European Research Studies,
Volume XVII, Issue (2), 2014 *pp. 58-80*

Corporate Governance and its Effect on Firm Value and Stock Returns of Listed Companies on the Athens Stock Exchange

Kanellos Toudas[1], Athanasios Bellas[2]

Abstract:
Recent researches have worked on the relationship between Corporate Governance and expected rates on return as well as historical returns. Firstly, we construct an Index of Corporate Governance (CGQL) that measures the quality implementation of Corporate Governance of the enlisted firms on the Athens Stock Exchange distinguishing the firms into Democracies and Dictatorships. An investment strategy that buys Democracies and shorts Dictatorships earns abnormal returns of around 18% annually during the sample period. In this paper we investigate if Corporate Governance matters in investors' decisions. We try to observe if Corporate Governance is a proxy for firm valuation, a factor of creating and altering abnormal returns, or a risk factor, which can be a "substitute" for market risk (beta), using uni- and multi-variate analyses. The conclusions call into question the utility of Corporate Governance upon firm attractiveness.

Key Words:
Corporate Governance, Asset Prices, Buy-and-hold Abnormal Returns, Beta, Firm Value

[1] *Department of Business Administration, University of Patras, Greece, e-mail: a.toudas@cmc.gov.gr*
[2] *Department of Business Administration, University of Patras, Greece, email: bellas@upatras.gr*

1. Introduction

The term Corporate Governance was barely presented before the decade of 90's, although unclassified and non-scientifically proved evidence exist since the date of Adam Smith. Unfortunately, the usage of Corporate Governance did not follow the rapid research of the concept of Corporate Governance. It can be characterized as a system of principles, which are concerned about the management and the administration of organizations. Through Corporate Governance organizations can be more efficiently governing, transparent, and can control the actions as well as the proceedings of managers.

However, there is not a convergence of thoughts between various researchers as far as the exact interpretation of this concept. Keasey and Wright (1993) think Corporate Governance as "the system of principles that includes the structures, the approached, the values, and the systems, which contribute to the successful management of organizations". Keasey, Thompson and Wright (1997) consider that Corporate Governance contains the wide system of formal and informal connections that are related with the organization as well as their consequences for the society. Another more general approach is that of Mayer (1988). According to the researcher, "Corporate Governance is concerned about the ways through which the interests of managers and investors can be reconciled in order organizations to operate in favor of investors".

Many facts and conditions have driven to an increased demand for good Corporate Governance. The springs of this demand were various negative acts, which hit the business world. Examples of these acts are: creative accounting, managers who service only their own interests and go against investors' interests, weakness of auditors to control and report companies efficiently (for example, Enron scandal), enormous compensations for managers that in some cases threatened the company's performance, policies of some investors for easy money etc. The representative examples of organizations' collapses give reasons to strongly believe that firm value is not exclusively depended on profitability ratios or/and growth prospects, but also on the quality of the control mechanisms, which ensure that organizations are well-managed as well as investors' wealth is increased. Finally, this situation led to the presentation and establishment of management and administration principles named Corporate Governance.

Tightened rules and regulations and the adoption of the codes (Cadbury Report, Greenbury Report) are the result which derives from the fact that better Corporate Governance will deliver higher shareholder value. In favor of this aspect, McKinsey and Company (2000) found that institutional investors are willing to pay significant premiums for companies that are well governed and that the valuation of a firm depends not only on financial issues but also on Corporate Governance. Moreover,

Drobetz, Schillhofer and Zimmermann (2004) have shown that investors in Germany are willing to pay a 20.2% premium for a company with high quality of Corporate Governance compared to another identical company but with a poor quality of Corporate Governance. The reason why investors are willing to pay this premium is the fact that the expected rate of return on equity is reduced as well as firm value is increased. Under these proportions and acceptances, can Corporate Governance change the expected rates of return across companies as well as create perceivable value for shareholders?

Corporate Governance tries to clarify the rights and the obligations of every single individual or company that are involved in the organization's governance. Zingales (1998) believes that there is an agency relationship between principals and agents. The principle-agent problem is the generative cause of the existence of Corporate Governance. While the traditional Capital Asset Pricing Model (henceforth CAPM) predicts that expected returns on equity depend exclusively on the size of covariance risk and not on Corporate Governance, the level of agency costs nowadays varies among different governance systems. These agency costs make Corporate Governance to be important for explaining the cross-section of expected returns of assets (Lombardo and Pagano, 2002).

Under these assumptions, the more qualitative the implementation of Corporate Governance is, the less rate of return is required for investors in order to monitor managers and the less is the cost of capital (Lombardo and Pagano, 2000). Only if we approach Corporate Governance with various models can we reveal the relation between the quality level of Corporate Governance implementation and various expressions and approximations of expected returns. Actually, we conclude that Corporate Governance does not contribute to the creation of excess returns nor is it a factor that contributes to their alteration. Also, Corporate Governance is not a risk factor that investors of Athens Stock Exchange (henceforth ASE) take into deep consideration.

It is noticeable the fact that governance codes are not compulsory regulations for any kind of company in Greece as it is in Germany with the "German Corporate Governance Code" (Drobetz et al., 2004). Thus, Corporate Governance is not viewed as an obligation but rather as a chance for changing.

The remainder is as follows. Section 2 cites the model through which we will test Corporate Governance as a risk factor. Section 3 contains the construction of the Corporate Governance Quality Level (CGQL) and variance analyses between CGQL and Financial Measures plus Valuation Ratios. Section 4 explores the factors, which create as well as shift returns. Section 5 presents the relationship between CGQL and expected return on equity. Section 6 concludes.

2. Corporate Governance, Historical Returns, Financial Measures, Valuation Rations, and Risk: Modelling the Relations

At this point, we are confined in the creation of some basic assumptions, which are going to be tested at a posterior section. Firstly, quality level of Corporate Governance must be a measurable variable. We develop the control variable named "Corporate Governance Quality Level" (CGQL) as an appropriate measure-proxy of quality implementation of Corporate Governance for every sample firm. This will help us in measuring the relation between Corporate Governance and the expected rate of return on equity. The quantification of the CGQL, which is a quality variable, is presented in the next section.

