

Corporate Governance and Firm Performance: Recent Evidence from Borsa Istanbul (BIST) Corporate Governance Index (XKURY)

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Abstract

As competition for foreign and domestic investment increases, firms look for new ways to remain competitive in today's complex business environment. Good corporate governance is rewarded with higher market valuation and companies with better corporate governance practices enjoy higher price-to-book ratios. Investors are actually ready to pay a premium for a company that is respectful to corporate governance practices. In this study, we aim to analyze the impact of several accounting ratios on the corporate governance scores of the selected companies from the Borsa Istanbul (BIST) Corporate Governance Index (XKURY). Our study covers the period of 2008 and 2014. To conduct our study, we selected three types of ratios : liquidity ratios, profitability ratios and operating efficiency ratios. Our results reveal the positive impacts between the liquidity ratios of Net Cash Flow by Operating Activities and Net Working Capital to Total Assets on the corporate governance rating scores. On the other hand, we could not obtain any significant associations between profitability ratios, operating efficiency ratios and corporate governance levels of the firms.

Keywords : Corporate governance, firm performance, accounting ratios, liquidity ratios, Borsa Istanbul (BIST) Corporate Governance Index (XKURY)

1. Introduction

In today's complex business environment globalization and the financial market liberalization have provided new opportunities for enhanced profits to the international investors. Companies are now much more exposed to intense competition and significant amount of capital fluctuations due to the reason that they need to attract both domestic and international capital in order to conduct their business operations. As competition for foreign and domestic investment grows, and firms look for new ways to remain competitive, the concept of corporate governance attracts considerable attention as an effective tool to improve firm competitiveness and the major economic and business environment in a country.

Although corporate governance is a relatively new term, it has evolved in response to corporate scandals such as Enron, Worldcom, Parmalat and Cirio in many countries at the beginning of the new century. As a consequence of all of these scandals, providers of necessary financing for companies such as pension funds, mutual funds, banks or other financial institutions demand assurances that their investments will be protected and will obtain the promised return. As Gregory and Simms (1999) underline, good corporate governance is at the center of this process, which ensures that management of corporate entities is conducted in accordance with the highest standards of ethics and efficiency.

It is obvious that good corporate governance is rewarded with higher market valuation and companies with better corporate governance practices also enjoy higher price-to-book ratios. Investors are actually ready to pay a premium for a company that is respectful to shareholder rights, has transparent financial reports, and has an independent board providing management oversight, which constitute basis of corporate governance approaches (Campos, Newell and Wilson, 2002). Good corporate governance is important not only because it represents sound values, but also because it allows a firm to maximize wealth in a legitimate way. Corporate governance has various benefits for the firms, investors and the society in general. As Aras and Crowther (2008) point out, these benefits include improving company performance, increasing credibility, ensuring efficient risk management and efficient use of resources, lowering the cost of capital, strengthening corporate reputation, mitigating risk and increasing shareholder value. Additionally, the major benefits for the society include fighting corruption, providing the suitable environment for suitable investment and sustainable growth, thereby promoting competition and efficiency and developing capital markets.

Borsa Istanbul (BIST) Corporate Governance Index (XKURY) is composed of listed companies who accomplished a certain level of Corporate Governance Principles. XKURY aims to measure the price and return performances of companies traded in BIST Markets with a corporate rating of minimum 7 over 10 points. The corporate governance rating is calculated by the five rating institutions approved by the Capital Markets Board (CMB) to evaluate and rate the companies' compliance with the corporate governance principles of Turkey as a whole.

In this study, we aim to analyze the impact of the selected accounting ratios on the corporate governance scores of the selected companies from the Borsa Istanbul (BIST) Corporate Governance Index (XKURY). Our study covers the period of 2008 and 2014. To conduct our study, we selected three types of ratios : liquidity ratios, profitability ratios and operating efficiency ratios. We particularly preferred these ratios in our analysis since we believe that they are the most related ratios to measure the firm performance and to indicate the relationship between firm performance and corporate governance rating score. Our results reveal the positive impacts between the liquidity ratios of Net Cash Flow by Operating Activities and Net Working Capital to Total Assets on the corporate governance rating scores. These results are a clear indication that as these liquidity ratios increase so does the corporate governance scores of the selected companies. On the other hand, we could not obtain any significant associations between profitability ratios, operating efficiency ratios and corporate governance levels of the firms. The remaining parts of the study are as follows : literature review, data and research design, empirical results and conclusion.

