

## The Effects of Board of Directors' Characteristics on Tax Aggressiveness

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### Abstract

There is an increasing expectation that investors are aware that tax aggressiveness has a detrimental impact on their investment returns. Corporations try to demonstrate to investors their compliance with tax regulations. This paper examines the effects of board of directors' characteristics on tax aggressiveness. The study is based on the analysis of a sample of 73 French companies on the SBF 120 index for the period 2006-2010. A regression analysis was used to determine which variables that can reduce tax aggressiveness. Results showed that the board size and the percentage of women in the board affect the activity of tax aggressiveness. Return on assets and size of the firm are significantly and positively associated.

**Keywords:** tax aggressiveness, board of directors, governance, investors, SBF 120

### 1. Introduction

In the past few years, the taxes have widely been considered as a motivating factor in many corporations decisions. It has received much attention in recent literature (Lanis & Richardson 2011; Hanlon & Slemrod 2009; Landolf 2006). It is increasingly being expected of corporations that they demonstrate to investors that they are complying with tax rules and regulations, because investors are aware that tax aggressiveness has a detrimental effect on their investment returns (Henderson Global Investors 2005).

Governance plays an important role in choosing a tax management strategy. Friese *et al.* (2008) find that tax law can influence corporate governance by offering privileges or imposing penalties. Additionally, the authors conclude that tax rules often result in intransparent and complex, tax-driven structures. Tedds (2006) does not specifically address governance but looks at tax evasion rather than tax avoidance and finds that the legal organization of a business affects tax compliance as does size, ownership, competition, and audit controls, while industry and age have no effect.

Many researchers have examined the association between corporate governance and tax aggressiveness. Khurana & Moser (2012) note that the firms with higher levels of institutional ownership are less tax aggressive because the institutional owners are concerned with long-term consequences of aggressive tax strategies. Hanlon & Slemrod (2009) find that on average of a company's stock price declines when there is news about its involvement in tax shelters, but the reaction is small, relative to reactions to other corporate misdeeds. They find also some limited evidence for cross-sectional variation in the reaction. For example, the stock price decline is smaller for firms that have good governance, which is consistent with the idea that for these firms the news is less likely to trigger concerns about insiders' aggressiveness toward the investors themselves. The reaction is more negative for firms in the retail sector, suggesting that part of the reaction may be a consumer/taxpayer backlash. A novel measure of corporate tax avoidance allows for an investigation of the link between tax avoidance and incentive compensation, is proposed by Desai & Dharmapala (2006). Incentive compensation appears to be a significant determinant of tax avoidance activity. Increases in incentive compensation tend to reduce the level of tax sheltering, in a manner consistent with a complementary relationship between diversion and sheltering.

The works reported by Uzun *et al.* (2004), and Ibrahim *et al.* (2003) in the contexts of both agency theory and Corporate Social Responsibility (CSR) show that the structure of the board of directors has an important role to play in monitoring management, different from that other governance mechanisms. Recently, Lanis & Richardson (2011) show that the inclusion of a higher proportion of outside members on the board of directors reduces the likelihood of tax aggressiveness. However, the relationship between the board of directors and the tax aggressiveness has been less investigated in literature. Consequently, in order to examine the effects of board of directors' characteristics on tax aggressiveness, firstly, we provide a simple theoretical framework for understanding the interaction between tax aggressiveness and the board of directors. Secondly, we construct a quantitative measure of the inherently elusive phenomenon of tax aggressiveness.

The rest of this paper is organized as follows. In section 2, a brief review of the theory of the tax aggressiveness is given, and in section 3, the interaction between tax aggressiveness and the board of directors is introduced. Section 4 reports the sample and study variables. Empirical results and conclusions are presented in section 5 and 6, respectively.

## 2. Theory of Tax Aggressiveness

Companies' tax aggressiveness can be seen in two ways following some descriptions; one is the legal way that is to find out what kinds of transactions are favorable under the current law. It is the legal tax avoidance and it is one kind of the valid services provided by the accountants. The second way is to do tax sheltering (Yeung 2010). The nature and extent of agency conflicts can affect the level of tax aggressiveness (Scholes *et al.* 2005). Some of the costs of tax aggressiveness are not tax related such as the costs that can arise from hidden actions of managers. Desai & Dharmapala (2006) indicate that the analysis of a tax aggressiveness decision is embedded in an agency framework in which managers can enjoy private benefits of control at the expense of other shareholders. Given that private ownership lacks disciplining of the market for corporate control, agency costs could be high (Schulze *et al.* 2001).