In a first step, we try to discover any relationship between Corporate Governance and firm value as well as correlation with historical returns. Following partially previous researches (La Porta, Lopez-de-Silanes, Shleifer and Vishny, 2002; Black, Jang and Kim, 2003; Drobetz et al., 2004; Thalassinos and Zampeta, 2012; Havlíček, Břečková and Zampeta, 2013; Břečková and Havlíček, 2013), we relate CGQL with firm value as it is measured by the book-to-market ratio and market capitalization in a univariate analysis. Our hypothesis is that we will be in line with the results of the majority of researchers and find a significant relationship. However, while some studies apply the technique of the two-stage least square regression (Drobetz et al., 2004), we are going to seek whether good quality of Corporate Governance causes increased returns and firm value using the Ordinary Least Squares Method (O.L.S.).

In a second step, our aim is to estimate whether expected returns are explained (at least) merely by the coefficient of RMRF (variable of the three-factor model of Fama and French (1993)) or/and they are related with another factor too, named "governance risk".

To start with, bear in mind that CAPM implies a linear relationship between expected returns and market betas. Beta is regarded as the factor, which completely explains the cross-section of expected returns. Following the rationale of Fama and MacBeth (1973) Lombardo (2000), Lombardo and Pagano (2000), as well as Drobetz *et al.* (2004) we relate expected returns not only with betas but also with an additional risk measure, which is the quality level of Corporate Governance. Using this method, we are able to confirm or to contradict the hypothesis that not only beta – that is the quotient with covariance for numerator and variance of the returns of the market for denominator – but also CGQL are factors, which completely describe the cross-sectional variation in expected returns. CGQL is the factor with elements corresponding to the "Corporate Governance Quality Level". In addition to the above, the equation that will reveal if not only market betas but also the quality of firms' Corporate Governance performs in the mutation of expected returns is:

$$\bar{r}_{iT} = \gamma_0 + \gamma_1 \beta_i + \gamma_2 CGQL_i + \varepsilon \quad (1)$$

Where:

Dependent variable $\bar{r}_{iT}$ depicts the geometric mean of historical returns over the sample period (T) from January 1, 2004 to January 1, 2006 for firm i.

Independent variable β_i denotes the beta of every firm i.

γ_1 is the coefficient of CAPM beta.

Coefficient γ_2 can be regarded as the reward for risk related to the firm's quality of Corporate Governance.

γ_0 is the intercept of the equation.

ε is the residual.

The acceptance of the null hypothesis is that $\gamma_0 = 0$, $\gamma_1 > 0$, and $\gamma_2 = 0$. In other words, Corporate Governance of every single firm does not have any explanatory power for the explanation of the expected returns' fluctuation. The execution of regression model (1) as well as the conclusions, which derive from its analysis, can be found in section 5.

3. Data Mining, Definition of Variables and Univariate Analysis

3.1. Construction of the Corporate Governance Quality Level (CGQL)

In order to succeed in our goals, we must define the set of governance proxies. The sample consists of firms which are listed on the ASE for the sample period from January 1, 2004 to January 1, 2006. All data are gathered from Hellenic Capital Market Commission, DataStream (as far as returns are concerned) as well as from the official financial statements of sample firms.

Many researchers have already worked on the selection of these proxies. Gompers, Ishii and Metrick (2003) adopt 24 factors (or International Responsibility Research Center/IRRC provisions), which are comprised into four categories, constructing their "G-Index". Brown and Caylor (2004) take into account 51 provisions, divided into eight categories, using Corporate Governance data from Institutional Shareholder Services/I.S.S. While Gompers et al. (2003) constructed the G-Index, Brown and Caylor (2004) created a summary index called "Gov-Score". Generally, every similar approach follows the 24 provisions of Gompers et al. (2003). It is not surprising that plenty of studies have partly or totally used the G-Index testifying the negative effects of Corporate Governance provisions (Fahlenbrach, 2003; Klock, Mansi and Maxwell, 2003; Cremers, Nair and Wei, 2004; Villalonga and Amit, 2006; Yermack, 2006).

Of course, there is no reason to expect that all the 24 provisions are equally responsible neither for the variation of every firm's Corporate Governance quality nor for the stock returns (Bebchuk and Cohen, 2004). Bebchuk, Cohen and Ferrell (2004) point out that only six are the provisions that actually are important in order to measure the quality level of Corporate Governance. Their index is called Entrenchment-Index. So, while Gompers et al. (2003) have used the G-Index with the 24 provisions, Bebchuk and Cohen (2004), Bebchuk et al. (2004) as well as Johnson, Moorman and Sorescu (2005) have used the Entrenchment-Index with the six provisions. In total, we follow Bebchuk et al. (2004) and gather six governance proxies divided into two categories: the "constitutional" provisions and the "takeover readiness" provisions. To be more specific, the first category ("constitutional" provisions) embraces four proxies: Staggered boards, Bylaws, Charter, and Supermajority. The second category ("takeover readiness" provisions) includes two governance proxies: Poison pills and Golden parachutes. All proxies are not legal required based on Greek laws but they are rather recommendations to managers.

All six proxies of Corporate Governance were embodied in a questionnaire that was sent out to all firms of the ASE. The General Index of the ASE enumerates five market segments: FTSE/XA 140, FTSE/XA SMALLCAP 80, FTSE/XA MID 40, FTSE/XA 20, and FTSE/XA INTERNATIONAL. A company can belong to more than one FTSE (market segment). As it is denoted in Table 1, although the volume of individual firms is 253, we count a company that belongs to several FTSEs respective times. So, our relevant population increases to 350. The number of 304 firms shows the double or triple enlistments of the 253 listed on the ASE firms. Finally, our sample is the 253 individual firms enlisted on the ASE. We notice that some firms are enlisted to more than one FTSE. Our sample consists of 253 individual firms or else of 350 firms, if we count some of them more than one time due to double or triple enlistments.