2. Literature Review

We could prove the direct relationship between the financial performance of a company with the level of compliance with the Corporate Governance Principles with empirical studies from different countries. However, existing literature presents controversial results on the relationship between corporate governance and firm performance. While various studies support the association between financial performance and corporate governance, others find the opposite results. In this context, it is not always possible to establish a positive link between corporate governance and firm performance due to the reason that researchers generally use different factors to investigate this relationship. We briefly mention some of the major studies in this field as follows.

Because of poor corporate governance policies of firms, usually the shares of firms are worth millions of dollars less than they would if their companies had established and implemented good governance policies. Black (2001) in his study tried to determine whether corporate governance has an impact on share prices. He concluded that sound corporate governance practices implemented by firms made a huge difference on share prices by determining a strong correlation between firm value and governance rating.

One of the most important studies related to this issue belong to a known paper by Gompers, Ishii, and Metrick (2003), who studied the impact of corporate governance on firm performance. The researchers constructed a governance index and found a positive correlation between corporate governance and firm performance during 1990s. Their results indicate that firms with weaker shareholder rights have lower market values and lower returns whereas firms with stronger shareholder rights enjoy higher market values and higher returns (Baker and Powell, 2009). Accordingly, they found that stock returns of firms with strong shareholder rights outperformed, returns of firms with weak shareholder rights by 8.5% per year during this decade (Bhagat and Bolton, 2008).

Drobotz, Schillhofer and Zimmerman (2003) from Germany obtain strong relationship between corporate governance and firm financial performance. Klapper and Love (2004) point out that some firms in countries with weak legal protection would want to adopt better firm-level governance to offset the weaknesses in their country's laws. They found that better corporate governance is highly related with higher financial performance and market valuation. Gonenc and Aybar (2006) interestingly determined that companies with a higher level of corporate governance such as those that offer stronger protection to minority shareholders experience less value loss during a financial crisis.

Core et al. (2006) found that companies with weak corporate governance exhibit a significantly poor operating performance. However, their results do not support the statement that weak governance causes poor stock returns. According to the results of their study conducted in Korean market, Black, Jang and Kim (2006) concluded that corporate governance is a crucial factor in explaining market value of companies.

On the other hand, Bauer, Gunster and Otten (2003) could not find evidence of a significant association between corporate governance and performance. Buyuksalvarci and Abdioglu (2010) could not also obtain any significant results on the relationship between corporate governance and financial performance in the form of stock returns for the companies included in the Borsa Istanbul (BIST) Corporate Governance Index (XKURY).

3. Data and Research Design

3.1. Data

Data used in the empirical analysis covers the period from January 1, 2008 to December 31, 2014. The sample used in the empirical analysis is comprised of 142 firm-year observations. The broad sample used in the empirical analysis is said to be a good representative of large firms operating in Turkish economy. To be included in sample, firms should be listed in Borsa Istanbul (BIST) Corporate Governance Index (XKURY), and operate in the manufacturing industry. Firms operating in financial sector are excluded from the sample since they have largely different financial statement structures and different financial regulations. Accounting ratios used in the empirical study are divided into three groups : liquidity ratios, operating efficiency ratios, and profitability ratios. These ratios are derived from balance sheets, cash flow statements and income statements disclosed by sample firms. All data are manually collected from the financial statements of firms included in the sample. Additionally, we collected all the data of corporate governance rating scores from the website of public disclosure platform (<http://www.kap.gov.tr>).

3.2. Research Design

The primary objective of empirical analysis is to determine whether accounting ratios have an impact on the corporate governance ratings received by the firms operating in Turkey. We analyze the association between corporate governance ratings and accounting ratios by employing logistic regression analysis. Consequently, the main objective of our study is to investigate whether corporate governance ratings reflect the information disclosed by accounting ratios.

Accounting ratios are important for several reasons: First, different users such as creditors, investors, and other stakeholders use accounting ratios massively in their decisions to analyze the financial situation of the company. Secondly, accounting ratios are also important in order to evaluate the firm's efficiency in terms of its operations and management and its profitability. Finally, accounting ratios are crucial in determining the weak points of the firm's operations and formulating its future plans and strategies. In this respect, management of the company needs accounting ratios in devising strategy.

The value of accounting ratios is a prominent consideration in resolving the determination of the corporate governance rating scores. Motivated by these concerns, we develop three research hypotheses :

H₁: High liquidity ratio increases the corporate governance rating score.

H₂: High profitability ratio increases the corporate governance rating score.

H₃: High operating efficiency ratio increases the corporate governance rating score.

