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Corporate Governance A Risk Factor To Remunerate

TEBER ZITOUNI
Carthage University, FSEG Nabeul, Tunisia
Email: zteber@yahoo.fr

Abstract

Using a sample of 192 US firms over a period from 2000 to 2011, we study the relationship between the efficiency of the corporate governance structure and the stock performance. We used a corporate governance index derived from the method of data envelopment analysis (DEA). These scores included in the market model and the 3-factors model developed by Fama and French (1993) confirm our hypothesis that the investment strategy of buying stock firms with good governance and selling those firms with weak governance is a profitable strategy. It reached a monthly abnormal return of 0.69% or 8.28% per year. Also, the use of fundamental analysis and the variable dividend on prices as a proxy of expected stock return reveals that the coefficients of the corporate governance index is significantly negative; so, a better corporate governance structure corresponds a decrease in the rate of stock return required by shareholders. It highlighted the importance of corporate governance structures as an additional explanatory factor of the expected stock return.

Key Words: *Corporate Governance Index, Expected Stock Return, 3-Factor Model Of Fama and French (1993), Risk Factor.*

Introduction

The impact of corporate governance practices on firm performance has been treated in several papers. Felton, Hudnut and Van Heeckeren (1996) list three good reasons for the interest of investors in corporate governance: First, some investors believe that well-governed firms are more successful in the long run. This is visible through the rising price of their stocks. Then, to other investors, corporate governance reduces the risk; it lowers the probability of occurrence of bad scenarios and even if they occur, well-governed companies will be able to overcome them faster. Finally, corporate governance is seen as a hot topic and its impact on performance is rather the result of a "fashion" effect.

In their study, Drobetz, Schulhofer and Zimmerman (2004), sum the investor interest in corporate governance in three main factors: the collapse of some renowned companies, the institutionalization of the shareholding and the globalization financial markets. The relationship between corporate governance and performance was been examined through two research paths. The first deals with the governance mechanisms one by one and examine the impact of each one on firm performance: for example, provisions against hostile takeovers (Gompers ,Ishii and Metrick, 2003), executive compensation (Loderer and Martin, 1997 ; Bebchuk and Fried , 2006), holding control blocks (Demsetz and Lehn, 1985 ; Demsetz and Villalonga, 2001), the size of the Board of directors (Yermack, 1996 ; Eisenberg and al, 1998 ; Godard and Schatt, 2004), its composition (Hermalin and Weisbach, 1991 ; Chen and al., 2000 ; Bhagat and Black, 2002), the protection of outside investors (Brockman and Chung, 2003) or the legal environment of the countries (La Porta and al., 2002 ; Durnev and Kim, 2003 ; Giannetti and Koskinen, 2003 and Guiso, Haliassos and Jappelli, 2003).

However, these empirical studies tested the link between corporate governance and firm performance using a single governance mechanism. Or, focusing on a specific mechanism may bias the study, given the fact that governance mechanisms are multiple and interact. For example, an increase in managerial ownership increases the likelihood of an alignment of the interests of the manager with those of shareholders. However, an increase of managerial ownership decreases, in a similar manner, the effectiveness of a hostile takeover. Therefore, we must determine the effects of substitution and complementarity between the different mechanisms in order to understand the optimal structure of corporate governance. Therefore the second research route evaluates corporate governance through an index that has the merit of synthesizing several mechanisms. Indeed, several studies have tried to test the impact of the governance structure of the company's performance. However, it is noted that the corporate governance practices can make, medium and long-term substantial gains but may also generate costs for those who undertake them. These marginal gains and costs vary from one environment to another and from one firm to another, leading the latter to choose different combinations of controls and incentives according to their specific characteristics.

We used the efficiency index derived from the method of data envelopment analysis (DEA)[1] to confirm our hypothesis that the corporate governance is an additional explanatory factor of the expected stock return. This paper is organized as follows: The literature review is presented in the first section. The univariate analysis, demonstrating that the strategy of buying stock firms with good governance and selling those firms with weak governance is a profitable strategy, is the subject of the second section. The impact of corporate governance on the expected stock return is treated in the third section through the time series and the cross-sectional analysis.

Literature Review

Table 1 is a summary of some empirical studies that built a corporate governance index to test its impact on performance.