Table 1: Number of firms that responded to the questionnaire per FTSE (market segment)

	FTSE/XA 140	FTSE/XA SMALLCAP 80	FTSE/XA MID 40	FTSE/XA 20	FTSE/XA INTERNATIONAL	All
Responses	128	67	34	13	62	304
Volume of firms per market segment	140	80	40	20	70	350
Percentage of responses	91.4%	83.8%	85.0%	65%	88.6%	86.9%

The questionnaire was sent out to target firms in July 2006 and the last response was given to us at the end of September 2006. One restriction is the sample companies to be listed on the ASE at the time period of our research. Although institutional investors are less likely to invest in small cap firms, we cannot ignore small firms based on their market capitalization (size), because these investors put capital on firms, whose number is insufficient for any consideration let alone our analysis. We remind that quality of the implementation of Corporate Governance acts as a proxy for the monitoring costs of all investors. As Table 1 shows, the response of every market segment as well as the total response is more than 80% with the exception of firms of FTSE/XA 20 (65%), ignoring the multiple enlistments.

In order to measure the level of every firm's Corporate Governance, we replicate the method of Bebchuk *et al.* (2004) constructing an index named Corporate Governance Quality Level (CGQL) with six scales or grades. We make the hypothesis that CGQL is a variable, which can measure risk. Every question of the set is a provision or else a limitation to shareholders rights. If a firm has this provision or limitation, one point is added to its total score. If the company does not have this provision, no point is added. As a rule, the more provisions a firm has, the higher score (CGQL) it gets. The relation is disproportional. So, the interpretation is straightforward and allows manageable explanations: if a company has an improved level of Corporate Governance, then a relatively small score will get in a seven-scale answering range[2]. The minimum score (zero) points out a firm with an exemplary quality of Corporate Governance, while the maximum score (six) indicates the opposite (total limitation of shareholder rights in favor of managers, directors, or/and members of Board of Directors). The CGQL consists of various variables and can act as a proxy for monitoring and other various costs. The less CGQL is, the less these costs. The hypothesis is that the provisions, which constitute CGQL for every single firm, can play the role of a proxy for the risk portion beyond covariance risk with a market index. As a result, we will try to transform differences of CGQL into perceived risk for shareholders.

As we said before, we use the six provisions to construct CGQL. In order to place it as variable, we quantify CGQL using the method of PC Analysis for every single question. We place one component and we extract a component score that is referred to the level of Corporate Governance quality. Firstly, we make a KMO Sphericity test for every Governance portfolio (Democracies and Dictatorships) in order to see if the variables (provisions) are correlated (Table 2a). From this Table we figure that the variables are correlated. So, we can proceed to the PC Analysis. According to the KMO test, the null hypothesis is the covariance matrix of variables is proportional to the identity matrix. PC Analysis converts the correlated variables to uncorrelated. In Table 2b we mention the structure of factor loadings as well as its

[2] CGQL fluctuates from zero to six.

differentiation according to the questions for the Governance portfolios. As far as Democracy portfolio is concerned, question number 1 (Staggered board) affects decisively in the formulation of the component. As far as Dictatorship portfolio is concerned, again question number 1 (Staggered board) affects decisively in the formulation of the component. From the KMO Sphericity test as far as Democracies and Dictatorships are concerned, we notice that variables are correlated. So, we can proceed to the PC Analysis.

Table 2a: KMO and Bartlett's Test for democracy portfolio

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.360
Bartlett's Test of Sphericity	**Approx. Chi-Square**	86.836
	df	15
	Sig.	0.000
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.341
Bartlett's Test of Sphericity	**Approx. Chi-Square**	80.233
	df	15
	Sig.	0.000

Table 2b: Factor loading for Democracies and Dictatorships

Component Matrix for the democracy portfolio

	Component
	1
Democracy_01	-0.755
Democracy_02	-0.632
Democracy_03	0.396
Democracy_04	0.437
Democracy_05	0.351
Democracy_06	0.426

Note: Extraction Method: Principal Component Analysis. a1 components extracted

Component Matrix for the dictatorship portfolio

	Component
	1
Dictatorship_01	0.735
Dictatorship_02	-0.104
Dictatorship_03	0.348
Dictatorship_04	-0.573
Dictatorship_05	0.329
Dictatorship_06	-0.693

Note: Extraction Method: Principal Component Analysis. a1 components extracted.

As argued above, every calculation is made over 24 running months (from January 1, 2004 to January 1, 2006). As there is not any database available in Greece for the level of Corporate Governance of firms, we assume that investors' expectations, as far as monitoring and various costs are concerned, are based on an average value of Corporate Governance over the sample period, which CGQL fully represents. We think that this simplification is neither a bias nor a prejudice. Besides, issues of Corporate Governance have received attention only recently in Greece as well as this attention has not actually changed during our sample period.

To measure the significance of the correlation between the CGQL and the expected rate of return on equity for the listed companies on the ASE, we should set a proxy for this return. We rely on two different financial measures as well as on a basic valuation ratio: a) historical stock returns (HSR), b) market capitalization (MAC), and c) book-to-market ratio (BTM)[3]. To measure the relationship of CGQL and expected rate of return, we insert these variables into a univariate analysis. Every single measure as well as its meaning is shown in section 3.2.

3.2. An introduction to Univariate Analysis: Correlations of Corporate Governance Quality Level (CGQL) and Financial Measures plus Valuation Ratios

Following Gompers *et al.* (2003) and Johnson *et al.* (2005), we construct two portfolios with extreme values of CGQL. A "Democracy" portfolio consists of all firms, which are fully or almost fully complied with Corporate Governance rules, with $CGQL \leq 2$. Contrary to the above, a "Dictatorship" portfolio is the set of companies with the poorest Corporate Governance quality and with $CGQL \geq 3$.

