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Corporate Governance and Firm Performance: Results from Greek Firms

Toudas S. Kanellos¹ and Karathanassis George²

Abstract

In this paper, we construct a Governance Index for a sample of Greek companies quoted on the Athens Stock Exchange. We then classify firms, using each firm governance index, into three governance portfolios. Furthermore, the Fama and French model, extended to include a momentum variable, is tested for each of the three governance portfolios. Our findings suggest that most of the firms in our sample are semi-democracies followed by democracies and dictatorships respectively. Good governance appears to be of value in as much as we found higher Tobin's q ratios for democracies followed by semi-democracies and dictatorships. We, also, report significant negative abnormal returns for shareholder-friendly and manager-friendly firms. The findings of significant negative abnormal returns are consistent with inefficient capital markets. At a practitioner level, the results imply that firms should practice vigorously good governance, as it is a policy of value to shareholders and possibly to other stakeholders.

KEYWORDS: Corporate Governance, Firm Performance, Democratic and Dictatorship Firms

JEL codes: G30, G14

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INTRODUCTION

The notion that corporate governance affects positively corporate performance is based on the fact that management in shareholder-friendly firms, in making corporate decisions, do what shareholders themselves would have done, had they been in charge of corporate decisions. They would have maximized the market value of the firm.

Corporate government provisions in management-friendly firms, that protect management from dismissal, may not be beneficial to shareholders. Such arrangements can increase agency costs and, thus, lead to a reduction in shareholder wealth (Manne 1965) and Easterbrook and Fischel (1981).

It is possible, however, as argued by some, that protecting management from removal may have beneficial effects upon shareholder wealth. Arrangements to protect management from appraisal may lead incumbents to invest in long-term projects that increase the value of the firm (Stein 1988 and Bebchuk and Lars 1993). Furthermore, such arrangements may increase the bargaining power of shareholders and obtain large premia in acquisitions.

Thus, firms with some mild governance provisions that protect management from dismissal, but do not permit them to extract large private benefits may be beneficial to shareholders. These firms are neither shareholder friendly nor manager friendly, but fall in between the above two extreme categories.

Much has been written on the subject of corporate governance and agency costs. There are conflicting views on the issue of the relationship between market value and governance. Nevertheless, National Government and Capital Market authorities in many

parts of the world, perturbed by recent grave corporate financial scandals, have taken drastic steps in reforming corporate governance rules.

The issue of the relationship between firm market value and governance provisions is, primarily, an empirical one. Most of the empirical work on the subject has been undertaken in the United States of America with mixed results. Theoretical constructs are of value, if they can explain real world behaviour. This necessitates repeated tests with data from developed and developing countries.

The present paper has several objectives. Firstly, it constructs a corporate governance index based on the answers to a questionnaire dispatched to the executives of Greek firms, the shares of which are quoted on the Athens Stock Exchange. Secondly, it explores the issue whether the set of government provisions used by firms is of value to shareholders. Thirdly, it investigates the extent to which changes in empirical abnormal returns can be explained by changes in the factors contained in the four-factor model (Fama and French 1993 and Carhart 1997). It should be mentioned that the effects of governance on the market value of firms and equity abnormal returns has not hitherto, been studied for the Greek Capital Market.

The remainder of the paper is organized as follows. Section II reviews some of the relevant existing work on the subject, section III is concerned with the sources of data and research methodology while section IV presents the empirical results. Finally, section V concludes the paper.

Review of Related Research

In this section we will briefly review only a number of relevant papers as the literature, both theoretical and empirical, is vast and has already been reviewed elsewhere (Shleifer and Vishny 1997, John and Senbet 1998, Hermalin and Weisbach 2003, Gompers et.al. 2003 and Karathanassis and Drakos 2004).

We start off with the influential paper presented by Gompers, Ishii and Metrick (GIM) (2003). GIM constructed a summary index of corporate governance, which included all provisions reported by the Institutional Investors Research Center (IIRC). GIM coined the terms democracies and dictatorships. In the first category, they included firms that are shareholder-friendly, while the second category comprises firms that are manager-friendly. They found that democracies have higher Tobin's q ratios and better operating performance than dictatorships. Furthermore, they reported that democracies earned higher positive abnormal returns than dictatorships. Bebchuk, Cohen and Ferrell (2004) used the Fama and French (1993) three-factor model extended, to include a momentum factor (Carhart 1997). They modified GIM's index concentrating on only six government provisions. They then aggregated these six provisions into a single explanatory index. They also found that there is a negative relationship between the level of the governance index and the market value of the firm. Finally, they found a negative relationship between the level of the governance index and abnormal returns. These results implied that the capital market was inefficient over their sample period.