Table 1 : Summary of literature linking corporate governance to firm performance

Authors or Agency	Year	Sample	Variables	Results
Gompers, Ishii and Metrick	2001	1500 U.S firms	24 provisions against takeovers	Non protection of shareholders' rights reduces profits and valuation by the market.
Campos and al.	2002	188 firms listed on six emerging markets	transparency, ownership structure, the board of directors and shareholder rights	Investors are more confident in the best governed firms and therefore well valued by the market
Black, Jang and Kim	2002	526 Korean firms	the rights of shareholders, the board of directors, independent directors, the audit quality, publications and ownership structure	Corporate governance is an explanatory variable of share value.
Standard & Poor's	2002	859 firms from 27 different countries	the concentration of the ownership structure, the nature of relations between the various stakeholders, transparency and communication and	---

[1] T. Zitouni (2016) : "Index Approach Of Corporate Governance", Journal of Business Studies Quarterly, Volume 7, number 3.

			the board of Directors	
Alves and Mendes	2002	Portuguese firms	the voting rights and fairness to shareholders.	Good protection of shareholders' rights improves the quality of corporate governance.
Institutional Shareholder Services (ISS)	2003	3000 American firms of the Russell Index	the board of directors, ownership structure, executive compensation, meetings of independent directors and director training	---
Durnev and Kim	2003	859 large firms from 27 countries	disclosure and governance practices and features of the legal environment.	Legal protection improves the quality of corporate governance, investment opportunities, and external funding.
Drobetz, Schillhofer and Zimmermann	2004	German firms	30 mechanisms linked to commitment to corporate governance, respect for shareholder rights, transparency, role of the board of directors and control.	There is a negative and significant relationship between corporate governance and performance demanded by shareholders.
Doidge and al.	2004	firms operating in 40 countries	the concentration of the ownership structure, transparency, discipline, and the Board of Directors and its characteristics.	The quality of the governance system is influenced by the legal environment of the countries and is attributed to firms characteristics only for the case of developed countries.
Durnev and Kim	2005	859 firms operating in 27 countries	ownership structure, disclosure practices and transparency rankings	They find that all three firm attributes (investment opportunities, external financing and ownership structure) are related to the quality of governance and disclosure practices, and firms with higher governance and transparency rankings are valued higher in stock markets.
Mintz	2005	firms from 23 different countries	financial transparency, shareholder rights, ownership structure, the board of directors and internal control	The quality of corporate governance depends on the country's legal environment.

Khiari, Karaa and Omri	2007	320 US firms	inside control, managerial discretion, ownership concentration, dominance of the board by the CEO and manager entrenchment	The better governed firms are characterized by a high dividend distribution rate and an important return on equity.
Credit Lyonnais Securities Asia (CLSA)	2008	495 firms operating in 25 emerging markets	transparency, discipline officers, responsibility of the audit committee, composition and functioning of the board of directors.	---
Varshney, Kaul and Vasal	2012	Indian firms	internal and external mechanisms of corporate governance	There is a positive and significant relationship between corporate governance and economic value added (EVA).

Finally, if the financial literature does not lead to a clear consensus on the relationship between corporate governance and performance, Odegaard Bohren (2004) identify several arguments to account for this divergence: First, the use of partial approaches and the manner to aggregate corporate governance mechanisms in an index may be biased and lead to skewed findings. Second, due to the fact that most studies are context-specific, findings are often non-generalizable. Indeed, most of the works have been conducted on American firms with large size; hence, their results cannot be generalized on smaller firms or those operating in different legal environments. Third, studies have used various measures of performance: whether accounting measures or more sophisticated measures such as productivity indicators, this explains divergences in the findings. And fourth, the treatment of endogeneity of the relationship between corporate governance and performance has been either neglected or badly treated.

Univariate Analysis

Sample

The sample consists of 192 US firms operating in 9 sectors. The study period runs from July 2000 to June 2011. For each company, we have the following information: Monthly stock market data are collected manually from the website www.yahoofinances.com. The annual financial data are from the database Value Line Investment. While data on the ownership structure and corporate governance mechanisms are manually collected from the reporting agents from the site www.edgarscan.com. They were synthesized by a corporate governance index.

Univariate Analysis

Following Gompers, Ishii and Metrick (2003) and Drobetz, Schillhofer and Zimmermann (2004), we focus on the following two extreme portfolios: the "good governance portfolio" and "weak governance portfolio". Thus, based on corporate governance scores, we classify firms in a decreasing order of efficiency score. We end up with the following three groups:

- the first group: the first three deciles (30% of the sample),
- the second group: the four median deciles (40% of the sample),
- the latter group: the last three deciles (30% of the sample).