Tables 3a, 3b, 3c, 3d, and 3e exhibit results from univariate analysis between CGQLs and three control variables, that is HSR, MAC, and BTM (column 1). To be more specific, Tables 3a and 3b show the correlations between CGQL and two of the three control variables (MAC, BTM) as far as Democracies firms are concerned

[3] It is noted that in order to measure BTM, we excluded all negative values as well as all values that exceed 10.

for years 2004 and 2005 respectively. Tables 3c and 3d show the same correlation but for Dictatorships again for years 2004, 2005 respectively. In columns 1 of these Tables, MAC represents the annual market capitalization computed at the 31st of December of each year[4], and BTM represents yearly book-to-market ratios following the methodology of Johnson *et al.* (2005). Furthermore, in columns 2 of Tables 3a, 3b, 3c, 3d, and 3e is exhibited the correlation and the statistic significance of each independent variable (HSR, MAC, and BTM) with CGQL. All values are equally-weighted. No specific Corporate Governance regulation exists for particular market segments of the ASE. So, including all sample firms in our analysis when HSR is calculated does not meet any biases. HSR is the geometric mean of monthly stock returns of our sample period. Table 3e shows the correlation of CGQL with HSR for both Democracies and Dictatorships. T-statistics are reported in parentheses underneath the results of the coefficients.

For all measures of expected rate of return the correlation with CGQL is not statistically significant. As a result no secure conclusion can be drawn for fundamental financial and valuation characteristics of Democracies or for Dictatorships, since these characteristics do not seem to be adopted by firms with specific Corporate Governance quality levels.

In addition, the third and the fourth columns show the means for the variables of the first column as far as Democracies and Dictatorships are concerned respectively. Column 5 gives the means for each variable for all sample firms. In this section, the results point out that there is no tendency for fundamental financial and valuation characteristics to be adopted by firms with specific CGQL. Although these results are important and call into question Corporate Governance and its relation with expected returns, multiple variables need to enter regressions, in order to draw much more credible and robust conclusions.

Table 3a: Summary statistics for CGQL variable and fundamental measures of expected rate of return for the Democracy portfolio in year 2004
(the mean of MAC is in million euros)

		Columns		
1	**2**	**3**	**4**	**5**
Measures (Variables)	**Correlation with CGQL**	**Mean of Democracies' Portfolio**	**Mean of Dictatorships' Portfolio**	**Mean of all sample firms**
MAC	0.01 (0.35)	359	129	253

[4] Due to the serious deficiency of published financial statements, with the exception of the annual, the market capitalization is computed annually and not in a monthly base as the stock returns.

BTM	-0.02 (-0.29)	1.01	1.67	1.32

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

Table 3b: Summary statistics for CGQL variable and fundamental measures of expected rate of return for the Democracy portfolio in year 2005
(the mean of MAC is in million euros)

		Columns		
1	**2**	**3**	**4**	**5**
Measures (Variables)	**Correlation with CGQL**	**Mean of Democracies' Portfolio**	**Mean of Dictatorships' Portfolio**	**Mean of all sample firms**
MAC	0.01 (0.27)	359	129	253
BTM	0.07 (0.50)	1.01	1.67	1.32

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

Table 3c: Summary statistics for CGQL variable and fundamental measures of expected rate of return for the Dictatorship portfolio in year 2004
(the mean of MAC is in million euros)

		Columns		
1	**2**	**3**	**4**	**5**
Measures (Variables)	**Correlation with CGQL**	**Mean of Democracies' Portfolio**	**Mean of Dictatorships' Portfolio**	**Mean of all sample firms**
MAC	0.01 (0.54)	359	129	253
BTM	0.01 (0.03)	1.01	1.67	1.32

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

Table 3d: Summary statistics for CGQL variable and fundamental measures of expected rate of return for the Dictatorship portfolio in year 2005 (the mean of MAC is in million euros)

		Columns		
1	**2**	**3**	**4**	**5**
Measures (Variables)	**Correlation with CGQL**	**Mean of Democracies' Portfolio**	**Mean of Dictatorships' Portfolio**	**Mean of all sample firms**
MAC	0.01 (0.29)	359	129	253
BTM	-0.03 (-0.42)	1.01	1.67	1.32

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

Table 3e: Summary statistics for CGQL variable and HSRs for the Democracy portfolio and the Dictatorship portfolio for the sample period

		Columns		
1	**2**	**3**	**4**	**5**
Measure (Variable)	**Correlation with CGQL**	**Mean of Democracies' Portfolio**	**Mean of Dictatorships' Portfolio**	**Mean of all sample firms**
HSR for Democracy portfolio	4.18 (1.27)	-0.78		-1.05
HSR for Dictatorship portfolio	-3.45 (-1.03)		-1.37	-1.05

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

4. Corporate Governance and Risk Factors

4.1. Governance Portfolios' Returns and the Three-Factor Model

From the results of Tables 3a, 3b, 3c, 3d, and 3e we suspect that no disparate returns exist among listed firms on the ASE owe to their level of Corporate Governance. To begin with, in order to confirm or to exclude alike assumptions, we run the three-factor model of Fama and French (1993) for the sample period (years 2004, 2005) trying to capture any speculative differences between Democracies' and Dictatorships' returns, examining at the same time if the returns of enlisted companies on the ASE are normal or not, as well as the factors – including Corporate Governance – which generate abnormal (if any) returns. A vast amount of empirical research indicates that market risk (beta) by itself[5] is inadequate in explaining the expected returns and that other factors such as market capitalization (size) (Fama and French, 1993), book-to-market ratio (Fama and French, 1993), immediate past stock returns (momentum) (Fama and French, 1993), as well as other measures (Lakonishok, Shleifer and Vishny, 1994) can sufficiently and significantly explain cross-section returns. We examine if the Greek capital market is efficient as well as if any control variable stand for proxies of systematic risk. Our hypothesis is that at least one control variable (size, book-to-market ratio or market risk) causes at least partly the (if any) differences in the stock returns between Democracies and Dictatorships. Using the O.L.S. Method, we compute the following model:

$$\left(R_{DEM} - R_{DICT}\right)_t = a + \beta_1\left(Rm - Rf\right)_t + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t \quad (2)$$

Where:

Dependent variable $\left(R_{DEM} - R_{DICT}\right)_t$ is the difference between the returns of the Democracy portfolio and the Dictatorship portfolio in month t.

