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Relative Influence of Ownership Structure and Board Structure on Potential Organizational Bankruptcy

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Abstract:

Recent corporate scandals and involvement of senior management in fraudulent activities have raised serious concerns over the way organizations are managed and the role of management. The aim of research was to analyze the relative influence of ownership pattern and board structure on potential organizational bankruptcy. Secondary data related to bankruptcy of organization, CEO's compensation, CEO's shareholding, CEO/Chairman duality and presence of institutional stakeholders was extracted from annual reports of Pakistani companies. Multiple regression analysis was used to achieve research objectives. Findings revealed that CEO's duality, CEO's shareholding, CEO's compensation, and institutional block holdings had significant impact on potential bankruptcy of selected enterprises. Our results implied that if CEO's compensation is linked to organizational performance/chances of bankruptcy, then CEO will put efforts to improve organizational performance and to reduce the likelihood of insolvency of the enterprise. Also, institutional shareholders exercise high care while investing in a company and once

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they invest in an enterprise, they track the performance of the organization, which avoid situations leading to organizational bankruptcies. It is recommended that organizations should develop performance management measures, separate CEO and Chairman's position, link CEO's compensation with organizational performance, award shares to directors of the company and remove barriers from institutional shareholding.

Key words: Organizational bankruptcy, Ownership structure, Board structure

1. INTRODUCTION

The accounting scandals of the 21st century drew attention of shareholders and policymakers towards governance issues of organizations. For example, in case of WorldCom, a renowned fraud case, profits were for overstated by US $3.8 billion (Norwani et al. 2011). Likewise, in case of Enron Inc. misappropriation of debts took place. Furthermore, in Adelphia, fifth largest cable operator of America, off-balance sheet financing worth US $2.3 billion was done. These scandals questioned the way organizations were governed and how management influenced organizational performance. These and many other bankruptcies increased concerns of regulators, investors, and other institutional stakeholders about the state of organizational affairs (Lee and Cray 2002). Accordingly, regulators responded to such bankruptcies by introducing code of corporate governance (CG), which requires management to conduct business in a certain way for preventing financial failures as well as fulfilling the interests of its stakeholders. The issue of organizational bankruptcy has been in lime light for decades and considerable work (both academic and professional) has been carried out for assisting decision-makers in predicting corporate bankruptcy (Chava and Jarrow 2004).

Research of Darrat et al. (2016) put forth insights related to association between provisions of code of corporate governance and potential bankruptcy of enterprises. Findings of their research revealed that different dimensions of code of corporate governance are linked with potential of organizational bankruptcy. One specific insight was related to presence of inside directors in the organization, which is inversely related to chances of bankruptcy. Findings of their research were based on data related to the firms, which became bankrupt during 1997 and 2007. These firms were from different sectors including wholesale and retail (41), business equipment industry (37), manufacturing (33), and utilities (1). The focus of this research is to extend and confirm the work of Darrat et al. (2016) and to analyze the relative influence of various dimensions of corporate governance on risk of bankruptcy. Extending work of Darrat et al. (2016), we have conducted research using a different set of explanatory variables including duality of CEO/Chairman, percentage of CEO's shareholding, CEO compensation and institutional block holdings.

Pandey (2009) suggested that analysis of potential of bankruptcy of the organization can be carried out using different techniques which includes ratio analysis, Conan and Holder's Model of bankruptcy analysis, Altman's Z-score, etc. In this study, Altman's Z Score was calculated to measure organizational bankruptcy.

Following are the research objectives of this research:

- To analyze influence of CEO/Chairman duality on potential of organizational bankruptcy.
- To analyze influence percentage of CEO's shareholding on potential of organizational bankruptcy.
- To analyze influence of CEO compensation on potential of organizational bankruptcy.

- To analyze influence of institutional block holdings on potential of organizational bankruptcy.
- Based on above, to recommend organizations on board structure and related dynamics.

2. LITERATURE REVIEW

Performance of an organization is a vital area of decision-making (May et al. 2014). While evaluating short and long run performance, managers should also evaluate organizational bankruptcy. Kumar and Ravi (2007) explained the concept of organizational bankruptcy and suggested that an organization faces bankruptcy related risk when it is unable to meet its obligations. Such obligations may arise from current or past business activities or it may have happened due to any provisions of law. Zhou (2013) added that an organization becomes bankrupt when it becomes impossible for the organization to meet its financial obligations in the stipulated amount of time. These obligations are not internal obligations but obligations to the third parties. Consequently, bankruptcy analysis involves evaluation of organization's potential to repay its loans to third parties.

2.1. Corporate Governance and Board Structure

Larcker, Richardson and Tuna (2007) highlighted main features of code of corporate governance and suggested that it is an integrated framework of rules and regulations for supporting the management to run organization in an effective and efficient way. Darrat et al. (2016) suggested that main contribution of code of corporate governance comes in the form of making every director of the company accountable towards making organizational strategy so that performance of the board of directors and ultimately organizational performance can be improved. Azeez (2015), Mazur and Wu (2016) and

Tricker (2015) highlighted that role of board members is an important aspect of code of corporate governance. Research work of Azeez (2015) and Mazur and Wu (2016) highlighted that a change in board structure and compensation of its members has a positive influence on organizational performance.

