Corporate Governance Quality and Cost of Equity in Financial Companies

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Abstract

There are many studies demonstrating how good corporate governance positively affects the economic-financial performance of companies, but few which examine the relationship between corporate governance and cost of equity capital. These mainly focus on multiple industries, and suggest that there are positive shareholder value implications for firms with stronger corporate governance mechanisms.

This paper investigates the relationship between the quality of governance and the cost of equity in financial companies. It finds that financial companies with the best governance (both "internal" and "external") are associated with a higher cost of equity capital.

Keywords: Corporate Governance, Governance Index, Gim Index, Cost of Equity Capital

1. Introduction

More and more frequently, directors and executives are being required to demonstrate good governance of their companies to both the authorities and the market. Managers therefore need to be able to assess governance and judge its quality.

Among the governance indices formulated, the GIM index proposed by Gompers, Ishii, and Metrick (2003) has received particular attention in the literature. Several authors (Bebchuk and Cohen, 2005; Klock et al., 2005; Core et al., 2006; Chava et al., 2009; Fahlenbrach, 2009) have used it to verify the existence of a link between the quality of governance and economic and financial performance.

Studies to date have not confirmed the existence of a link between governance quality and economic-financial performance (Donker and Zahir, 2008). At least two observations can be made on this.

In the first place, the method of measuring governance quality is not definitive. Numerous indicators have been elaborated, and these present differences which are at times significant. Even the Gompers index, one of the best-known and most reliable, can be considered partial, because it only reflects the quality of the “external” governance, and ignores the profiles of “internal” governance (Cremers and Nair, 2005).

In the second place, the identification of a relationship between economic-financial performance and governance can be problematic. There are several issues at stake, and we believe that "time" may be one of the most important. This is because the effects of good governance are revealed in the medium-long term rather than immediately. For this relationship too, the effects on economic and financial performance can be hidden by macroeconomic or other factors. Furthermore, it is conceivable that the effect of good governance is to lengthen company life and stabilize certain financial results, rather than improve them.

Rather than the "direct" benefits of good governance on economic-financial performance, this study investigates "indirect" benefits, mainly involving stakeholder perception of the company. We believe that it is important to investigate the impact of governance quality on the cost of capital (both debt and equity capital) for two main reasons:

- the existence of good governance itself is not sufficient; to have an effect it also needs to be publicly recognized. In an efficient market, capital lenders need to be able to perceive, understand and price it;

- investor assessments of corporate governance are sometimes made before it produces its economic and financial fruits. Our study should thus provide a different type of feedback for use in investment decisions.

The literature has recently attempted to study the link between governance and cost of debt (K_d) (Bhojraj and Sengupta, 2003; Klock et al., 2005; Cremers et al., 2007) and the relationship between governance and cost of equity (K_e) (Chen et al., 2003; Ashbaugh et al., 2004; Cheng et al., 2006; Byun et al., 2008; Chen et al., 2009).

This paper falls into the second area, and focuses on the response of the market, and particularly investors, to corporate governance of financial companies. We will try to ascertain whether those that enjoy "good" governance take advantage of this element of presumably lower risk in seeking equity (K_e) on the market. As it is related to all other sectors, the financial sector plays a pivotal role, so the issue is particularly important for these companies.

To our knowledge, no previous studies analize the relationship between corporate governance and cost of equity capital specifically in the financial sector.

The literature review is followed by a description of the sample and method of analysis. We then report the results of the analysis and the conclusions.

2. Literature Review and Hypotheses

The interest in "corporate governance", viewed as "*the relationships between the company's executives, managers, shareholders and other stakeholders*" (OECD, 2004), has increased considerably in recent years, and the literature has started to develop this topic from different viewpoints (Huse, 2003).

Among these, the measurement of governance quality has acquired particular importance, and a number of indicators have been constructed to assess the level of corporate governance.

The first indicator was the GIM Index developed by Gompers, Ishii, and Metrick (2003). It measures the governance quality of companies characterized by multiple ownership, typical of those operating on US market. It is constructed on the basis of five areas (calculated on the basis of 24 variables): *delay* (measures to prevent hostile takeovers)*, voting* (provisions related to shareholders' rights in elections or charter/bylaw amendments)*, protection* (measures designed to insure officers and directors against job-related liability or to compensate them following a termination)*, other* (other safeguards for management), and *state* (legal and regulatory provisions). It is calculated by assigning a point to every variable considered to violate the rights of the shareholders, and discriminates between "good" and "bad" governance. "Good" governance companies have aggregate scores of 5 or lower and offer greater protection to the shareholders; "Bad" governance companies have an aggregate of 14 or higher and are those where management plays a greater role.