[5] The single-index model of Sharpe (1963).

Independent/explanatory variable $R_m - R_f$ shows the difference between market return and the risk-free rate in month t.
Independent/explanatory variable SMB_t (Small Minus Big) indicates the return difference between portfolios with small size and those with large size in month t.
Independent/explanatory variable HML_t (High Minus Low) gives the return difference between portfolios with high book-to-market ratios and those with low book-to-market ratios in month t.
a is the intercept of the equation.
ε_t is the residual.

All returns are value-weighted using market capitalization. This method is preferable, because al value-weighted components contribute to the variance minimisation, particularly when returns' variances are negatively correlated with total market capitalization (Fama and French, 1993). Intercept coefficient (a) controls for abnormal returns of the market on an investment strategy that buys Democracies and sells short Dictatorships. The sample period is extended from January 1, 2004 to January 1, 2006. As far as variables are concerned, $\left(R_{DEM} - R_{DICT}\right)_t$ is the return difference for every month between Democracy portfolio's returns and Dictatorship portfolio's returns. Variable $R_m - R_f$ denotes the monthly difference between the return of the General Index of ASE (R_m) and the return of a risk-free 3-year Greek bond (R_f). Then, we compute SMB_t and HML_t according to Fama and French (1993), Gompers *et al.* (2003) as well as Johnson *et al.* (2005). SMB_t denotes the monthly return difference between a portfolio that constitutes of big size firms and a portfolio which constitutes of small size companies. HML_t constitutes the monthly return difference between a portfolio that constitutes of high book-to-market (BTM) firms and a portfolio which constitutes of low book-to-market (BTM) companies. Median is used for these portfolio separations. Table 4 gives the regression results of the three-factor model of equation (2).

In Table 4, intercept "a" is statistically significant at the 10% level, rejecting the CAPM. This indicates that the ASE is not an efficient market confirming the results of other researches in Greece (Kavussanos and Dockery, 2001). Furthermore, alpha is positive, which indicates that Democracies tend to gain larger abnormal returns than Dictatorships. The regression results show that the coefficient of HML_t enters with a negative sign at the 1% level of significance. Variable SMB_t is not significant. Taken into account the results from Tables 3a, 3b, 3c, and 3d, we

confirm that size in not a factor that characterizes enlisted firms on the ASE with a high quality of Corporate Governance. Surprisingly, market risk (coefficient of $R_m - R_f$) is not able to explain the monthly excess returns of Democracies.

If the independent variables are factors of systematic risk, then the dependent variable $\left(R_{DEM} - R_{DICT}\right)_t$ can be explained by the book-to-market ratio but only partly, because the intercept is not equal to zero. Following Gompers *et al.* (2003), alpha is 1.48 that equals to 148 basis points per month, or to 17.76% yearly. Corporate Governance, as it is measured by CGQL, is not able to create abnormal returns. As a result, other factors (differences in firm value as value is expressed through book-to-market ratios) are responsible for making Greek stock market inefficient. T-statistics are reported in parentheses underneath the results of the coefficients.

Table 4: Results from the three-factor model of Fama and French (1993).

$$\left(R_{DEM} - R_{DICT}\right)_t = a + \beta_1\left(Rm - Rf\right)_t + \beta_2 SMB_t + \beta_3 HML_t + \varepsilon_t$$

Variables and Factor	**Intercept (α)**	**RMRF**	**SMB**	**HML**
Coefficients	1.48* (1.87)	-0.02 (-0.18)	0.07 (0.41)	-0.24*** (-2.88)
R^2	0.35			
Adjus. R^2	0.25			
F-Prob.	0.03			
Durbin-Watson statistic (d)	1.32			

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

4.2. Does Corporate Governance Quality Level (CGQL) determine the volume of the result of the Three-Facto Model (Abnormal Returns) among firms on the ASE?

While we found abnormal returns through the three-factor model of Fama and French (1993), it is essential to use a second model that measures the volume of these returns as well as to try to detect if CGQL acts as a risk proxy for the volume of abnormal returns. Also, in this analysis we make use of a fundamental factor that may determine, at least partly, this range of abnormal returns in favor of Democracies. Our multi-variate analysis continues after controlling for abnormal returns in the ASE. In this subsection we use the procedure of Buy-and-Hold Abnormal Returns (BHARs) to measure the volume of these returns and we will

seek to find a relationship not only with CGQL but also with a valuation ratio named Tobin's Q for every Governance portfolio.

As we mention above, the statistically significant alpha indicates that the control variables of the Fama and French (1993) model cannot be interpreted as the only proxies of risk factors. So, let alone the variables of the three-factor model, they do exist other factors that cause stock returns shifts. As it is already known, firm value can be measured using the Tobin's Q ratio. It is the ratio of a firm's market value via the replacement cost of its assets (Tobin and Brainard, 1968). Tobin's Q ratio is vastly used the last decades as a measure of performance (Thomadakis, 1977; Lindenberg and Ross, 1981; Salinger, 1984; Smirlock, Gilligan and Marshall, 1984; Morck, Shleifer and Vishny, 1989; Lang, Stulz and Walkling, 1989; Servaes, 1991; Hanson and Song, 1996; Gompers et al., 2003; Black et al., 2003). Abnormal returns are created, if a company is valued more than the cost that would have been necessary as a requirement in order to be rebuilt.

In many cases, so as in ours, another approach of Tobin's Q ratio is adopted, due to the fact that the calculation of the preliminary form of this complex ratio bears difficulties. Chung and Pruitt (1994) as well as Perfect and Wiles (1994) developed a form of Tobin's Q named Approximate Tobin's Q. Due to its simplicity and accuracy (only basic and published financial and accounting factors) it is widely used. Actually, Tobin's Q of company i in time period t is the vulgar fraction with nominator the sum of stock market value as well as short- and long-term liabilities, and with denominator the book value of total assets all in time period t. To begin with, we calculate for the sample period monthly BHARs for these two Governance portfolios, following Barber and Lyon (1997) as well as Alexandrou and Sudarsanam (2001). The monthly return of the General Index of the ASE is used as the expected return-as the benchmark (Thalassinos and Politis, 2011). .