Current ratio, net working capital to total assets, net cash flow by operating activities and cash flow from operating activities to current liabilities are used to measure the liquidity degrees of sample firms. Return on asset (ROA), return on equity (ROE), earning per share (EPS), and operating income per share are included in the empirical model to measure the financial performances of sample firms by measuring their profitabilities. Current asset turnover and fixed asset turnover ratios are used to measure the operating efficiency of sample firms to evaluate how efficiently firms utilize their assets and manage their liabilities.

To analyze the association between corporate governance rating scores and accounting ratios, we estimate the following model:

$$\text{Corporate Governance Rating Score}_{it} = w_0 + w_1 \text{Current Ratio}_{it} + w_2 \text{Net Cash Flow by Operating Activities}_{it} + w_3 \text{Cash Flow from Operating Activities to Current Liabilities}_{it} + w_4 \text{Equity Turnover}_{it} + w_5 \text{ROA}_{it} + w_6 \text{ROE}_{it} + w_7 \text{EPS}_{it} + w_8 \text{Operating Income per Share}_{it} + w_9 \text{Net Working Capital to Total Asset}_{it} + w_{10} \text{Current Asset Turnover}_{it} + w_{11} \text{Fixed Asset Turnover}_{it} + u_{it}$$

in which, for sample firm *i* and year *t*,

Corporate Governance Rating Score_{it} = Corporate governance rating score is a dichotomous variable that takes 1 when a firm fully satisfies the corporate governance principles, and 0 otherwise;

Current Ratio_{it} = Current asset divided by current liabilities at year *t*

Net Working Capital to Total Asset_{it} = Net working capital divided by the total assets at year *t*

Net Cash Flow by Operating Activities_{it} = Net cash flow by operating activities deflated by the number of outstanding shares at year *t*

Cash Flow from Operating Activities to Current Liabilities_{it} = Cash flow operations divided by current liabilities at year t

ROA_{it} = Net income divided by total assets at year t

ROE_{it} = Net income divided by total stockholders' equity at year t

EPS_{it} = Firm's earning divided by the number of common stock at year t

Operating Income per Share_{it} = Operating income divided by number of common stock at year t

Current Asset Turnover_{it} = Net sales revenue divided by current assets at year t

Fixed Asset Turnover_{it} = Net sales revenue divided by fixed assets at year t

4. Empirical Results

4.1. Descriptive Statistics

In table 1, the descriptive statistics for variables used in the empirical analysis are presented. As can be seen from the table, liquidity ratios of sample firms are relatively high. The level of current ratio, the most common way of measuring of liquidity position, reveals that sample firms have sufficient current assets to cover their short term liabilities. Table 1 also indicates that the majority of sample firms are profitable during the period of 2008-2014. All profitability measures for sample firms (ROA, ROE, EPS and operating income per share) reveal that the results of operations conducted by these firms are profitable.

Except total asset turnover, other operating efficiency measures, equity turnover, current asset turnover and fixed asset turnover are above 1. This situation is the clear indication that despite the negative impacts of the recent financial crisis and the geopolitical risks of Turkey, sample firms have meticulously improved their credibilities.

Table 1. Descriptive Statistics for Sample Firms

Variable	Mean	Std. Deviation	25%	50%	75%
Current Ratio	1.55	0.37	1.25	1.52	1.86
Net Working Capital to Total Assets	0.16	0.12	0.08	0.14	0.23
Net Cash Flow by Operating Activities	0.20	0.56	0.01	0.02	0.24
Cash Flow from Operating Activities to Current Liabilities	9.62	54.72	1.33	3.37	8.00
Return on Assets	2.09	0.66	1.50	1.99	2.34
Return on Equity	0.08	0.09	0.02	0.06	0.13
Earnings per Share	0.31	0.42	0.03	0.09	0.56
Operating Income per Share	0.21	0.40	0.005	0.01	0.25
Current Asset Turnover	1.35	0.80	0.70	1.32	1.84
Fixed Asset Turnover	1.09	0.64	0.60	0.90	1.44

4.2. Results of Logistic Regression Model

In this part of the study, the results of logistic regression model are provided. The results of logistic regression analysis provide some evidence of effects of accounting ratios on corporate governance rating scores. The results reported in table 2 indicate that the coefficient for net cash flow by operating activities, one of the liquidity efficiency ratios, is positive and statistically significant. In other words, higher cash flow by operating activities has a positive impact on the probability of having higher corporate governance rating. The results also confirm the statement that the probability of having higher corporate governance rating increases with increasing net working capital to total assets which measures the liquidity position of a firm. In addition to this, we found that another liquidity ratio, net working capital to total assets is also statistically significant and has a positive

coefficient. This result can be interpreted that as net working capital to total assets increases so does the corporate governance rating of the selected firm.