2.2. Duality of CEO/Chairman

Yermack (1996) suggested that "duality" is related to a situation where a person or officer in the organization holds more than two or more positions. Azeez (2015) highlighted that CEO duality is a situation in which a person occupies two positions in the organization i.e., Chief Executive Officer and Chairman. He found that separated post of CEO and Chairman has a positive influence on the performance of the organization. This separation results in an increase in level of supervision, investigation and expertise as well as decreases level of conflict of interest. Yermack (1996) suggested that separation of two positions (CEO and Chairman) increases the level of accountability. If CEO underperforms, Chairman will inquire him about not producing desired results. Moreover, separation of post of CEO and Chairman would create a clear line of authority, strong performance evaluation system, and better succession planning.

2.3. CEO Compensation

Mazur and Wu (2016) suggested that CEO's compensation not only covers salaries and wages but it also covers bonus, allowances, bonus shares, houses, vehicles, etc. They put forth that CEO's compensation has a positive influence on the organizational performance. Nulla (2013) highlighted a more rigid situation where CEO's compensation is tied to organizational performance. If organization performs better than CEO will receive high level of compensation and vice versa. Huang et al. (2015) suggested that corporate boards and companies are focusing on improvement of their salaries and compensation packages and this situation has lead managers/directors to improve their performance level for justified salaries.

2.4. Corporate Governance and Ownership Structure

An important guidance of code of corporate governance was related to ownership structure of the company. Researchers including Gillan and Starks (2003), McConnell, McKeon and Xu (2010), Singh and Davidson (2003), Yermack (1996) and Zhang, Piesse and Filatotchev (2015) explored and evaluated this area. The findings of these researchers highlighted association between organizational structure patterns and organizational performance. Singh and Davidson (2003) emphasized that ownership structure is one of the main dimensions of code of corporate governance. The diversity of shareholders of an organization may lead to diluted ownership, limited interest of owners in organizational activities and reduced control of owners on the affairs of the organization. This may also lead to reduced supervision and control, which may be problematic for organization. Thus, it is imperative to analyze the influence of organization's ownership pattern on organizations' performance/ potential of bankruptcy.

2.5. Percentage of CEO's Shareholding

Mazur and Wu (2016) suggested that percentage of CEO's shareholding is positively associated with firm's performance. This asserts that if an organization gives its CEO equity shares then CEO would become shareholder of the organization. CEO, being the shareholder of the organization would attempt to maximize the performance of the organization for receiving increase dividends. Mazur and Wu (2016) further added that even if the organization decides not to give dividends to shareholders, even then increase in performance of the organization would lead to increase in wealth of the shareholders, which comes in the form of increase in share price. McConnell, McKeon and Xu (2010) highlighted that one of the underlying reasons for giving CEO equity stake in the organization, is to ensure that CEO continually strive for improving the performance of the organization. CEO's hard work can avoid bankruptcy of the organization.

2.6. Institutional Block

Another aspect of code of corporate governance was highlighted by Zhang, Piesse and Filatotchev (2015) who suggested that presence of institutional shareholders increases accountability of the management of the organization. Institutional owners generally tend to purchase shares in large quantity. Because of this, the stakes of these institutional shareholders are high. Manzaneque, Merino and Priego (2016) suggested that since considerable organizational stake is involved, while making investment decisions, institutional shareholders conduct detailed organizational analysis. For this, these institutional shareholders may hire specialist people. These specialists investigate organization's performance prior and/or after investment. This exerts pressure on the people/management, which leads to more efforts towards improving performance of organization and hence there will be fewer chances of organizational bankruptcy.

Based on the above literature and identified research gap, following hypotheses were developed:

$H_{1\text{-}1}$ = There is a significant influence of CEO/CMN duality on potential for bankruptcy.

$H_{1\text{-}2}$ = There is a significant influence of CEO's compensation on potential for bankruptcy.

$H_{1\text{-}3}$ = There is a significant influence of percentage of CEO's ownership on potential for bankruptcy.

$H_{1\text{-}4}$ = There is a significant influence of presence of institutional shareholders on potential for bankruptcy.

3. DATA AND METHODOLOGY

This study aimed to investigate the impact of board structure and ownership structure on organizational bankruptcy within the context of Pakistan. In order to achieve above-mentioned research aims and research objectives, secondary data was obtained from financial statements of companies that were listed on Pakistan Stock Exchange (PSX). The collected data was quantitative in nature and helped researcher in applying structured research approach (positivism) (Maxwell 2012). A sample of 100 listed companies of Pakistan stock Exchange (PSX) was selected. Researchers used random sampling techniques (probability-based sampling) and selected a sample of 100 companies. This sample was obtained through balloting. Out of sample of 100 companies, websites of 9 companies were not operational and 10 of companies had not provided their annual reports of 2015 on their websites. Consequently, data was obtained from websites of 81 companies. Detail of selected companies is given in table 1.