The "good governance Portfolio" (GGP) consists of all firms in the first group whose quality of governance is the best. However, the "weak governance portfolio" (WGP) includes all firms in the last group whose governance is considered the poorest.

Table 2: Average scores of governance of extreme portfolios

Year	« GGP »	« WGP »
2000/2001	0,9084	0,2979
2001/2002	0,8716	0,2669
2002/2003	0,8894	0,2863
2003/2004	0,9561	0,2037
2004/2005	0,9311	0,2881
2005/2006	0,9103	0,2468
2006/2007	0,9094	0,2227
2007/2008	0,8796	0,2115
2008/2009	0,8994	0,2422
2009/2010	0,9108	0,2371
2010/2011	0,9204	0,2529

Table 2 provides a comparison of the evolution of the efficiency scores of the two extreme groups. We note that the scores for both firms of good governance as weak governance are not stable during the study period. The average efficiency score for good governance portfolio exceeds 90%. It differs greatly from that of weak governance which is less than 25%. In addition, in 2002/2003, ~~both~~ the good governance portfolio as well as the weak governance portfolio recorded an increase in their average score. This can be corroborated notably by the promulgation of the Sarbanes Oxley Act in July 2002.

However, in 2007/2008, we notice a downturn of respective corporate governance scores of the two extreme portfolios which can perhaps be accounted for by the subprime financial crisis.

Table 3: Average return of the two extreme portfolios

	« GGP »	« WGP »	Difference
Average	0, 017397	0, 014036	0, 0033608*
Standard deviation	0, 048897	0, 043521	

Table 3 shows the difference between the average monthly return of the two extreme portfolios, The results reveal that the average monthly return of the « good governance portfolio » is higher than the « weak governance portfolio » of 0,3361% namely 4,03% per year, this difference is significant at the 10% threshold.

Table 4: Financial characteristics of the two extreme portfolios

	« GGP »	« WGP »	Difference
Tangible asset	0,2675	0,3686	-0,1011**
R&D	0,4745	0,1359	0,3386*
Logasset	23,0588	22,7632	0,2956*

* significant at the 10% threshold
** significant at the 5% threshold

Tangible asset is measured by the ratio fixed assets to total assets, R&D is the measurement of the intangible assets, it is the research and development expenditure ratio of total assets, Logasset is a measure of the total investment of the firm. It is the logarithm of total assets.

From Table 4, we see that the size of the firms belonging to the good governance portfolio is higher than those of the weak governance portfolio. But these firms invest more in research and development and less in tangible assets than firms belonging to weak governance portfolio. This can be explained by saying that better governance limits the discretion of the officer and ensures optimum choice of investment decisions. It also solves the problem to the construction of empire by the manager. Indeed, for Jensen (1986), Morck, Shleifer and Vishny (1988) and Stulz (1990) investment is a vector of entrenchment through which managers tray to develop their discretion and to increase their non-monetary benefits.

Table 5: Analysis of univariate correlations

	Correlation with CGI	« GGP »	WGP	Difference
R	0,2145*	0, 017397	0, 014036	0, 0033608*
D/P	0,1512*	1,0853	0,6976	0,3877*
MTB	0,3656	4,5815	2,5976	1,9839
MV	0,9477	26973,69	5412,75	21550,94**
PER	0,3478	25,5237	22,4121	3,1116
GROWTH	0,0658	0,0763	0,0344	0,0419

* significant at the 10% threshold
** significant at the 5% threshold

CGI is the corporate governance index,
R is the geometric mean of monthly returns over the study period,
$\frac{D}{P}$ is the geometric average of dividends divided by the stock price of each firm over the study period,
MV is the market value collected from *Value Line Investment database*,
MTB is the Market to Book ratio collected from *Value Line Investment database*,
GROWTH is an arithmetic average of de *SG* and *EGEPS* where :
SG is the arithmetic average of the historical sales growth and

EGEPS is the estimated growth of the EPS[2] collected from *Value Line Investment database.*
As expected (table5), the univariate analysis[3] reveals that there are several differences between the « GGP » and « WGP ». Thus, well-governed firms tend to be larger with a better average return, over dividend yield and generally receive a good evaluation of the market.
Also, the « good governance portfolio » receives an average monthly returns that exceed 0,3361% of those in the « weak governance portfolio » namely 4,03% per year. Although, the results of the univariate analysis support our general hypothesis, namely that the quality of governance affects the firm performance, a multivariate regression methodology is needed to be able to reach sound conclusions.