Using a linear regression model, we test if Tobin's Q as well as CGQL can cause a shift to abnormal returns. To be more exact, our hypothesis is that firm value, as it is measured by Tobin's Q ratio, indicates another meaningful risk factor for Democracies as well as for Dictatorships, by causing statistically significant changes of stock returns. We compute annually Tobin's Q ratios (TQRs) and BHARs for every firm i. Specifically, to account for and confirm our hypotheses, we estimate the following regression for every sample year (years 2004, 2005) and for every Governance portfolio:

$$BHAR_i = a + \beta_1 TQR_i + \beta_2 CGQL_i + \varepsilon_i \quad (3)$$

Where:

$BHAR_i$ is the Buy-and-Hold Abnormal Return of firm i in year t

TQR_i is the Tobin's Q ratio of firm i in year t

$CGQL_i$ is the Corporate Governance score of firm i in the sample period (years 2004, 2005) as it is measured from the PC Analysis.

Tables 5a and 5b show the results of the regression (3) for the Democracy portfolio and for the years 2004 and 2005 respectively. Tables 6a and 6b report the results for the Dictatorship portfolio for the same sample years. In all cases, the coefficient of TQR_i enter with a positive sign. Particularly, TQR_i is significant at the 1% level with the exception of the Democracy portfolio of year 2004 (significant at the 10% level). $CGQL_i$ overall explanatory power is low. The same low explanatory power exists even if $CGQL_i$ was the only independent variable in regression model (3)[6] both for Democracy and Dictatorship portfolios as well as for all sample sub periods (years 2004, 2005). T-statistics are reported in parentheses underneath the results of the coefficients.

It is shown clearly that Corporate Governance is a factor that neither increases nor decreases abnormal returns. The volume of these returns that characterize the ASE as an inefficient capital market can be explained sufficiently through a financial ratio such as Tobin's Q.

Table 5a: Results from the correlation between BHARs, firm value, and CGQL for the Democracy portfolio of year 2004.

$$BHAR_i = a + \beta_1 TQR_i + \beta_2 CGQL_i + \varepsilon_i$$

Variables and Factors	**Intercept (α)**	**TQR**	**CGQL**
Democracy portfolio	-0.65*** (-14.38)	0.21*** (6.47)	0.05 (1.64)
R^2	0.24		
Adjus.R^2	0.23		
F-Prob.	0.00		
Durbin-Watson statistic (d)	1.93		

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

[6] In a univariate regression without $TQR_{i,t}$ the coefficient of $CGQL_i$ remained insignificant.

Table 5b: Results from the correlation between BHARs, firm value, and CGQL for the Democracy portfolio of year 2005

$$BHAR_i = a + \beta_1 TQR_i + \beta_2 CGQL_i + \varepsilon_i$$

Variables and Factors	Intercept (α)	TQR	CGQL
Democracy portfolio	-0.36 (-1.02)	0.39* (1.80)	0.01 (0.01)
R^2	0.02		
Adjus.R^2	0.01		
F-Prob.	0.20		
Durbin-Watson statistic (d)	2.04		

********* *Significant at the 1% level* ******** *Significant at the 5% level* ******* *Significant at the 10% level*

Table 6a: Results from the correlation between BHARs, firm value, and CGQL for the Dictatorship portfolio of year 2004.

$$BHAR_i = a + \beta_1 TQR_i + \beta_2 CGQL_i + \varepsilon_i$$

Variables and Factors	Intercept (α)	TQR	CGQL
Dictatorship portfolio	-0.68*** (-11.79)	0.28*** (4.29)	-0.04 (-1.26)
R^2	0.15		
Adjus.R^2	0.13		
F-Prob.	0.00		
Durbin-Watson statistic (d)	2.39		

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

Table 6b: Results from the correlation between BHARs, firm value, and CGQL for the Dictatorship portfolio of year 2005.

$$BHAR_i = a + \beta_1 TQR_i + \beta_2 CGQL_i + \varepsilon_i$$

Variables and Factors	Intercept (α)	TQR	CGQL
Dictatorship portfolio	-0.31*** (-4.49)	0.19*** (3.12)	-0.05 (-1.03)
R^2	0.09		
Adjus.R^2	0.07		

F-Prob.	0.01		
Durbin-Watson statistic (d)	1.62		

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

5. Corporate Governance Quality Level (CGQL) and Expected Return on Equity as expressed by Geometric Means of Historical Stock Returns

In this section, we measure the relationship between CGQL and expected rate of return. It is assumed that historical stock returns [$\bar{r}_{iT}$ of equation (1)] are sufficient proxies for expected rates of return (Drobetz *et al.*, 2004). Because the market is imperfect, agency and various other costs exist, making the expected returns on equity to include risk that is not related to the stock's beta.

In this section we adopt an alternative approach. Our goal is to examine if the level of the quality implementation of Corporate Governance, as expressed by variable CGQL, can account for the stock returns' differences against market beta. If there is a significant correlation between CGQL and expected returns in a cross-section of firms, then beta is not the only risk factor that determines the price performance of listed firms in the ASE.

Our rationale is rather simple and straightforward[7]: if no agency costs existed, then the CAPM would not be rejected and the market of the ASE would be efficient. However, as we have already shown, the world of the ASE (and generally of almost every single capital market) is conquered by agency costs. According to the agency theory, Dictatorships should experience higher returns, as compensation to investors for paying associated costs (agency, auditing, and monitoring costs). The sample period ranges from January 1, 2004 to January 1, 2006.

Firstly, we estimate the betas of companies using monthly stock returns and the monthly return of the General Index of the ASE as market return. Secondly, we estimate the equation (1) for every Governance portfolio. Contrast to the agency theory, we hypothesize that the level of Corporate Governance, as expressed through variable CGQL, will be positively related to the returns on equity. Regression results are shown in Table 7. Again, t-statistics are reported in parentheses underneath the results of the coefficients. Our hypothesis does not hold for any of the regressions.
Columns 1 of Tables 7a and 7b underline the value of coefficient, its significance level, and t-statistics if the only independent variable in equation (1) is the firms' betas. In other words, in columns 1 we find the results of the CAPM. In columns 2 of Tables 7a and 7b we introduce CGQL variable of equation (1) excluding betas.