Brown and Caylor (2004) extended GIM's work, by creating a corporate governance index using data provided by 'Institutional Shareholder Services'. Their

Index 'Gov-Score' is a composite measure of 51 governance provisions covering eight corporate categories. They then related Gov-Score to operating performance, valuation and dividend payouts for 2327 firms and found that shareholder-friendly firms are relatively more profitable, more valuable and with liberal dividend policies. Their results implied that markets were inefficient. This implication was not shared by Johnson, Moorman and Sorescu (2005), who introduced a calendar-time control firm approach to rectify possible misspecifications in the three-factor Fama and French (1993) methodology. Their results showed that neither shareholder-friendly firms nor manager-friendly firms earned significant abnormal returns. These findings imply that the market impounds in the prices of stocks quickly and accurately firms' government choices. Their main implication was that markets were efficient.

Data and Research Methodology

Our sample consists of 314 firms quoted on the Athens Stock Exchange. The firms were observed over the years 2004 and 2005. It should be noted that in Greece compliance to governance provisions has been effective since the fiscal year 2004. In order to determine the quality of government practices of the firms in our sample we formulated a number of questions based on a number of provisions promulgated by the European and U.S.A. authorities. These are similar to those cited in the article by Brown and Caylor (2004). The questionnaire was dispatched via electronic mail to 314 firms and completed by firm executives. Of the 314 questionnaires, 262 (83.4%) were

completed and returned to us for analysis, which is a very high response for this kind of research. We then coded the 55 binary questions, assigning one point for every practice (provision) that restricts shareholder rights and zero points for every provision that increases shareholder power. As a rule, similar indexes were constructed by earlier published works (some of which were reviewed earlier), either by using data supplied by Institutional Research Centers or by studying relevant supplements to published accounts.

In countries where such institutions do not exist, one could have studied firm annual accounts (Tsipouri and Xanthakis 2004, Tsipouri, Spanos and Xanthakis 2005, Aksu, Mine and Kosedag 2006, Florou and Galarniotis 2007). Such a study could reveal each firm's compliance with relevant governance practices. It should, however, be stressed that even though compliance with governance rules may be compulsory, it is possible that management may exercise discretion regarding the extent to which some of the governance provisions are being practiced. It follows that a study of firm accounts alone may not reveal fully the qualitative application of mandatory governance rules. Our approach to constructing a governance index is more analytical and direct in as much as it involves appraisal of governance provisions at firm level through a number of relevant questions put to firm executives. It is, thus, better placed to explain the extent to which firms practice governance rules. Our approach is more direct, as we question those firm executives who are responsible for the qualitative application of governance rules for each firm. We may, therefore, expect reliable classification of firms into categories indicating whether a firm is a) shareholder-friendly (democracies), b) manager-friendly (dictatorships) or c) semi-democracy. Of the 55 questions only six provisions were taken into consideration following the theoretical arguments of Bebchuk et.al. (2004) and

Brown and Caylor (2004). These provisions include those factors that may be said more effectively to measure the degree of qualitative application of corporate governance. These were: staggered boards, limits to shareholder amendments of the bylaws, supermajority, requirements for charter amendments, poison pills and golden parachute arrangements. Along these lines, we established the total score of the answers to the six questions and constructed for each firm a score similar to the entrenchment-index created by Bebchuk et.al. (2004). Thus, the scores range from 0 to 6. Firms with total scores equal and/or less than 1 are classified as democracies, firms with a score equal and/or greater than 4 are classified as dictatorships. Firms with a score from 2 to 3 are classified as semi-democracies. On the basis of the above classifications we have three types of portfolios comprising shareholder-friendly (democracies), manager-friendly (dictatorships) and semi-democracy firms.