Because the tax literature has not historically differentiated between the corporate and individual aspects of tax aggressiveness, previous models of corporate tax aggressiveness have been formulated based on individual taxpayer compliance (Slemrod 2004). However, the studies reported by Chen & Chu (2005), and Crocker & Slemrod (2005) consider corporate tax aggressiveness in the context of agency theory, which is more appropriate in the corporate environment because of the principal-agent relationship between shareholders and management. From an agency perspective, the marginal benefits of tax aggressiveness to shareholders include greater tax savings for the corporation, whereas the marginal costs include the potential for tax fines and penalties to be imposed by the tax administration, implementation costs, reputational costs, and political costs (Scholes *et al.* 2005; Slemrod 2004). Chen *et al.* (2010) consider whether family corporations are more tax aggressive than non-family corporations or not. They find that family firms are less tax aggressive than their non-family counterparts, *ceteris paribus*. Their results suggest that family owners are willing to forgo tax benefits to avoid the non-tax cost of a potential price discount, which can arise from minority shareholders' concern with family rent seeking masked by tax avoidance activities.

CSR and corporate tax aggressiveness have attracted a great attention in the academic recent literature (Chen *et al.* 2010; Frank *et al.* 2009). In a much wider and arguably more important context, CSR could potentially influence tax aggressiveness in terms of how a corporation accounts and directs its systems and processes in respect to the well-being of society as a whole (Avi-Yonah 2008; Williams 2007; Desai & Dharmapala 2006a).

It is generally expected that shareholders prefer tax aggressiveness. It may not be true, for example, there is a famous Enron case where a company is so involved in the tax avoidance, its shareholders are not definitely get no benefited (Yeung 2010). The tax department of Enron had been turned into a business department, which even had its annual target revenue. However, the complicated transactions used to avoid taxes were so expensive and cost the company much. Consequently, the shareholders actually couldn't get any benefited. Desai *et al.* (2007) suggest that shareholders' agent, the directors, makes the decision of tax strategy. As the directors may not align with the shareholders, then the agency problem arises and makes the tax issue complicated (Garbarino 2009).

## 3. Board Composition and Tax Aggressiveness

As corporate taxation influences corporate governance, the quality of corporate governance plays an important role in determining the sensitivity of tax revenue to tax rate changes. When it is difficult for the management to divert income (good corporate governance), an increase in tax rate can increase the tax revenue. By contrast, when the corporate governance system is ineffective (management is easy to divert income), an increase in the tax rate can reduce tax revenues (Desai *et al.* 2007). On the other hand, corporate governance has different components. It is interrelated between several parties, like directors, shareholders and the board.

In fact, the board of directors bears the ultimate responsibility for the tax affairs of the corporation, and is held accountable for them by shareholders and other stakeholders (Erle 2008; Hartnett 2008). Landolf (2006) argues that as the risks faced in tax matters have become more diverse, the board of directors must, within the framework of the risk management strategy of the corporation as a whole, involve itself directly in the corporation's tax planning. He also asserts that the board should implement such a strategy after carefully considering the important aspects of sustainability, compatibility with business activities and taxation structures, the compliance culture of the corporation, and the issue of paying a fair share of corporate taxes.

The independent non-executive directors are always viewed as a balancing force in the board; their existence of them shows a symptom of good corporate governance; shareholders are willing to authorize the management to

be tax aggressive (Bhagat & Bolton 2008). Yeung (2010) also suggests the result that the increase in board independency decreases the effective tax rate. It indicates that under good corporate governance the company follows tax aggressive policy.

CSR literature emphasizes the importance of non-executive directors in monitoring the behavior of top management in the context of key strategic decisions that affect society as a whole (Rose 2007; Pearce & Zahra 1991). Ibrahim *et al.* (2003) claim that in their role, as supervisors of the corporation's strategic decisions, outside directors should actively support greater corporate responsiveness to society's needs.