[7] For a more complex approach see Lombardo and Pagano (2000) and Lombardo (2000).

Finally, in the last columns, both variables (beta and CGQL) are taken into account at the right-hand member of equation (1).

As far as Democracies are concerned, beta in column 1 enters with a negative coefficient, although it tends to zero, not in line with the theoretical predictions[8]. In addition, in a univariate analysis beta is significant at the 5% level.

In column 2 a univariate analysis with CGQL follows. As it is directly observed, the explanatory power of CGQL is rather inexistent. Finally, in column 3 we control for systematic risk. The null hypothesis that $\gamma_2 = 0$ is acceptable due to the insignificance of CGQL's coefficient. As far as Dictatorship portfolio is concerned, we actually draw the same conclusions. This indicates that an adoption of a high quality Corporate Governance code by the enlisted companies on the ASE does not lead to higher returns on equity. It seems that investors do not value the lower costs of monitoring and auditing when they invest on stocks.

Table 7a: Regression returns ($\bar{r}_{iT}$) of equation (1) for the Democracy portfolio from January 1, 2004 to January 1, 2006

	Columns		
Democracy portfolio	1	2	3
Independent Variables			
β_i	-0.01** (-2.15)		-0.01* (-1.98)
$CGQL_i$		0.01 (1.27)	0.01 (0.96)
R^2	0.03	0.01	0.04
Adjus.R^2	0.03	0.01	0.03
F-Prob.	0.03	0.21	0.07
Durbin-Watson statistic (d)	2.15	2.16	2.18

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

[8] We notice that all R-squares are rather low. Defenders of the CAPM would argue that the model deals with expected returns, while we can only observe actual returns. Actual returns reflect expectations, but they also embody "noise" related to the flow of surprises (Drobetz *et al.*, 2004). This is the reason why we assume that historical returns are good proxies for expected rates of return.

Table 7b: Regression returns ($\bar{r}_{iT}$)of equation (1) for the Dictatorship portfolio from January 1, 2004 to January 1, 2006

	Columns		
Dictatorship portfolio	1	2	3
Independent Variables			
β_i	-0.01*** (-3.33)		-0.01*** (-3.25)
$CGQL_i$		-0.01 (-1.03)	-0.01 (-0.82)
R^2	0.09	0.01	0.09
Adjus.R^2	0.08	0.01	0.08
F-Prob.	0.00	0.31	0.00
Durbin-Watson statistic (d)	1.71	1.75	1.73

*** Significant at the 1% level ** Significant at the 5% level * Significant at the 10% level

6. Conclusions

Corporate Governance in Greece has attracted some attention in the last years. Researches in foreign capital markets have shown that investors are willing to pay a premium for a company with high quality of Corporate Governance compared to another identical company but with a poor quality of Corporate Governance, as well as, firm value is specified not only by financial factors but also by the quality of Corporate Governance. In our study, we stress that the only plausible variables are the six provisions Bebchuk et al. (2004) have pointed out, in order to build reliable conclusions between Corporate Governance and other factors. Again, we underline that all selected proxies are not legal required based on Greek laws but they are rather recommendations to managers. Our results do not show any existence of significant differences between Democracies and Dictatorships.

The answer to all the questions that concern us throughout our research is alike. Corporate Governance cannot create nor control abnormal returns between the listed firms on the ASE. To raise the point differently, Corporate Governance does not matter from an asset pricing perspective and it cannot be regarded as an additional risk factor for investors. Furthermore, Corporate Governance cannot be a "substitute" for market risk (beta). Listed firms on the ASE must find another way to increase their perceived valuation. The Greek capital market can be characterized as a rather traditional market that does not keep pace with the evolution and the use of non-quantified measures of firm attractiveness. This can be interpreted by the fact that investors in Greece are rather passive in monitoring and disciplining incumbent

management teams as well as Corporate Governance is an issue that only very recently has received some attention from investors.

References

Alexandrou G. and Sudarsanam S. (2001), "Shareholder Wealth Experience of Buyers in Corporate Divestitures: Impact of Business Strategy, Growth Opportunities and Bargaining Power", *Working Paper*, University of Essex and Cranfield University.

Barber B.M. and Lyon J.D. (1997), "Detecting Long-Run Abnormal Stock Returns: the Empirical Power and Specifications of Test Statistics", *Journal of Financial Economics*, Vol. 43, pp. 341-372.

Bebchuk L.A. and Cohen A. (2004), "The Cost of Entrenched Boards", *NBER Working Paper*, No. 10587.

Bebchuk L.A., Cohen A. and Ferrell A. (2004), "What Matters in Corporate Governance?", Harvard Business School, *Discussion Paper*, No. 491.

Black B.S., Jang H. and Kim W. (2003), "Does Corporate Governance Affect Firms' Market Values? Evidence from Korea", *Stanford Law and Economics Paper*, 237 / Texas Law and Economics Paper, 26.

Břečková, P. and Havlíček, K., (2013), "Leaders Management and Personnel Controlling in SMEs," *European Research Studies Journal,* Vol. XVI(4), Special Issue in SME's, 3-14.

Brown L.D. and Caylor M.L. (2004), "Corporate Governance and Firm Performance", *Working Paper*, Georgia State University.

Carhart M.M. (1997), "On Persistence in Mutual Fund Performance", *Journal of Finance*, Vol. 52, No. 1, pp. 57-82.

Chung K.H. and Pruitt S.W. (1994), "A Simple Approximation of Tobin's Q", *Financial Management, Vol. 23, No. 3, pp. 70-74.*

Cremers M.K. J., Nair V.B., and Wei C. (2004), "The Impact of Shareholder Control on Bondholders", New York University, *Law and Economic Research Paper*, No. 04-007.