Because it summarises a large amount of information, the GIM Index has been widely used to assess governance quality (Bebchuk and Cohen, 2005; Klock et al., 2005; Core et al., 2006; Chava et al., 2009; Fahlenbrach, 2009). But it is not without critical aspects. As Cremers and Nair (2005) observe, although it is generally interpreted in the literature as a proxy for governance quality, it is more strictly speaking an "anti-takeover protection index." This is because it does not express a judgment on governance in the broad sense, but concentrates exclusively on the "external" governance of companies, i.e., the degree of exposure to the market and thus vulnerability to takeover.

Several authors have reinterpreted the GIM Index, separating or re-elaborating the variables identified by Gompers, Ishii, and Metrick (Brown and Cayrol, 2006; Bhagat et al., 2008; Bebchuk et al., 2009), and re-presenting them in new indices. Other authors have added further variables to the GIM Index, enabling them to take account of "internal" governance, assessed in relation to the participation of institutional investors in the corporate equity (Cremers and Nair, 2005).

These indices have mainly served to study the relationship between the quality of governance and the economic and financial performance of companies, represented by such variables as Tobin's Q, profitability ratios, or market performance indicators. Many studies refer to the US market and identify a statistically significant positive relationship between the two variables (Gompers et al., 2003; Brown and Cayrol, 2006; Bebchuk et al., 2009), although in some cases their evidence is not clear (Bauer et al., 2004; Cremers and Nair, 2005). Empirical analyses made on a sample of European enterprises give uneven results (Drobetz et al., 2004; Colarossi and Giorgino, 2006; Mazzotta, 2007).

In the absence of clear evidence of the link between governance quality and economic and financial results, some authors have investigated the link between governance (both "internal" and "external") and the cost of debt capital, focussing on the credit spread of corporate bonds (Bhojraj and Sengupta, 2003; Klock et al., 2005; Cremers et al., 2007). These empirical studies however have given differing results. Bhojraj and Sengupta (2003) ascertain the existence of a significant inverse proportion between governance quality and cost of debt, but Cremers, Nair, and Wei (2007), considering the interaction of different mechanisms of governance, reach much less uniform results. In particular, Cremers, Nair, and Wei (2007) demonstrate that good "internal" governance, as identified by a significant presence of institutional investors among shareholders, contributes to lowering the cost of debt only when the enterprise has a low level of exposure to takeover. Otherwise, a company characterized by the high quality of its "external" and "internal" governance tends to have a higher cost of debt.

Focusing attention on protection from takeover, Klock, Mansi, and Maxwell (2005) report the existence of a statistically significant inverse relationship between the GIM Index and credit spread, thus furnishing evidence of how anti-takeover instruments lower the cost of debt capital. Chava, Dierker, and Livdan (2009) reach the same conclusions, demonstrating how companies with greater exposure to takeover are those characterized by a higher cost of bank debt.

Other authors have investigated the link between governance and implied cost of equity capital (Chen et al., 2003; Ashbaugh et al., 2004; Cheng et al., 2006; Byun et al., 2008; Chen et al., 2009)(Note 1). In the literature, the implied cost of equity capital has mainly been estimated using three models: the Gordon model (Botosan, 1997; Brav et al., 2005), the residual income valuation models (RIV), in which the company ROE at the end of the earnings forecast horizon is assumed to decay down over 8-12 years to industry ROE (Claus and Thomas, 2001; Baginski and Wahlen, 2003), and the Ohlson-Juettner (OJ) model (Ohlson and Juettner-Nauroth 2005), which assumes that abnormal earnings growth decays asymptotically over a period of time (Gode and Mohanram, 2003; Easton, 2004).

Ashbaugh, Collins and LaFond (2004) investigate, on a sample of US listed firms, the effect of corporate governance quality (measured by quality of firms' financial information, ownership structure, shareholder rights and board structure) on the cost of equity capital. Equity capital is estimated using the average firm's expected return over its fiscal period (Botosan and Plumlee, 2005) and Price/Earnings to growth ratio (PEG ratio), as developed in Easton (2004). Ashbaugh, Collins and LaFond (2004) find that firms with better governance present a lower cost of equity capital.

Cheng, Collins and Huang (2006) study the effects of shareholder rights on the cost of equity capital on a sample of 8,281 US firms in the period 1992-2002. The authors measure the first variable using a modified form of the GIM Index, and the second variable using the abnormal earnings growth valuation model (OJ model).

Their results show that weak firm-level shareholder rights levels are associated with a higher cost of equity capital, supporting the hypothesis that a good "external" corporate governance can reduce cost of equity capital.

Chen, Chen and Wei (2003) investigate the impact of corporate governance quality (measured by the CLSA corporate governance survey) (Note 2) on the cost of equity capital on a sample of 545 Asian firms observations for the period 2001-2002. Cost of equity capital is measured by the residual income valuation model (RIV), while corporate governance quality is proxied by the results of the two surveys from Credit Lyonnais Securities Asia (CLSA). The results show that corporate governance quality is negatively related to cost of equity capital.