Modeling Corporate Governance as a Risk to Remunerate

If corporate governance affects firm performance and if this effect is totally incorporated by the market, then, stock prices would be quickly adjusted to any changes of corporate governance practices. However, if the corporate governance affects firm performance and if this phenomenon is not absorbed by the market, then realized returns will deviate systematically. Thus, to answer this issue i.e. the existence or non-existence of effect of the quality of corporate governance on the stock return, we will proceed in two ways : In the first step, in order to distinguish between the performance of a the « good governance portfolio » and that of « weak governance portfolio », we adopt the three-factor model of Fama and French (1993) to assess the strategy of buying the « good governance portfolio » and selling of the « weak governance

[2] EPS : Earning Per Share
[3] Before proceeding to the nonparametric testswe checked the non normality of variables and used the Kolmogorov Smirnov.

portfolio ». In the second step, and considering the previous work, we regress the expected stock return of our sample firms on the corporate governance index and other control variables. This regression tries to verify the nature and the degree of significance of the effect of corporate governance index on the stock return. We hope to find in the case of our study a significant and negative impact of the of corporate governance quality on the expected stock return of the firm.

Time Series Analysis

Several studies (Banz, 1981; Chan and Chen, 1991) tried to explain the difference of returns by specific characteristics of firms. By constructing portfolios based on the size of the equity, Chan and Chen (1991) show that the size effect is associated to business vulnerability factor affecting the stock return. Furthermore, Rosenberg, Rei and Lanstein (1985) found a positive correlation between the equity performance and the book value to market value ratio (VC / VM). Similarly, Fama (1991) found that this ratio is an important explanatory factor of stock return and it is linked to growth opportunities. Thus, in order to verify the existence of a link between corporate governance and stock return, we adopt the 3-factor methodology of Fama and French (1993).

The methodology followed is inspired by the work of Drobetz, Schulhofer and Zimmermann (2004). It is based on the construction of portfolios for both explained variable and core variables. According to the model of Fama and French (1993), the excess return of a portfolio of shares ($Rp_t - Rf_t$), would depend on its sensitivity to three risk factors: market factor ($RMRF_t$), the size factor (SMB_t) and the factor related to book value to market value ratio (HML_t),

For our problem, the sensitivity coefficients of these factors will be estimated by the following time series regression:

$$GMW_t = \alpha + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 HML_t + \xi_t$$

GMW (good minus weak) is the difference between the monthly stock return of the portfolio compound of well governed firms and the monthly stock return of the portfolio compound of badly governed firms.

$RMRF_t$ is the monthly return of the market in which operate the sample firms reduced by the free risk rate[4] for each month t.

SMB_t (small minus big) is constructed to reproduce the size risk factor. It is the difference between the monthly stock returns of the portfolio compound of small cap market firms and the monthly stock return of the portfolio compound of big cap market firms.

HML_t (High minus Low) is constructed to reproduce the growth risk factor. It is the difference between the monthly stock returns of the portfolio compound of firms with high « book to market » ratio and the monthly stock return of the portfolio compound of firms with low « book to market » ratio.

H_0 : ($\alpha = 0$) means the non-existence of a corporate governance risk.

[4] The risk-free rate is the rate for a safe investment. Generally, il is the rate of government borrowing such as Treasury bill rates to 1 month available on : http://www.federalreserve.gov/releases/H15/data/Monthly/H15_TB_M1.txt

Table 6: Coefficients of Fama and French model (1993)

Variable	Coefficient	Std, Error	t-Statistic	Prob,
α	0,006918	0,004824	2,039475	0,0465**
RMRF	0,002336	0,055611	0,041138	0,9625
SMB	-0,3089341	0,129841	-2,712564	0,0082***
HML	-0,481541	0,081904	-5,879366	0,0000***
AR(2)	0,302001	0,131666	2,293688	0,0258

** significant at the 5% threshold
*** significant at the 1% threshold

Table 6 shows that the coefficients of SMB and HML are negative and significant at the 1% threshold. This result is similar to that found by Gompers, Ishii and Metrick (2003) on a sample of 1500 US firms.