Drobetz W., Schillhofer A., and Zimmermann H. (2004), "Corporate Governance and Expected Stock Returns: Evidence from Germany", *European Financial Management*, Vol. 10, No. 2, pp. 267-293.

Fahlenbrach R. (2003), "Shareholder's Rights and CEO Compensation", University of Pennsylvania, *Institute for Law and Economics Research Paper*, No. 03-05.

Fama E.F. and French K.R. (1993), "Common Risk Factors in the Returns on Bonds and Stocks", *Journal of Financial Economics*, Vol. 33, No. 1, pp. 3-53.

Fama E.F. and MacBeth J.D. (1973), "Risk, Return and Equilibrium: Empirical tests", *Journal of Political Economy*, Vol. 81, No. 3, pp. 607-636.

Gompers P.A., Ishii J.L., and Metrick A. (2003), "Corporate Governance and Equity Prices", *Quarterly Journal of Economics,* Vol. 118, No. 1, pp. 107-155.

Hanson R. and Song M. (1996), "Ownership Structure and Managerial Incentives: The Evidence from Acquisitions by Dual Class Firms", *Journal of Business Finance & Accounting*, Vol. 25, No. 5,6, pp. 831-849.

Havlíček, K., Břečková, P. and Zampeta, V., (2013), *"Quality Management as a Part of CRM",* European Research Studies Journal, vol. XVI(4), *Special Issue in SME's,* 15-28.

Jegadeesh N. and Titman S. (1993), "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency", *Journal of Finance*, Vol. 48, No. 1, pp. 65-91.

Johnson S.A., Moorman T., and Sorescu S. (2005), "Governance, Stock Return, and Market Efficiency", Mays Business School at Texas A&M University, *Working Paper*.

Kavussanos M.G. and Dockery E. (2001), "A Multivariate Test for Stock Market Efficiency: The Case of ASE", *Applied Financial Economics*, Vol. 11, No. 5, pp. 573-579.

Keasey K., Thompson S., and Wright M. (1997), "Corporate Governance: Economic and Financial Issues", *Oxford University Press*, Oxford, Great Britain.

Keasey K. and Wright M. (1993), "Issues in Corporate Accountability and Governance: An Editorial", *Accounting and Business Research*, Vol. 23, No. 91a, pp. 291-303.

Klock M., Mansi S., and Maxwell W. (2003), "Corporate Governance and the Agency Cost of Debt", *Working Paper*, Georgia Washington University.

La Porta R., Lopez-De-Silanes F., Shleifer A., and Vishny R. (2002), "Investor Protection and Corporate Valuation", *Journal of Finance*, Vol. 57, No. 3, pp. 1147-1170.

Lakonishok J., Shleifer A., and Vishny R. (1994), "Contrarian Investment, Extrapolation, and Risk", *Journal of Finance*, Vol. 49, No. 5, pp. 1541-1578.

Lang L.H.P., Stulz R., and Walkling R. (1989), "Managerial Performance, Tobin's Q, and the Gains From Successful Tender Offers", *Journal of Financial Economics*, Vol. 24, pp. 137-154.

Lindenberg E.B. and Ross S.A. (1981), "Tobin's Q Ratio and Industrial Organization", *Journal of Business*, Vol. 54, No. 1, pp. 1-32.

Lombardo D. (2000), "Is There a Cost to Poor Institutions?", *Discussion Paper*, Stanford Institute for Economic Policy Research, No. 00-19.

Lombardo D. and Pagano M. (2000), "Legal Determinants of the Return on Equity", *Working Paper*, CEPR, No. 2275.

Lombardo D. and Pagano M. (2002), "Law and Equity Markets: A Simple Model", *Working Paper*, University of Salerno, No. 25.

Mayer C. (1988), "New Issues in Corporate Finance", *European Economic Review*, Vol. 32, pp. 1167-1188.

McKinsey and Company (2000), "Investor Opinion Survey on Corporate Governance", London.

Morck R., Shleifer A., and Vishny R. (1989), "Alternative Mechanisms for Corporate Control", *American Economic Review*, Vol. 79, No. 4, pp. 842-852.

Perfect S.B. and Wiles K.W. (1994), "Alternative Constructions of Tobin's Q: An Empirical Comparison", *Journal of Empirical Finance*, Vol. 1, No. 3, pp. 313-341.

Salinger M.A. (1984), "Tobin's Q Unionization and the Concentration-Profits Relationship", *Rand Journal of Economics*, Vol. 15, No. 6, pp. 159-170.

Servaes H. (1991), "Tobin's Q and the Gains from Takeovers", *Journal of Finance*, Vol. 46, No. 1, pp. 409-419.

Smirlock M., Gilligan T.W., and Marshall W.J. (1984), "Tobin's Q and the Structure-Relationship Performance", *American Economic Review*, Vol. 74, pp. 1051-1060.

Thalassinos, I.E. and Zampeta, V. (2012) "How Corporate Governance and Globalization Affect the Administrative Structure of the Shipping Industry", *Journal of Global Business and Technology*, Vol. 8(1), 48-52.

Thalassinos, I.E. and Politis, D.E. (2011), "International Stock Markets: A Co-integration Analysis," *European Research Studies Journal,* Vol. XIV(4), 113-130.

Thomadakis S.B. (1977), "A Value-Based Test of Profitability and Market Structure", *Review of Economics and Statistics*, Vol. 59, No. 2, pp. 179-185.

Tobin J. and Brainard W.C. (1968), "Pitfalls in Financial Model Building", *American Economic Review*, Vol. 58, No. 2, pp. 99-122.

Villalonga B. and Amit R. H. (2006), "How Do Family Ownership, Control, and Management Affect Firm Value?", *Journal of Financial Economics*, Vol. 80, No. 2, pp. 385-417.

Yermack D. (2006), "Flights of Fancy: Corporate Jets, CEO Perquisites, and Inferior Shareholder Returns", *Journal of Financial Economics*, Vol. 80, 211-242.

Zingales L. (1998), "Survival of the Fittest or the Fattest? Exit and Financing in the Trucking Industry", *Journal of Finance*, Vol. 53, No. 3, pp. 905-938.