Our next step is to determine which one of the above three alternative sets of firms dominates the market. In other words, we would like to determine the relationship between governance and firm performance. Firm performance will be represented by Tobin's q. The relevant formula is given below:

$$TQR = \frac{VAL_c + VAL_p + Debt}{TA} \quad (1)$$

Due to the complexities of calculating Tobin's q, as proposed initially by Tobin and Brainard (1968), we used an alternative simplified approach proposed by Chung and Pruitt (1994) and Perfect and Wiles (1994). Specifically, "VALc" is the stock exchange value of common stock at the end of economic year n and "VALp" is the stock exchange value of preferred stock at the end of economic year n. Variable "Debt" represents the

book value of total Liabilities (Short- and Long-term) at the end of economic year n, while variable “TA” represents the book value of total Assets at the end of year n.

We now turn to the issue of market efficiency initially through application of the Fama and French three-factor model. We then extend the Fama and French methodology to include an additional factor that of momentum.

The three-factor model

In this section, we use the methodology advanced by Fama and French (1993). The initial CAPM formulation was substituted by the three-factor model, to account for additional factors, which were supposed to provide additional information in explaining required and/or abnormal rates of return for single shares and portfolios of shares. In the third specification a fourth factor was added to account for an additional factor known as momentum.

We replicate the methodology used in previous studies (Gompers et al., 2003. Bebchuk et al., 2004. Johnson et al., 2005. Cremers and Nair, 2005) and constructed Governance portfolios, in order to examine the existence of abnormal returns on the Athens Stock Exchange for the years 2004, 2005. For each calendar month we calculate the monthly returns for each of the three weighted Governance portfolios (Democracy, Semi-democracy, and Dictatorship portfolios). The portfolios’ construction is achieved using the value-weighted method. We then regress the monthly excess returns using the three-factor model, as shown below:

$$(R_i - R_f)_t = a + \beta_1(R_m - R_f)_t + \beta_2SMB_t + \beta_3HML_t + \varepsilon_t \quad (2)$$

where $(R_i - R_f)_t$ is the abnormal return of the firms of each Governance portfolio. In other words, it is the return per month of each Governance portfolio after the subtraction of the riskless interest rate (R_f) , which was extracted from Government bonds. The variable $(R_m - R_f)_t$ represents the excess return on the market portfolio. (SMB_t) is the difference of returns of value-weighted portfolios of big size minus the returns of value-weighted portfolios of small size. (HML_t) is the difference of returns of value-weighted portfolios of high book-to-market minus the returns of value-weighted portfolios of low book-to-market. The intercept “a” is interpreted as the mean monthly abnormal return of each Governance portfolio. If the intercept “a” is statistically significant, then excess returns do exist (Gompers et al., 2003. Bebchuk et al., 2004. Johnson et al., 2005).

The above model was tested using Ordinary Least Squares.

The Four-Factor Model

Carhart (1997) in an effort to evaluate fund managers, extended the Fama and French model and added an additional factor that of Momentum. We use the additional four factor model in order to determine the extent to which this additional variable improves the explanatory power of the model. The four-factor model may be written as:

$$(R_i - R_f)_t = a + \beta_1(R_m - R_f)_t + \beta_2SMB_t + \beta_3HML_t + \beta_4Momentum_t + \varepsilon_t \quad (3)$$

where Momentum is the difference of returns of portfolios with high returns in the past minus the returns of portfolios with small returns in the past. The momentum variable has duration of twelve months and is based on the methodology advanced by Otten and Bams (2002). All the data that concern stock returns, Government bonds as well as the General

Index of the Athens Stock Exchange have been collected from the Hellenic Capital Market Commission and the “DataStream” database.

Empirical Results and Discussion

Table 1.A shows the number of firms belonging to each broad category of governance practices explained earlier.

[Table 1.A. enters here]

As can be seen from this table, semi-democracies dominate the Greek Capital Market, followed by democracies and dictatorships. An interesting result is that nearly 60% of firms are semi-democracies. This is possibly due to the fact that most firms, in Greece, are family-owned with benevolent owner-managing directors, who grant outside shareholders a sense of involvement in the firm’s corporate affairs. Institutional Investors who hold shares in such firms have aligned themselves with management interests (which coincide with the interest of the founders-owners of the firm). The average outside shareholder in such firms passively accept managerial decisions, which are also accepted by institutional investors given their strategic alignment motives (Pound 1988). Under this regime, we should expect the management of semi-democracy firms to pay lip-service to good governance, while the management of democracy firms may be quite liberal towards the good governance practices. On a priori grounds, we should expect

democracy firms to perform better than semi-democracy firms, which in turn may perform better than dictatorships.