These findings are confirmed in a recent study (Chen et al., 2009) carried out on a sample of 559 Asian firms in the period 2001-2002. This finds that the corporate governance effect is more pronounced in countries that provide relatively poor legal protection.

Byun, Kwak and Hwang (2008) examine the relation between corporate governance and the implied cost of equity capital (Note 3) on a sample of 389 firms using a corporate governance score constructed by the Korea Corporate Governance Service for the period 2001 - 2004. Their results indicate that firms with good corporate governance practices, in particular shareholder rights protection, have a lower implied cost of equity capital.

So several studies, all focusing on multiple industries, have examined the relationship between corporate governance and cost of equity capital. They suggest that there are positive shareholder value implications for firms with stronger corporate governance mechanisms. This can be explained by the fact that shareholders consider enterprises characterized by "good" governance less at risk than firms characterized by "bad" governance, and are consequently prepared to accept a lower return on their capital in view of the reduced risk.

We now investigate whether findings for multiple sectors on the relationship between corporate governance and cost of equity capital can be extended to the financial sector. The decision to focus on this sector is dictated by the awareness that financial intermediaries are "special", that is, different from corporations, because:

- they have more diverse stakeholders (many depositors and often more diffuse equity ownership) and this means there are fewer perceived incentives for monitoring;
- they are more subject to corporate governance risks, as historically they have been chacacterized by outright misuse (tunneling, insider lending, expropriation, etc.) than non-financial firms;
- given their systemic importance, they are heavily regulated.

In this perspective, this paper examines the following hypotheses:

H_1: *The quality of "external" governance, measured by the GIM Index, is inversely related to the financial company cost of equity.*

H_2: *The quality of "internal" governance, measured by the participation of institutional investors in its equity, is inversely related to the financial company cost of equity.*

3. Sample and Methodology

In this study we use a sample of 122 American financial companies listed on the US stock exchange. For each company we measure through an ordinary least squares regression model the ability of "external" and "internal" corporate governance (independent variables) to affect the cost of equity (dependent variable). To test this link and examine the quality of governance and the cost of equity we use control variables identified in previous literature.

The variables are selected for each of the companies in the sample, with reference to the years 2006 (122 observations), 2004 (119 observations), and 2002 (75 observations), for a total of 316 observations. To take account of the different time frames in the sample, we include one constant in the regression (dummy variable) for each of the reference years.

3.1 Measurement of the Quality of Corporate Governance

The two independent variables concern governance quality.

The first variable, representative of "external" governance, is measured with the GIM Index. This index consists of 24 "anti-takeover" provisions and is calculated by assigning one point for every variable detrimental to shareholder protection. The index can therefore exhibit values from 0 to 24. The higher scores indicate the existence of more limitations on the shareholders and, consequently, more power to the management. The lower scores indicate companies where shareholders are better protected against management gaining private benefit.

The values of the GIM Index were extrapolated from Investor Research Responsibility Center (IRRC), which publishes the values of governance variables for 1500 American companies, for the years 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006. We isolated the years 2002, 2004, and 2006 and selected the values of the GIM Index relating exclusively to financial companies. Since the IRRC does not provide annual data, we assume, in line with the assumptions of Gompers, Ishii, and Metrick (2003), that the quality of governance measured by the IRRC in a given year is the same as would have been measured for the following year.

Following the literature, the quality of "internal" governance, the second independent variable, is measured on the basis of the percentage of share capital held by institutional investors, whose presence should represent a form of "indirect" control on management. To construct this variable we used data from the Value Line database.

3.2 Measurement of the Cost of Equity

The cost of equity (K_e), the dependent variable, is estimated using the one-stage Dividend Discount Model. This model, also known as the Gordon model (1959), shows that the price of a share at time *t* is the product of the ratio between the dividend at time *t+1* and the difference between the cost of equity and growth rate of the share, or:

$$P_0 = D_0 \, X \, \frac{(1+g)}{(k_e - g)} = \frac{D_1}{(k_e - g)} \quad (1)$$

Where:

P_0 is the share price at time *t*;

D_0 is the dividend per share at time *t*;

g is the rate of growth of the dividends;

k_e is the cost of the equity;

D_1 is the dividend per share at time *t+1*.

Therefore, inverting (1), we can estimate the cost of equity as:

$$k_e = \frac{D_1}{P_0} + g \quad (2)$$

The growth rate g is estimated as:

$$g = ROE \times (1 - \text{Payout Ratio}) \quad (3)$$

This is an estimated solution of equity cost that takes account of company performance and share appreciation on the market. It is possible to demonstrate that the cost of equity, calculated in this way, is also given by the return on equity (ROE) multiplied by the ratio between net equity and capitalization. The value of goodwill therefore plays both a multiplicative and a demultiplicative role in the cost of equity.