Directors can affect the level of tax aggressiveness. Indeed, Fama & Jensen (1983) argue that the board is a major internal control mechanism, which is responsible for monitoring the equity of management. The claim that outside directors are encouraged to fulfill their spot monitoring and refuse to agree with the direction in expropriating shareholders wealth. Therefore, they increase the ability of the board to monitor management effectively in situations characterized by agency problems arising from the separation of ownership, control, and can help reduce the tax aggressiveness.

It is therefore reasonable to expect that a proportion of outside directors in higher board could significantly reduce the likelihood of tax aggressiveness. Hence, hypothesis 1 is as follows:

Hypothesis 1. All else being equal, the higher the proportion of outside directors on the board, the lower the level of tax aggressiveness.

The size of the board can affect the level of tax aggressiveness. Jensen (1993) argues that when the board of directors is small it performs a better controlling function, but when it is large, it is less likely to function effectively as a curb on management, and is thus, easier for the Chief Executive Officer (CEO) to control. Beasley (1996) finds that the possibility of accounting fraud increases with board size. Yermack (1996) similarly shows that small boards are more effective than large boards. It is reasonable to assume that a larger board of directors will increase the possibility of corporate tax aggressiveness. Then the hypothesis 2:

Hypothesis 2. The smaller the size of the board is, the more likely the tax aggressiveness to be reduced.

The combination of the decision functions and control has been interpreted in several ways. Some claim that it improves accounting profitability, as Rechner & Dalton (1991) find higher returns accounting for dual structures, but stock returns are not significantly different. However, other lines of research confirm that the absence of differences in wealth creation between the two types of structure (Baliga *et al.* 1996). Brickley *et al.* (1997) note that the separation between the decision functions and control of directors may also generate new costs to control the new Chairman behavior and cost information. Overall, it is reasonable to assume that the cumulative function control and direction at board should significantly increase the likelihood of aggressive corporate tax. Then the hypothesis 3:

Hypothesis 3. Combining the functions of management and Chairman of the Board of directors helpfully affects the level of tax aggressiveness.

Women play an important role in tax matters. In this context, Kastlunger *et al.* (2010) and Fallan (1999) demonstrate the relevance of feminine values in the treatment of tax matters. For example, although tax optimization is a legal activity that aims to minimize the tax burden companies taking advantage of the legal and tax advantages granted by the State, the interpretations of situations and tax regulations differ depending on the masculine and feminine traits.

In line with the literature on gender differences in risk behavior and tax compliance (Croson & Gneezy 2009; Hasseldine 1999), we assumed that women must have higher levels of tax compliance, while men should show higher levels of aggressive tax. The greater tendency among men to escape the tax was supposed to be related to differences in socialization. In the case of significant differences between the sexes, women were often judged more suitable than men (Lewis *et al.* 2009; Gërkhani 2007). Then the hypothesis 4:

Hypothesis 4. The higher the percentage of women in the board is, the more likely the tax aggressiveness to be reduced.

#### **4. Variables and Models Specification**

Our sample consists of 73 French companies. The study sample selection limits the period 2006-2010. The tax and financial data are collected from the Paris Stock Exchange. The data used in our analysis are taken from the financial statements and annual reports of various companies.

##### *4.1 Study Variables*

We have involved several variables to test the interdependence between tax aggressiveness and characteristics of French board.

#### 4.1.1 Dependent Variable

Our dependent variable is represented by corporate tax aggressiveness. Several measures of tax aggressiveness have been used previously in the extant accounting literature such as cash effective tax rate (Hanlon & Shevlin, 2003), book-tax difference measures (Manzon & Plesko, 2002) and a residual book-tax difference (Desai & Dharmapala, 2006). We employ the Effective Tax Rate (ETR) as a measure of tax aggressiveness to improve the robustness of our results. The dependent variable ETR is defined as follows:

$$ETR = \frac{\text{Total tax expense}}{\text{Pretax income}} \quad (1)$$

This measure reflects aggressive tax planning through permanent book-tax differences. Examples of such tax planning are investments in tax havens with lower foreign tax rates (provided that foreign source earnings are classified as permanently reinvested), investment in tax exempt or tax favored assets, and participation in tax shelters that give rise to losses for tax purposes but not for book purposes (Wilson 2009).