To construct Tobin's q, which is unique for each company and year, we used published yearly financial statements, as well as the stock prices on the last day of negotiation for the years 2004 and 2005.

In order to find what kind of relation exists between Tobin's q and Corporate Governance, we use the one-way analysis of variance (ONE WAY ANOVA) for each year.

Tables 1.B. and 1.C. show the results from the analysis of variance (ONE WAY ANOVA). We observe that there exists a positive and statistically significant relationship between firm value, as is calculated by Tobin's q and the level of Corporate Governance for both years (2004, 2005). Specifically, and with regard to 2004, it appears that Democracies have a much higher Tobin's q (mean = 1.504) compared to Semi-democracy firms (mean = 0.778) and Dictatorships (mean = 0.575). This difference in the means of the three Governance portfolios was found to be statistically significant ($F = 34.9$, $df = 2$, $p\text{-value} < 0.01$). A similar tendency is also observed for the year 2005. The higher Tobin's qs for Democracies, has a mean equal to 1.54, followed by Semi-democracies (mean = 0.906) and Dictatorships (mean = 0.67). For the year 2005, this difference in means was found to be statistically significant ($F = 14.772$, $df = 2$, $p\text{-value} < 0.01$).

[Table 1.B enters here]

[Table 1.C enters here]

From tables 1.B. and 1.C. we conclude that our a priori expectations regarding the relationship of governance practices and performance, represented by Tobin's q , were realized. It would seem that the market recognizes that good governance practices are valuable and are incorporated into the share prices of firms with strong shareholder rights. These results are similar to those reported elsewhere as was mentioned earlier. The implications of our results are obvious for Government and Capital Market Authorities, as well as for the managers of firms and shareholders. It would not be appropriate at this juncture to elaborate and expand on the above implications, as our data cover only two years. Lack of adequate data did not permit us to conduct elaborate techniques, which might have led to robust results.

We now turn to the issue of market efficiency through use of the Fama and French (1993) and Carhart (1997) methodologies. Specifically, the four-factor model will be tested with two different portfolios of firms. One portfolio, as explained earlier, consists of shareholder friendly firms and the second comprises manager-friendly firms. The results are shown in Tables 2 and 3.

The explanatory power of the three-factor model is very good. The value of the intercept is statistically significant for democracies and dictatorships. For the portfolio comprising shareholder-friendly firms, the variables HML and SMB do not add any information in explaining the dependent variable. For semi-democracy the value of 'a' is statistically insignificant, while the independent variables $(R_m - R_f)$ and HML add to the explanatory power of the model. In the third portfolio, that of manager-friendly firms all independent variables are statistically significant with lower explanatory power than the first two portfolios.

The value of the intercept for the democracy portfolio implies an annual negative abnormal return equal to 20.18% while for the dictatorship portfolio it is equal to 37.06%. For the portfolio with semi-democracy firms it is also negative but not statistically significant. There is, thus, some evidence that stock returns of the portfolio with strong power for managers were affected more adversely than the other two categories of portfolios.

The addition of the fourth leading factor, that of momentum, does not add to the explanatory power of the model as shown in Table 3.

Overall, our results appear to imply that investors recognize that governance is of value, which is incorporated into the market value of firms. This follows from the results of table 1.B., where it is shown that the mean q value for democracies is larger than the mean value of the other two portfolios (dictatorships and semi-democracies).

Our findings of significant negative abnormal returns for two of the three portfolios seem to imply that the market is inefficient. This might, *prima facie*, appear to be inconsistent, given the above-mentioned finding of the value of relevance of good governance.

The market may price good/bad governance provisions, but the full adjustment could take a long time to be effected. In some other instances, such as earnings adjustments (Bernard and Thomas 1989) and dividend surprises (Michaely, Thaler and Womack 1995) there has been a long time before the market fully adjusted the event.

Thus, to the extent that the market at the end of the sample period has adjusted fully the effects of the event or has overreacted in either direction, the relationship between excess returns and the independent variables might be zero, negative or positive.

In our case, one could say that the price adjustment has been incomplete resulting thus, in negative risk premia.