For values of the variables used to calculate the cost of equity (share price at time t, dividends distributed at time t+1, ROE and Payout Ratio) we use data from the Value Line database.

3.3 The Control Variables

We use control variables for aspects which could also affect the cost of equity: size (CAP) and profitability (GR.EPS and PE) of the company, market performance (PBV), and the liquidity generated by the enterprise (CASH).

The size of the company, as suggested by Berk (1995) and Botosan and Plumlee (2001), is measured using the logarithm of market capitalization. This variable should exhibit a negative link with the cost of equity, as larger companies are deemed less at risk than smaller ones.

Expected profitability is measured by such indicators as Expected Growth in EPS (earnings per share) and Forward Price/Earning. Since the enterprises with the best profitability prospects should be perceived by the shareholders as less risky than those with lower profitability expectations, we hypothesized an inverse relationship between expected profitability and cost of equity.

Performance on the stock exchange is measured through the Price/Book Value Index. Since stocks overpriced by the market with respect to the intrinsic equity value are generally characterized by high risk, a positive link can be theorized between that indicator and the cost of equity.

Finally, the firm's liquidity is measured using the Cash/Firm Value index. This variable should theoretically exhibit a negative link with the cost of equity, as companies with more liquidity are deemed less at risk than those with problems of liquidity, all else being equal.

3.4 Descriptive Statistics

Table 1 summarizes the descriptive statistics of the variables used in the sample analysis. It shows the mean, median, minimum and maximum value, standard deviation, asymmetry, and kurtosis of the following variables: cost of equity (KE), GIM Index (GIM), percentage of institutional investment (ISTI), price to book value ratio (PBV), expected growth of earnings per share (GR.EPS), logarithm of market capitalization (CAP), expected price/earnings (PE), and corporate liquidity on business value (CASH).

<Table 1 about here>

The cost of equity used in the analysis as dependent variable shows a mean value of 11.21%, a median value of 11.3%, and a standard deviation of 0.055.

The GIM Index, an expression of the quality of "external" governance, shows a mean of 9.6, a median of 9, and a standard deviation of 2.8. A low value means that the firm is exposed to takeover and therefore that the market exercises a control function over the management, suggesting greater protection of the shareholders; vice versa for the high values.

The distribution of frequencies of the GIM variable (Table 2) highlights the absence of financial companies characterized by very low governance quality (high GIM Index values). The GIM Index, which could potentially range from 0 to 24, is always 16 or lower in our sample. In percentage terms, the highest relative frequencies are at the GIM Index scores of 9 (frequency of 15.51%) and 12 (frequency of 14.24%).

<Table 2 about here>

On the other hand, the percentage of institutional investment, an expression of the quality of "internal" governance, shows a mean value of 52.11%, a median of 52.93%, and a standard deviation of 0.2. As the value of the variable increases, the quality of firm governance is considered to be higher.

The distribution of frequencies of the ISTI variable (Table 3) highlights how the presence of institutional investors in American listed financial companies is extremely variegated. Financial firms with a percentage of institutional investment of less than 51.8% also score a cumulative frequency of 48.72%. This means that about half the other companies in the sample have institutional investors among their shareholders holding more than 51.8% of the shares.

<Table 3 about here>

Before performing the empirical study we ascertain the correlation between the independent variables used in the survey. Our analysis of these correlations seems to support the theory that every independent variable has its own peculiar informative value in the ability to explain the cost of equity (Table 4).

<Table 4 about here>

4. Results

The analysis investigates the link between the quality of governance and the cost of equity, using control variables relating to parameters of profitability, market performance, liquidity, and company size. In formulas:

$$K_e = \alpha_1 + \alpha_2 + \alpha_3 + \alpha_4(GIM_{i,t}) + \alpha_5(ISTI_{i,t}) + \alpha_6(PBV_{i,t}) + \alpha_7(GREPS_{i,t}) + \alpha_8(CAP_{i,t}) + \alpha_9(PE_{i,t}) + \alpha_{10}(CASH_{i,t}) \quad (4)$$

where:

K_e is cost of equity;

α_1 is a dummy variable, equal to 1 in 2006, 0 otherwise;

α_2 is a dummy variable, equal to 1 in 2004, 0 otherwise;

α_3 is a dummy variable, equal to 1 in 2002, 0 otherwise;

$GIM_{i,t}$ is the GIM index;

$ISTI_{i,t}$ is institutional investment;

$PBV_{i,t}$ is price to book value;

$GREPS_{i,t}$ is expected growth in earning per share;

$CAP_{i,t}$ is market capitalization;

$PE_{i,t}$ is price earning;

$CASH_{i,t}$ is cash to firm value.

Equation (4) presents a corrected R square of 0.4320 and, shows that the model has high explanatory power for the variance of the dependent variable (Table 5).