We draw on ETR in this study for two important reasons. Firstly, recent empirical tax research has found that ETR encapsulate tax aggressiveness (Armstrong *et al.* 2012). Secondly, ETRs also denote the proxy measure of tax aggressiveness most frequently used by many academic researchers (Robinson *et al.* 2010; Dyreng *et al.* 2008; Rego 2003).

#### 4.1.2 Independent Variables

It has been shown that certain board structures reduce agency problems, which can improve performance. Specifically, we examine board size (BSIZE) and the percentage of independent directors on the board (INDEP). Independent directors include any non-employee board members as well as any members who are not considered gray (consultants, lawyers, accountants, etc.). Board diversity (DIV) is measured in terms of percentages of women in the board. Diversity enhances the mission assigned to the control board and thereby reduces fat control costs because female directors are in most cases independent. In addition, women are more likely to be used in the various subsidiary committees (audit committee, nomination and remuneration) than men are. Consequently, a better protection of the shareholders interests by strengthening control mechanisms. M'hamid *et al.* (2011) suggest the need to integrate the diversity variable in the study of the attributes of governance boards.

Duality (DUA) is a dichotomous variable that takes 1 when the CEO and Chairman of the Board titles are vested in one individual, otherwise 0. Minnick & Noga (2010) were the first who used this variable in the context of tax planning for U.S. companies. They predicted that CEO does not seem motivated to manage the activities of tax management.

#### 4.1.3 Control Variables

The performance of the company (ROA) is defined as the ratio between operating income and total assets. Companies are interested in tax optimization in order to improve business performance. This variable is used to control the performance and highlight the specific effect of tax optimization (Minnick & Noga 2010; Dyreng *et al.* 2008). The natural log of the book value of total assets measures firm size (FSIZE). The majority of studies that have addressed the relationship between effective tax rates and the size of the companies involved this variable in their analyses (Hanlon & Slemrod 2009; Gupta & Newberry 1997). They confirm the existence of a positive relationship between firm size and effective tax rate. We summarize all our dependent, independent and control variables in Table 1.

Table 2 provides the descriptive statistics of all variables used in our study.

#### 4.2 Models Specification

To examine the association between the characteristics of board of directors and tax aggressiveness, we used a logarithmic model in order to perform an analysis regarding various parameters included in our model. Logarithmic model is one of the transformations useful in data analysis to obtain a packet data that most closely matches the standard form (normal distribution). Therefore, we estimate the following regression model:

$$\begin{aligned} LnETR_{it} = & \alpha_0 + \alpha_1 LnBSIZE_{it} + \alpha_2 LnINDEP_{it} + \alpha_3 LnDIV_{it} + \alpha_4 DUA_{it} + \alpha_5 LnROA_{it} + \alpha_6 LnFSIZE_{it} \\ & + \varepsilon_{it} \end{aligned} \quad (2)$$

Where, *ETR* denote the effective tax rate measure, and *BSIZE*, ..., *FSIZE* are all independent and control variables measures as discussed above.

## 5. Empirical Results

Firstly, we start by presenting the correlation results between independent variables in the regression. Table 3 shows that the multicollinearity is not a problem in the case.

Secondly, we have audited the F-test for the presence or not of individual specific effects. The effect can be fixed or random. If the specific effect is fixed, we conclude that we are in the presence of a fixed effect model. Otherwise, we proceed to estimate a random effects model. At the 1% level, the F-test is statistically significant. We reject null the hypothesis and we conclude that there is a specific effects company. We used also the test specification Hausmann (1978), which allows discriminating the fixed and random effects. P-value is well above the 10% level. Consequently, we have a presence of random effect. Table 4 presents the regression analysis results of our hypothesis.

## 6. Conclusions

This study considers the effect of board of director composition on corporate tax aggressiveness. Based on a choice-based sample of 73 corporations during 2006-2010, our study employs a regression analysis to test the prediction that the diversity and size of board decrease the activity of tax aggressiveness. However, the higher proportion of outside members and duality don't reduce the likelihood of tax aggressiveness. Overall, our study provides unique insights into the association between diversity of board director and tax aggressiveness.

