is, it does not consider that, accounting for the role of interest alignment devices, poor control can only lead to value-destroying diversification if CEOs have FCF at their disposal to engage in such projects. In contrast to past research (Amihud and Lev, 1981; Lane *et al*., 1998; Goranova *et al*., 2007), our study shows that financial diversification destroys value and that corporate governance devices do not directly prevent this value-destroying diversification. Their effect on financial diversification is contingent on the FCF level, that is, when there is a situation of potential opportunism (Lane *et al*., 1998).

In addition, we argue and find evidence that an alignment device (CEO variable compensation) is counterproductive in preventing the use of FCF for financial diversification when the level of FCF is high. The other two (CEO ownership and stock options) appear to be ineffectual regardless of the level of FCF. This suggests a reappraisal of the interest alignment branch of agency theory. If we are to retain the assumption of managerial risk aversion (e.g., Jensen and Meckling, 1976), agency theory seems to contradict itself in recommending the use of interest alignment devices to prevent financial diversification (e.g., Amihud and Lev, 1981). Instead of decreasing financial diversification, we argue and show that CEO variable compensation exacerbates the problem, probably because CEOs perceive more personal risk when they are incentivized in this way and, thus, when FCF is substantial, they can engage in financial diversification to reduce their risk. In that sense, our study extends to the French context and to a more recent period of prior U.S.-based evidence that has shown that interest alignment devices do not resolve the agency problem (Jensen and Murphy, 1990; Murphy, 1999). Overall, our study indicates that control is by far a more effective governance device than interest alignment in preventing the use of FCF for financial diversification.

Moreover, following Lane and colleagues (1998) call, we contribute to the business diversification literature by distinguishing between unrelated and financial diversification and by providing better and more replicable measures of financial diversification (Amit and Livnat, 1988). Given that firms' unrelatedness does not capture revenue smoothing (see also Amit and Livnat, 1988), we created a new measure for financial diversification: the correlation of industry-level sales among a firm's businesses. Further, past research assumed that financial diversification destroys firm value without empirically showing it (e.g., Amihud and Lev, 1981). It provided a mixed picture on the performance and value implications of unrelated diversification (e.g., Campa and Kedia, 2002; Lubatkin and Chatterjee, 1994; Palich *et al*., 2000; Rumelt, 1982), in that, in some cases, this type of business strategy can be value creating (Castañer, 2002; Levinthal, 1995; Villalonga, 2004). We show that, for the largest French publicly traded firms in the 2000–2006 period, unrelated and financial diversification are two different kinds of diversification, also in terms of their performance and value consequences: financial diversification negatively impacts shareholder wealth and firm value, whereas unrelated diversification has a positive impact on firm value. Finally, in contrast to past studies on the impact of corporate governance on business diversification, we provide a better model specification in which we clearly allow for temporal precedence (e.g.,

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Lane *et al*., 1998) and control for selection issues (e.g., Goranova *et al*., 2007). In a nutshell, we investigate the antecedents of financial diversification, with a particular focus on its governance determinants. Our study is probably pioneering in this sense, given that past research had not used a proper measure of financial diversification (see Amit and Livnat, 1988 for a partial exception) but rather focused on few governance antecedents of unrelated diversification (e.g., Amihud and Lev, 1981; Lane *et al*., 1998; Goranova *et al*., 2007).

Limitations and future research

As in any study, ours has limitations. First, we were not able to determine the performance measure on which CEO variable compensation is based. It might be the case that sales-based targets are not effective interest alignment devices, whereas profit or stock performance ones might be. Future research should try to establish which performance measure is used and effective (if any) in variable compensation schemes. Second, our finding on non-CEO outside board members might also be affected by the fact that we were not able to systematically assess whether these board members were prior employees of the firm or had any other current conflict of interest. It is possible that there is a lower proportion of 'truly' independent members than the one recorded, but we do not have any reason to think it introduces a bias in our results, as we believe all sample firms are equally affected by our measure. Finally, a broader issue refers to the generalizability of our findings to countries other than France. Future studies could test our model for firms headquartered in different countries, considering the corporate governance factors that might make the behavior of different corporate governance actors, such as owners, directors and managers, differ across countries (e.g., Gedajlovic and Shapiro, 1998; Kogut, Walker, and Anand, 2002). In particular, a more specific treatment of owners' identities (and objectives), and the diversification of their investments might warrant attention.

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