The quality of "external" governance measured by the GIM index shows a statistically significant link with the cost of equity. In particular, contrary to Hypothesis 1, financial companies with the best governance, or those most exposed to takeover (which theoretically ought to provide better protection for the shareholders rather than the management), are associated with costs of equity higher than those with lower governance quality. Unlike previous studies focusing on multiple industries (Chen et al., 2003; Ashbaugh et al., 2004; Cheng et al., 2006; Byun et al., 2008; Chen et al., 2009), the link between the two variables in our study is weak, and the coefficient of the relationship is –0.002.

Neither do the results confirm Hypothesis 2 as regards the profile of "internal" governance. The empirical evidence shows that the cost of equity increases as the percentage of institutional investment rises.

As regards the control variables, liquidity and company size do not furnish a statistically significant contribution to determination of the cost of equity. In line with the expectations, however, the cost of equity shows a link with expected profitability and stock market performance.

<Table 5 about here>

The analysis continues with the division of the total sample into four sub-samples, according to the quality of "internal" and "external" governance of financial companies.

From the original sample we isolated four observations for which the value of "internal" governance was not available. The quality of "internal" governance is considered high when the percentage of institutional investment exceeds 51.8% of the equity. The value of 51.8% corresponds to a cumulative frequency of the sample of 48.72%, as shown in Table 3.

The quality of "external" governance is considered high in the case of GIM Index values of 9 or lower: the value 9 corresponds to a cumulative frequency of the sample of 50.63%, as shown in Table 2.

We identify the following sub-samples: quality of "internal" governance high and "external" governance low (sub-sample 1), quality of both "internal" and "external" governance high (sub-sample 2), quality of "internal" and "external" governance low (sub-sample 3), and quality of "internal" governance low and "external" governance high (sub-sample 4) (Figure 1).

<Figure 1 about here>

Table 6 and Figure 2 show the average values of the cost of equity for the individual sub-samples.

<Table 6 about here>

<Figure 2 about here>

The values shown in Table 6 highlight how the higher average cost of equity (12.27%) is associated with financial companies characterized by high quality of both "external" and "internal" governance (sub-sample 2). On the other hand, companies characterized by lower quality of both "external" and "internal" governance are associated with the lowest cost of equity of the entire sample (10.00%) (sub-sample 3).

Because these findings conflict with our predictions, separate regressions were carried out on the four sub-samples in Table 6, using the same variables as for the total sample.

For sub-sample 2, characterized by high quality of both "internal" and "external" governance, the results show the existence of a direct link of the cost of equity with both the presence of institutional investors (in line with the evidence found in the survey on the global sample) and with the GIM Index (Table 7). So for sub-sample 2, the hypothesis of an inverse relationship between quality of "external" governance and cost of capital appears confirmed.

<Table 7 about here>

But the results are not confirmed for the other sub-samples. For sub-sample 3, characterized by low "internal" and "external" quality of governance, the regression shows the absence of a significant link between the GIM Index and cost of equity (Table 8), while it confirms the existence of a direct link between "internal" quality of governance and cost of equity.

This also occurs for sub-sample 1, characterized by high quality of both "internal" and "external" governance. But for sub-sample 4, characterized by high quality of both "internal" and "external" governance, the regression does not reveal any link between the quality of corporate governance (either "internal" or "external") and cost of equity.

<Table 8 about here>

To reduce the distortive effect on the results that could derive from the investors' difficulty in assessing governance, a further regression is run on an aggregation of the previous sub-samples into two groups. The first group contains only financial companies characterized by high or low quality of both "external" and "internal" governance (sub-samples 2 and 3). The second group contains financial companies characterized by an uneven quality of governance, i.e., good external but not internal (sub-sample 1) and good internal but not external (sub-sample 4). The results show the existence of a statistically significant link between the cost of equity and the quality of internal governance, while no link emerges between the quality of external governance and the cost of equity.

Since the inverse relationship between the quality of external governance and the cost of capital is verified only in the case of massive investment by institutional investors in the companies' capital, we also investigate whether such institutional investors are attributed a role of "certification" of the governance. But aggregating sub-samples 1 and 2, i.e., taking into consideration only financial companies characterized by high quality of "internal" and governance, we find no link between the quality of governance and Ke.

The analyses do not identify a direct link between the quality of "internal" governance and the cost of equity. In other words, companies characterized by significant institutional investment are those where shareholders either support a higher cost of equity or, alternatively, expect lower yield on their capital. It is of course important to note that these results could also depend on the way in which the cost of equity is estimated. Given that institutional investors prefer policies of dividend distribution, they may in fact concentrate on stocks with specific characteristics.