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Table 1. Study Variables

Variables	Abbreviations	Measures used
Effective tax rate	ETR	Total tax expense / Pretax income
Board size	BSIZE	Natural log of the total number of directors
Independent directors	INDEP	% of independent directors on the board
Board diversity	DIV	% of women on the board
Duality	DUA	Dichotomous variable that takes 1 when the CEO and Chairman of the Board titles are vested in one individual, otherwise 0.
Performance	ROA	Operating income / Total assets
Firm size	FSIZE	Natural log of the book value of total assets

Table 2. Descriptive Statistics

Variables	Mean	Minimum	Maximum	Standard Deviation
BSIZE	2.455709	1.098612	3.178054	0.368357
INDEP	0.461172	0	0.888888	0.191370
DIV	0.093245	0	0.769230	0.090341
ETR	0.216332	-4.420269	6.75	0.484855
FSIZE	8.867908	6.060846	12.39634	1.490627
ROA	0.158900	-0.448228	3.975992	0.374829
	<b>Proportions</b>			
	<b>0</b>		<b>1</b>	
DUA	31.23		68.77	

We can note that the ETR from the observed companies is 21.63%. The minimum is around -4.420269 and the maximum is 6.75. This rate is lower than the statutory rate applied which is equal to 33.1/3%. The average effective tax rate of French companies indicates that statutory tax rates displayed by the government do not adequately reflect the nature of payment of taxes on French companies.

Table 3. Correlation Results

	<b>BSIZE</b>	<b>INDEP</b>	<b>DIV</b>	<b>DUA</b>	<b>ROA</b>	<b>FSIZE</b>
<b>BSIZE</b>	1.0000					
<b>INDEP</b>	0.0058	1.0000				
<b>DIV</b>	-0.1434	-0.0277	1.0000			
<b>DUA</b>	-0.0999	-0.0667	-0.0520	1.0000		
<b>ROA</b>	-0.0081	-0.1973	-0.0818	-0.1607	1.0000	
<b>FSIZE</b>	0.5861	0.2117	0.0837	-0.0647	-0.2191	1.0000

The results show that the strongest correlation is 0.5861 and is between firm size and board size. In addition, the tax rate is significantly associated with board size and company performance. Overall, correlations are not high.

Table 4. Regression Analysis Results

	<b>Coefficient</b>	<b>Z</b>	<b>P&gt; z </b>
<b>BSIZE</b>	-1.17459	-2.39	0.017**
<b>INDEP</b>	-0.06640	-0.47	0.636
<b>DIV</b>	0.10324	1.77	0.076*
<b>DUA</b>	-0.08774	-1.59	0.112
<b>ROA</b>	0.27964	5.74	0.000***
<b>FSIZE</b>	1.41859	2.60	0.009***
<b>Intercept</b>	-1.11765	-2.48	0.013**
<b>R<sup>2</sup></b>	0.1513		
* Significance at the 10% level; ** Significance at the 5% level; *** Significance at the 1% level			

As the R square is only near 0.1513, this indicates that 15.13% of the variability of the ETR can be explained by the independent variables. As seen from Table 4, among the independent variables investigated, the lowest among all the p-value is lied on the ROA; it gets around p value = 0.000. It is the most significant variable between two control variables. A similar analysis can be seen also for the regression coefficient FSIZE with p-value equal to 0.009. Consequently, these two control variables are significantly associated with tax aggressiveness. The diversity variable (DIV) is significant at the 10% level. It is indicating that among the corporate governance components used, the diversity is most likely to have a relationship with the ETR. The positive sign of the coefficient for this variable implies that the increase in the percentage of women who sit on the board decreases the activity of tax aggressiveness, confirming our H4 hypothesis. The variable board size (BSIZE) is significant at the 5% level, supporting thus our H2 hypothesis. The negative sign of the coefficient for this variable implies that the decrease of board size decreases the activity of tax aggressiveness. This result converges with the work of Yermack (1996), who shows that small boards are more effective than large boards. Finally, the regression coefficients for INDEP and DUA are not significant with p-value equal to 0.636 and 0.112, respectively. Our hypothesis H1 and H3 are not supported in this case. The result of outside directors diverge with the work reported by Lanis & Richardson (2011) which show that the inclusion of a higher proportion of outside members on the board of directors reduces the likelihood of tax aggressiveness.



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