However, the coefficient of the RMRF variable appears with the expected sign but it remains insignificant. α is the estimated model constant. It can be interpreted as the abnormal return in excess of the return realized by the passive investment strategy. It is the excess return of a zero-investment strategy, which consists of buying well governed firms and selling those whose corporate governance quality is low. This strategy is paying off and reached a monthly abnormal return of 0.69% namely 8.28% per year. The coefficient of the constant is significant at the 5%. This abnormal profit is attributed to corporate governance. It is similar to that found by other studies especially those of Gompers, Ishii and Metrick (2003). They found an abnormal return of 0.71 per month (8.5% per year) in the US market, while Drobetz, Schulhofer and Zimmerman (2004) found a profit of 1.37% per month (16.4% per year) on the German market. There are several factors that can be put forward to corroborate this:

- Firstly, the differences in sample characteristics. Indeed, the sample studied by Gompers, Ishii and Metrick (2003) is larger as it includes 1500 US companies and thus better captures the difference in performance between the two types of portfolios. While the sample of Drobetz, Schulhofer and Zimmerman (2004) consists of 253 German companies operating in widely different legal and institutional environment.
- Secondly, the selected corporate governance rating criteria. In the case of Gompers, Ishii and Metrick (2003), the classification criterion is an index constructed on the basis of 24 anti-takeover provisions. While for Drobetz, Schulhofer and Zimmerman (2004), the corporate governance index is determined on the basis of a questionnaire distributed to sample firms. As for our study the classification criterion is a synthetic corporate governance index that includes basically internal mechanisms collected from information disclosed in the reports of agents.

Cross-Sectional Analysis

In this section and following the example of Drobetz, Schulhofer and Zimmermann (2004), we study the impact of corporate governance on the expected stock return using historical returns[5]. It should be noted that in the presence of agency costs, the required stock return by investors may include risk compensation other than that of the market. Thus, Lombardo and Pagano (2000) suggest that the required stock return must compensate investors for cost of control and auditing and for all costs related to malfunctions in governance systems. In their model, a high protection of minority shareholders rights reduces the stock return required by investors. Thus, an important question is pertinent here: Can a difference in the quality of governance explain the difference in the stock return required by the investor?

In fact, the market model is reliable in an efficient market without agency costs. However, in an environment characterized by the agency costs, the classic market model does not reward all the risks

[5] We implicitly assume that historical returns are reliable measures of the required stock return.

incurred by the investor. To test the hypothesis that corporate governance score has an explanatory power of expected stock return which is not captured by the market beta, we estimate the following cross-sectional regression:

$$\overline{R} = \alpha_0 + \alpha_1 \beta_m + \alpha_2 CGI + \varepsilon$$

$\overline{R}$ is the geometric average of the monthly return of each firm from July 2000 until June 2011.

β_m is the market beta available from the Value Line Investment database.

CGI is the geometric average of annual corporate governance index of each firm.

This approach is commonly used in the literature of the equity assessment; it can easily test the effect of any risk factor other than that of the market. In the case of our study, we focus on the explanatory power of corporate governance quality as an additional variable. Thus, the coefficient α_2 is considered compensation related to the quality of corporate governance. Our null hypothesis ($\alpha_2 = 0$ and of course $\alpha_1 \succ 0$) reflects the non existence of risk effect related to corporate governance.

Table 7: Corporate Governance Index and Expected Stock Return (1)

Variable	Coefficient	Std, Error	t-Statistic	Proba	
A	-0,042903	0,007727	-5,552063	0,0000***	
BETA_M	0,020162	0,001133	17,80208	0,0000***	
CGR	0,015324	0,008589	1,784062	0,0761*	

* significant at 10% threshold
*** significant at 1% threshold

Adjusted R-squared 0,804385

The empirical results (Table 7) show that the coefficients of the explanatory variables, Beta market and corporate governance index are significantly positive to the respective thresholds of 1% and 10%. The sign of the coefficient of the market's beta is that predicted by theory but the sign of the coefficient of the corporate governance index is not the one expected. Thus, a priori prediction of the link between corporate governance and expected return using historical returns as a proxy may seem fuzzy and inappropriate. (Drobetz, Schillhofer & Zimmermann, 2004). Certainly, the historical returns may reflect forecasts of expected returns but they are impregnated with white noise and myopia of markets (short-termist reactions) face of changes in governance structures.

The main problem is related to the time effect which is complex and not easily measurable empirically.
Thus, well-governed firms may have adhered to the standards of governance several years before data collection and the reaction on return is not done in a timely manner,
Bekaert and Harvey (2000) and Gompers, Ishii and Metrick (2003) confirm such reasoning and emphasize that an improvement in the quality of governance can have a discreet effect on the level of returns but may be more perceptible in stock prices.
To circumvent this problem/short circuit, we use fundamental analysis and we follow a similar path to that of Errunza and Miller (1998), Lambardo and Pagano (2000) and Bekaert and Harvey (2000). These studies used the distributed dividend yield as a proxy for expected stock returns.
Indeed, the dividend distributed has the triple advantage of being directly observable, relatively stationary and perfectly correlated with the expected return. Therefore, to validate the hypothesis that the corporate governance index is an explanatory variable for expected return in addition to the beta of the market variable, we estimate the following cross-sectional regression:

$$\frac{D}{P} = \alpha_0 + \alpha_1 \beta_m + \alpha_2 CGI + \alpha_3 GROWTH + \varepsilon$$

$\frac{D}{P}$ is the geometric average of dividends distributed relative to stock price of each firm[6].