The evidence is not as clear as regards a link between the quality of "external" governance and the cost of equity. At the general level, however, it seems possible to state that there is no clear, statistically significant relationship between the two variables. There may however be a link if we take account of the interaction of different mechanisms of governance, following the suggestion of Cremers, Nair, and Wei (2007). Exclusively for companies characterized by a preponderance of institutional investors (i.e., companies characterized by high quality of "internal" governance) and by a high exposure to takeover (i.e., high quality of "external" governance) we find a reverse link between the quality of

external governance and the cost of equity. This is consistent with Hypothesis 1. In other words, good "external" governance, indicated by a low value on the Gompers index, contributes to lowering the cost of equity only in companies with a preponderance of institutional investors among the shareholders.

5. Conclusions

This study starts from the assumption that good corporate governance may reduce business risk. It attempts to identify a link between governance quality and the cost/yield of shareholder equity in the financial sector. In particular, we assess the impact on equity cost of the quality of "external" governance (measured by the GIM Index, an index of protection from takeover) and the quality of "internal" governance (measured by the percentage of institutional investors among the shareholders).

On the one hand, we confirm for the financial sector a link between the cost of equity and the presence of institutional investments, i.e., the higher the proportion of institutional investments the higher the cost of equity. This finding may reflect the method of calculating equity cost. On the other hand, no clear evidence is found of a link between cost of equity and exposure to takeover.

Unlike previous literature, we cannot therefore conclude by claiming the existence of a clear link between the cost of capital and the quality of governance in financial companies. Of course, this may reflect the composition of the sample and constraints on the analysis. The study focused on a single sector for a limited number of years (2002-2006) and an estimate of equity cost was made following the Gordon model. Studies carried out on different sectors, using broader time frames and different estimates of equity cost could possibly yield different results. But it is important to note the existence of a direct link between the two variables under certain conditions: the cost of equity increases, rather than decreases, for companies with the best governance.

In conclusion, this apparently irrational behavior by investors requires some explanation. If good governance improves financial results and reduces risk for investors, why is this not taken into account by different and lower risk premiums? If our results are confirmed by future research, there will be a need to investigate the reasons for this "abnormal" relationship.

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Notes

Note 1. These studies use an ex-ante measure of required returns (the implied cost of equity capital).

Note 2. The CLSA (Credit Lyonnais Securities Asia) survey is a comprehensive report on corporate governance. It assesses corporate governance on seven key criteria: transparency, management discipline, independence, accountability, responsibility, fairness and social awareness.

Note 3. Byun, Kwak and Hwang (2008) measure the cost of equity capital by means of three proxies estimated by mean or median analysts' earnings forecast.

Table 1. Descriptive statistics

Variable	Mean	Median	Minimum	Maximum	Std.Dev.	Asymmetry	Kurtosis
KE	11.21%	11.30%	-6.50%	59.77%	0.055	2.245	20.126
GIM	9.601	9.000	3.000	16.000	2.817	-0.107	-0.555
ISTI	52.11%	52.93%	0.00%	97.59%	0.198	-0.064	-0.372
PBV	2.675	2.388	0.300	14.414	1.327	3.813	25.512
GR.EPS	10.50%	9.60%	1.50%	50.00%	0.046	2.880	20.091
CAP	8.210	7.829	4.578	12.523	1.427	0.825	0.230
PE	17.150	15.124	7.012	138.417	11.091	6.363	54.959
CASH	15.30%	9.47%	0.03%	259.51%	0.217	6.084	54.126

Table 1 presents the descriptive statistics of the variables used in the analysis: cost of equity (KE), GIM Index (GIM), percentage of institutional investment (ISTI), price to book value ratio (PBV), expected growth of earnings per share (GR.EPS), logarithm of market capitalization (CAP), expected price/earnings (PE), and corporate liquidity on business value (CASH).

Table 2. Distribution of frequency of the GIM variable

Value	Frequency	Rel.	Cum.
3	4	1.27%	1.27%
4	9	2.85%	4.11%
5	13	4.11%	8.23%
6	22	6.96%	15.19%
7	20	6.33%	21.52%
8	43	13.61%	35.13%
9	49	15.51%	50.63%
10	34	10.76%	61.39%
11	28	8.86%	70.25%
12	45	14.24%	84.49%
13	24	7.59%	92.09%
14	12	3.80%	95.89%
15	12	3.80%	99.68%
16	1	0.32%	100.00%

Table 2 presents the distribution of frequency of the GIM variable (316 observations). We report the values relative to absolute frequency, relative frequency (Rel.), and cumulative frequency (Cum.).