[Table 2 enters here]

[Table 3 enters here]

Conclusions and Suggestions for further research

Corporate Governance provisions in Greece have been in effect since 2004. The changes in governance structure effected recently are known to all concerned as evidenced by several reports in the media. It is probably too early to expect the market fully to recognize and price the effects of governance provisions on firm performance and whether it is a factor influencing stock returns. Our results have shown that most of the firms quoted on the Athens Stock Exchange are Semi-democratic. One could be tempted to say that in these firms power is evenly shared by shareholders and managers. As regards the effect of governance and firm performance there appears to be a stronger association between firm performance and the application of provisions friendly to shareholders.

Even though the present paper does not constitute a direct approach to the issue of market efficiency, we along with other extant papers, attempted to shed some light on whether over the sample period the market has been efficient. Our benchmark in doing so has been the influential three-factor methodology proposed and tested by Fama and

French nearly fifteen years ago. The explanatory value of the model was very good. The value of the intercept, representing excess return, was negative for the three portfolios examined and statistically significant for the democracy and dictatorship portfolios. Our results imply annual negative abnormal returns of 20.13% and 37.06%, respectively for the democracy and dictatorship portfolios. For the semi-democracy portfolio no such abnormal return exists. One could, tentatively, conclude that the average return for the democracy portfolio was adversely affected, but not as severely as that of the dictatorship portfolio. Whether or not this is a direct consequence of the value relevance of the application of good governance rules is a moot issue. This could imply use of an inefficient proxy for the true market portfolio (Roll and Ross 1994 and Berk 1995). There is some evidence, from our work and from the work of others, that manager-friendly firms were accompanied by poor performance both in terms of firm value and stock returns. If the results were affected by unobservable firm and time characteristics then a different methodology is called for. One should or instance use panel data analysis, where those unobservable firm and time unobservable effects could be taken into account indirectly. To achieve this, one would need more temporal data, which are not as yet available.

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Tables

Table 1.A. Descriptive Statistics for the Distribution of Sample Firms into the Three Governance Portfolios.

Portfolios	Frequencies	Percent
Democracies	64	24.4%
Semi-democracies	155	59.2%
Dictatorships	43	16.4%
TOTAL	262	100%

Table 1.B. Means and Standard Deviation of Tobin's Q for Each Governance Portfolio and Sample Year.

	Year 2004		Year 2005	
	Mean	Standard deviation	Mean	Standard deviation
Democracies	1.505	0.132	1.540	1.412
Semi-democracies	0.778	0.035	0.907	0.654
Dictatorships	0.576	0.081	0.671	0.746

Table 1.C. Analysis of Variance of Tobin's Q ratio

Year 2004		Year 2005	
F-Statistic	p-value	F-Statistic	p-value
14.772	< 0.001	34.902	< 0.001

Table 2. Regression Analysis of the Three-Factor Model.

Governance Portfolios	Intercept “a”	RMRF	HML	SMB	Adj.R²	F-Prob.
DEMOCRACIES	-1.6776** (-3.986)	0.8586** (10.785)	0.0235 (0.376)	0.0246 (0.2383)	85.36%	<0.001
SEMI-DEMOCRACIES	-0.8905 (-1.692)	0.9201** (9.243)	0.1747* (2.235)	-0.0314 (-0.244)	83.72%	<0.001
DICTATORSHIPS	-3.0880** (-3.460)	0.6744** (3.995)	0.2767* (2.088)	0.4784* (2.188)	56.67%	<0.001

(*) (**) Significant at the 5% and 1% level respectively.

Table 3. Regression Analysis of Four-Factor Model.

Governance Portfolios	Intercept “a”	RMRF	HML	SMB	Momentum	Adj. R²	F-Prob.
DEMOCRACIES	-2.0493* (-2.358)	0.8728** (10.128)	0.0289 (0.447)	0.0218 (0.207)	0.0189 (0.492)	84,78%	<0,001
SEMI-DEMOCRACIES	0.2680 (0.255)	0.8757** (8.410)	0.1578 (2.021)	-0.0228 (-0.179)	-0.0589 (-1.269)	84,21%	<0,001
DICTATORSHIPS	-4.9090* (-2.741)	0.7442** (4.190)	0.3031* (2.275)	0.4648* (2.142)	0.0926 (1.169)	57,45%	<0,001

(*) (**) Significant at the 5% and 1% level respectively.