β_m is the market beta available from the Value Line Investment database.

CGI is the geometric average of the annual corporate governance index of each firm.

GROWTH is an arithmetic average of de *SG* and *EGEPS* where :

SG is the arithmetic average of the historical sales growth and *EGEPS* is the estimated growth of the EPS collected from *Value Line Investment database.*

Note that the standard version of CAPM assumes that $\alpha_2 = 0$ et $\alpha_3 = 0$, that is - to - say that there is no systematic risk apart from market risk.

Table 8: Corporate Governance Index and Expected Stock Return (2)

Variable	Coefficient	Std, Error	t-Statistic	Proba
α	0,050993	0,005204	9,798579	0,0000***
BETA_M	-0,010443	0,002834	-3,684612	0,0003***
CGR	-0,029602	0,005766	-5,133614	0,0000***
GROWTH	-0,008083	0,004735	-1,707130	0,0896*

* significant at 10% threshold
*** significant at 1% threshold
Adjusted R-squared 0,233361

The empirical results (Table 8) show that the Beta coefficients of the market, the corporate governance index and control variable "growth" are significantly negative with respective thresholds of 1% and 10%. The coefficients of the corporate governance index and the variable "growth" appear with the expected signs. These empirical results allow us to note that a better corporate governance structure decreases the stock return required by investors. The coefficient α_2 is significantly negative at the 1% threshold. This is consistent with results of previous work including those of Bekaert and Harvey (2000), Gompers, and Ichii Metrick (2003) and Drobetz, Schillhofer and Zimmermann (2004). Thus, the corporate governance structure can be an additional variable explaining the difference in stock market performance of firms.

Conclusion

The debate on the relationship between corporate governance and performance is constantly renewed and argued differently along different temporal and spatial axes/ spatio-temporal paradigms. Therefore, professional organisms such as Deminor (2000), "Credit Lyonnais Securities Asia" (2001 and 2008), "Standard & Poor's" (2002), "Institutional Shareholder Services" (2003), "Governance Metrics International" (2003), and authors such as Gompers, Ishii and Metrick (2003); Alves and Mendes (2004); Drobetz, Schillhofer and Zimmermann (2004); Beiner et al (2005), Black, Jang and Kim (2006), Khiari Karaa and Omri (2007) and Varshney, Kaul and Vasal (2012) have calculated a corporate governance score based on transparency and compliance with standards of good codes of conduct to validate their hypotheses about the impact of corporate governance practices on performance. For our part, we have tried to empirically show the relationship between corporate governance and particularly the expected stock return. Descriptive statistics show that:

[6] D_{t+1} / P_t

- The average corporate governance index shows some disparities by sector : in the transport and health firms are on average those which observe the recommendations on corporate governance, unlike those in utilities and the technology sector. Also, well-governed firms are investing more in research and development and less in tangible asset than firms with "weak governance system".
- Well-governed companies tend to be larger with a better average return, over dividend yield and generally receive a good market valuation.
- There is a difference between the average return of the two extreme portfolios. This difference is statistically significant at the 10% threshold.

Moreover, the application of the methodology to three factors, Fama and French (1993) show that the estimated model is constant which can be interpreted as an abnormal excess return realized by passive investment strategy is statistically non zero. It is the excess return on a zero-investment strategy, which consists of buying the portfolio of firms following the good governance standards and selling portfolio of firms with weak quality of corporate governance. This strategy proved to be paying off and reached a monthly abnormal return of 0.69% or 8.28% per year.

In addition, the use of fundamental analysis and the variable dividend on prices as a proxy of expected stock return reveals that the coefficients of the corporate governance index and the control variable "growth" in the market model are significantly negative; so, a better corporate governance structure corresponds a decrease in the rate of stock return required by shareholders.

In a nutshell, awareness raising of the role of corporate governance among investors and giving it pivotal importance, corporate governance can be considered as a criterion on its own in the assessment of financial securities.

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