Table 3. Distribution of frequency of the ISTI variable

Range			Frequency	Rel.	Cum.
	<	0.030497	1	0.32%	0.32%
0.030497	-	0.091491	4	1.28%	1.60%
0.091491	-	0.15248	5	1.60%	3.21%
0.15248	-	0.21348	13	4.17%	7.37%
0.21348	-	0.27447	14	4.49%	11.86%
0.27447	-	0.33547	18	5.77%	17.63%
0.33547	-	0.39646	28	8.97%	26.60%
0.39646	-	0.45745	35	11.22%	37.82%
0.45745	-	0.51845	34	10.90%	48.72%
0.51845	-	0.57944	28	8.97%	57.69%
0.57944	-	0.64043	43	13.78%	71.47%
0.64043	-	0.70143	38	12.18%	83.65%
0.70143	-	0.76242	14	4.49%	88.14%
0.76242	-	0.82342	15	4.81%	92.95%
0.82342	-	0.88441	10	3.21%	96.15%
0.88441	-	0.9454	9	2.88%	99.04%
	>=	0.9454	3	0.96%	100.00%

Table 3 presents the distribution of frequency of the ISTI variable (312 observations). The percentage of institutional investment is defined on the basis of 17 ranges. We report the values relative to absolute frequency, relative frequency (Rel.), and cumulative frequency (Cum.).

Table 4. Table of correlations

	GIM	ISTI	PBV	GR.EPS	CAP	PE	CASH
GIM	1						
ISTI	-0.0046	1					
PBV	-0.0623	0.0242	1				
GR.EPS	-0.1006	0.1451	0.3479	1			
CAP	0.0185	0.2622	0.0864	-0.0142	1		
PE	-0.052	-0.0834	0.1179	0.02	-0.259	1	
CASH	-0.1661	0.1086	-0.1135	0.0379	-0.103	0.2173	1

Table 4 shows the correlations between the independent variables considered in the regression: GIM Index (GIM), percentage of institutional investment (ISTI), price to book value ratio (PBV), expected growth of earnings per share (GR.EPS), logarithm of market capitalization (CAP), expected price/earnings (PE), and corporate liquidity on business value (CASH).

Table 5. Regression on the total sample

	Coefficient	Std.Error	t ratio	P-value
α_1	0.139***	0.023	6.074	<0.00001
α_2	0.132***	0.023	5.679	<0.00001
α_3	0.143***	0.023	6.303	<0.00001
GIM	-0.002*	0.001	-1.760	0.080
ISTI	0.059***	0.013	4.399	0.000
PBV	0.021***	0.002	10.465	<0.00001
GR.EPS	-0.116*	0.061	-1.907	0.058
CAP	-0.003	0.002	-1.437	0.152
PE	-0.004***	0.000	-9.898	<0.00001
CASH	-0.016	0.015	-1.083	0.280
R-square				0.450693
Corrected R-square				0.431967

Table 5 presents the results of the regression made considering as dependent variable the cost of equity (Ke). The sample is composed of 316 observations. One, two, or three asterisks represent the significance of the coefficients, i.e., the rejection of the hypothesis of nullity of the coefficient, with a level of probability of 10%, 5%, and 1%, respectively.

Table 6. Breakdown of sub-samples

	Number of observations:	Mean	Median
Sub-sample 1	74	12.11%	12.28%
Sub-sample 2	86	12.27%	11.91%
Sub-sample 3	79	10.00%	10.19%
Sub-sample 4	73	10.40%	11.10%

Table 6 shows the division of the total sample into four sub-samples: quality of "internal" governance high and "external" governance low (sub-sample 1), quality of both "internal" and "external" governance high (sub-sample 2), quality of "internal" and "external" governance low (sub-sample 3), and quality of "internal" governance low and "external" governance high (sub-sample 4). With reference to each sub-sample, the mean and median are shown.

Table 7. Regression of the second sub-sample (financial companies characterized by high quality of both "internal" and "external" governance)

	Coefficient	Std.Error	t ratio	P-value
α_1	-0.055	0.063	-0.885	0.37902
α_2	-0.053	0.062	-0.845	0.40116
α_3	-0.036	0.061	-0.601	0.54951
GIM	0.011***	0.003	3.296	0.00155
ISTI	0.154***	0.035	4.361	0.00004
PBV	0.032***	0.003	12.621	<0.00001
GR.EPS	-0.006	0.115	-0.050	0.96011
CAP	-0.002	0.003	-0.787	0.43400
PE	-0.006***	0.001	-6.377	<0.00001
CASH	0.036*	0.021	1.702	0.09321
R-square	0.796573			
Corrected R-square	0.770039			

Table 7 presents the results of the regression considering as dependent variable the cost of equity (Ke). The sample consists of 86 observations and refers to financial companies characterized by high quality of both "internal" and "external" governance. One, two, or three asterisks represent the significance of the coefficients, i.e., the rejection of the hypothesis of nullity of the coefficient, with a level of probability of 10%, 5%, and 1%, respectively.