The results of our logistic regression reveal that not all financial statement ratios included in the empirical model are significant. According to our empirical findings, our hypothesis of H₁, which states that high liquidity ratio increases the corporate governance rating score, should be accepted. On the other hand, our hypotheses of H₂, which states that high profitability ratio increases the corporate governance rating score and H₃, which states that high operating efficiency ratio increases the corporate governance rating score should be rejected. These empirical results contradict with the studies of Sami et al. (2011), Bhagat and Bolton (2008), and Haniffa and Hudaib (2006), who found that corporate governance practices have a positive impact on firm performance. The results of empirical analysis prove that liquidity ratios are useful in explaining firms' corporate governance rating, whereas profitability ratios and operating efficiency ratios are not.

Table 2. The Results of Logistic Regression

Variable	Coefficient	S.E.	Sig.
Current Ratio	1.505	1.129	0.183
Net Cash Flow by Operating Activities	5.027	1.998	0.012
Cash Flow From Operating Activities to Current Liabilities	-0.010	0.013	0.462
Net Working Capital to Total Assets	9.970	4.458	0.025
ROA	0.735	0.571	0.198
ROE	3.241	4.625	0.483
EPS	-0.322	0.980	0.743
Operating Income per Share	2.938	1.942	0.130
Current Asset Turnover	-0.720	0.510	0.158
Fixed Asset Turnover	0.408	0.575	0.478
Constant	-1.940	2.065	0.347

Table 3. The Results of Goodness of Fit Tests

	Chi-square	df	Sig.
Hosmer Lemeshow Test	7.528	8	0.481
Model Summary	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R²
	87.922 ^a	0.238	0.319

According to the results of Hosmer and Lemeshow's goodness-of-fit test (p-value of 0.481), logistic regression model fits the empirical data well. This result ($p = 0.481 > 0.05$) indicates that the variables in the model are appropriate for our model. Nagelkerke R square is regarded as the adjusted version of the Cox & Snell R Square. The values for the sample data are 0.238 and 0.319, respectively. These results can be interpreted that our model is useful in forecasting the corporate governance rating scores.

Table 4. Classification Table

	Observed		Predicted		
			Group		Percentage Correct
			0	1	
Step 1	Group	0	35	10	77.8
		1	16	19	54.3
	Overall Percentage				67.5

According to our classification table (Table 4), which assesses the performance of our logit model, our empirical model correctly classifies all sample firms with 67.5%.

5. Conclusion

Corporate governance is one of the most debated issues in the general business environment. Stockholders, creditors, and potential investors pay massive attention to the corporate governance mechanisms within business entities. Some of the reserachers claim that corporate governance practices influence the efficiency and financial results of business operations. In Turkey, business entities listed in Borsa Istanbul (BIST) Corporate Governance Index (XKURY) are required to disclose corporate governance ratings to the public. Corporate governance rating is a prominent consideration for the investors, creditors and stockholders. Corporate governance ratings enable financial market participants to examine how much business entities conform to the corporate governance practices.

In this study, we aim to determine whether accounting ratios have an impact on corporate governance practices. We use liquidity ratios, profitability ratios, and operating efficiency ratios in our logistic regression model. With this logistic model, we tried to analyze whether selected accounting ratios have significant influence on the corporate governance scores given by the rating agencies. The results of our study indicate that business entities having higher net cash flow by operating activities are likely to get higher corporate governance ratings. Moreover, we found that net working capital to total assets is another critical factor for corporate governance ratings. Our research reveals that higher net working capital to total assets has a significant positive affect in obtaining higher corporate governance ratings. Having found these two variables (net cash flow by operating activities and net working capital to total assets) significant according to the results of our study, we conclude that high liquidity ratio increases the corporate governance rating score.

Due to the limited number of companies included in the Borsa Istanbul (BIST) Corporate Governance Index (XKURY), we could not obtain significant relationship between profitability ratios and operating efficiency ratios and the corporate governance. As the importance and benefits of corporate governance practices are better understood among the Turkish companies more significant results can also be obtained in the future. In this respect, studies with the aim of analyzing the relationship between corporate governance and firm financial performance is important to accelerate this process especially in emerging countries like Turkey.

Finally, it is obvious that further research needs to be made to have an in-depth analysis of the relationship between corporate governance and firm performance in different emerging and developed markets since researchers obtain controversial results on the subject. As a suggestion for further research, various analyses can be conducted to examine this relationship with different empirical methods in order to compare different corporate governance practices. This is particularly important to evaluate whether emerging market countries pay more attention to the corporate governance practices and whether these practices are reflected in the financial performances of the companies in those emerging markets.

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