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Table 8. Regression of the second sub-sample (financial companies characterized by low quality of both "internal" and "external" governance)

	Coefficient	Std.Error	t ratio	P-value
α_1	0.173***	0.061	2.832	0.00629
α_2	0.174***	0.059	2.919	0.00493
α_3	0.162***	0.059	2.740	0.00808
GIM	-0.001	0.003	-0.518	0.60656
ISTI	0.082*	0.048	1.725	0.08969
PBV	0.018**	0.007	2.567	0.01276
GR.EPS	0.042	0.153	0.272	0.78634
CAP	-0.007	0.004	-1.606	0.11347
PE	-0.006***	0.001	-4.413	0.00004
CASH	0.104	0.118	0.881	0.38189
R-square	0.339260			
Corrected R-square	0.240149			

Table 8 presents the results of the regression considering as dependent variable the cost of equity (Ke). The sample consists of 79 observations and refers to financial companies characterized by low quality of both "internal" and "external" governance. One, two, or three asterisks represent the significance of the coefficients, i.e., rejection of the hypothesis of nullity of the coefficient, with a level of probability of 10%, 5%, and 1%, respectively.

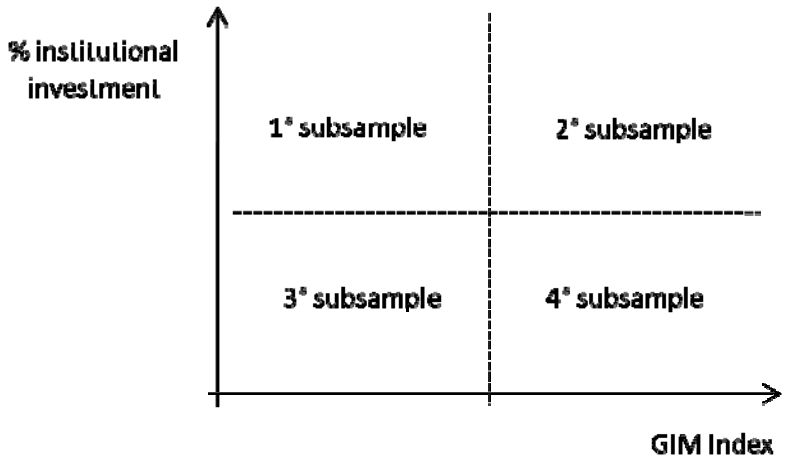

Figure 1. Breakdown of sub-samples

Figure 1 shows the division of the total sample into four sub-samples. On the X axis we placed the variable that expresses the quality of "external" governance (GIM Index): the values close to the origin of the axes are associated with companies characterized by low quality of "external" governance (high GIM Index), while values farther from the origin of the axes are associated with companies characterized by high quality of "external" governance (low GIM Index). On the Y axis we placed the variable that expresses the quality of "internal" governance (percentage of institutional investment): the values close to the origin of the axes are associated with companies characterized by low quality of "internal" governance (low percentage of institutional investors), while values farther from the origin of the axes are associated with companies characterized by high quality of "internal" governance (high percentage of institutional investors).

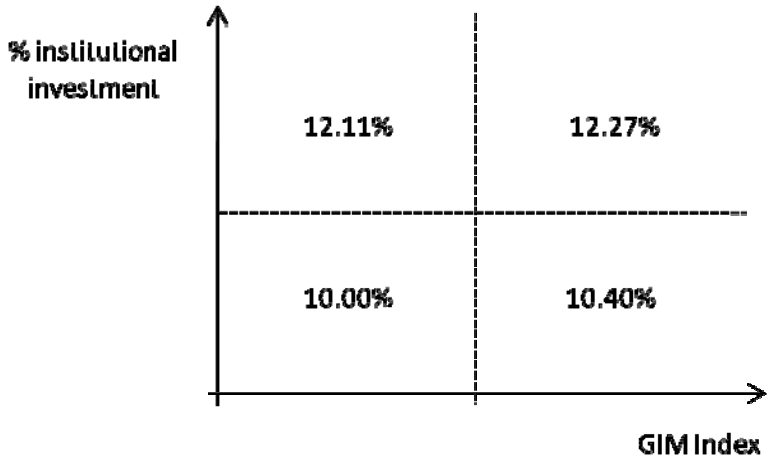

Figure 2. Cost of equity of the individual sub-samples

Figure 2 shows the division of the total sample into four sub-samples and the cost of equity associated with each. On the X axis we placed the variable that expresses the quality of "external" governance (GIM Index): the values close to the origin of the axes are associated with companies characterized by low quality of "external" governance (high GIM Index), while values farther from the origin of the axes are associated with companies characterized by high quality of "external" governance (low GIM Index). On the Y axis we placed the variable that expresses the quality of "internal" governance (percentage of institutional investment): the values close to the origin of the axes are associated with companies characterized by low quality of "internal" governance (low percentage of institutional investors), while values farther from the origin of the axes are associated with companies characterized by high quality of "internal" governance (high percentage of institutional investors).