Table 1: Industries of Selected Companies

No.	Nature of Industry	Frequency	Percent
1	Agricultural Chemicals	5	6.2
2	Auto and Truck Manufacturers	3	3.7
3	Banks and Financial Institutions	19	23.5
4	Broadcasting and Telecommunications Services	2	2.5
5	Cargo, Marine and Port Services	2	2.5
6	Commodity Chemicals	1	1.2
7	Construction Materials	7	8.6
8	Electric Utilities	3	3.7
9	Food Processing	5	6.2
10	Heavy Electrical Equipment	3	3.7

11	Natural Gas Utilities	2	2.5
12	Oil & Gas-Exploration, Refining and Marketing	8	9.9
13	Paper Packaging	2	2.5
14	Pharmaceuticals	4	4.9
15	Textiles and Leather Goods	9	11.1
16	Others	6	7.4
	Total	**81**	**100.0**

Saunders (2011) suggested that surveys are a good method for collection of large amount of standardized quantitative data. Moreover, surveys are structured in nature, non-emergent and are less prone to researcher's biasness. Consequently, researchers conducted survey to collect required cross sectional data. Researchers relied upon secondary data from financial statements about duality of CEO/Chairman, percentage of CEO's shareholding, CEO compensation, institutional block holdings, and potential of organizational bankruptcy as it is readily available and is inexpensive (Bryman and Bell 2007). For bankruptcy analysis, Altman's Z score, a famous multivariate discriminant analysis tool proposed by Altman (1968) was used. The value of Z score was based on different ratios (working capital/total assets ratio, retained Earnings/total assets ratio, EBIT/total assets, market value of equity/book value of debt, and sales/total assets). Equation 1, given below, presents relationship among different ratios of Z-score

$$\text{Z-Score} = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E \qquad \text{(Equation 1)}$$

Where:
A = working capital / total assets
B = retained earnings / total assets
C = earnings before interest and tax / total assets
D = market value of equity / total liabilities
E = sales / total assets

A Z-score of less than 1.81 is an indicator of bankruptcy of the firm where investors may consider withdrawing their investment. Score more than 3 implies strong position of the organization. For evaluating relationship between independent and dependent variables, researchers used multiple-regression technique. Multiple linear regression analysis is used in situations where a researcher intends to predict value of one dependent variable from two or more independent variables. The use of multiple-regression is quite common in social science research (Hair 2009; Kutner, Nachtsheim and Neter 2004; Stolzenberg 2004). Apart from testing the primary issue, problems/diseases of multiple-regression such as autocorrelation, multicollinearity and heteroskedasticity were also checked.

4. RESULTS

In order to contextualize the findings of the research, we are also giving secondary findings of this research. Table 4.2, given below gives CEO shareholding percentage.

Table 2: CEO Shareholding Percentage

Percentage Holding	**Frequency**	**Percent**	**Cumulative Percent**
0 - 10	48	59.26%	59.26%
11 – 20	14	17.28%	76.54%
21- 30	4	4.94%	81.48%
31- 40	3	3.70%	85.19%
41- 50	1	1.23%	86.42%
51- 60	6	7.41%	93.83%
61 – 70	2	2.47%	96.30%
71 and above	3	3.70%	100.00%
Total	81	100.00%	

The above table showed that majority of the CEOs have 10 percent or less shares in their own companies. In addition to this, there were around 17 percent CEOs who owned shares between 11 to 20 percent. Then there were very few companies, only 3, whose CEOs own over 70 percent shares. It was observed that organizations where CEOs owned majority shares were family-owned businesses. It means these were owned and controlled by large business families of Pakistan. Table 3 deals with CEO's salary range and is given below.

Table 3: CEO's Salary Range			
Salary Range	**Frequency**	**Percent**	**Cumulative Percent**
Less Than 1,000,000	2	2.47%	2.47%
1,000,001 -1,500,000	15	18.52%	20.99%
1,500,001 -2,500,000	25	30.86%	51.85%
2,500,001 -2,500,000	21	25.93%	77.78%
2,500,001 -3,000,000	15	18.52%	96.30%
3,000,001 -3,500,000	1	1.23%	97.53%
3,500,001 and above	2	2.47%	100.00%
	81	100%	

Table 3 presented salary range of CEO. It shows that majority of the CEOs of these listed company have annual income above US$ 1.5 million. This is just the basic salary and does not cover other incentives and bonus, which they received from their companies. Around 80 percent of CEOs were receiving more than US$ 100,000 per month and over 20 percent of these CEOs were receiving more than US$ 200,000 per month. Results indicated that CEOs in Pakistan are highly paid.

Table 4 deals with CEO's salary range and is given below.

Table 4: Institutional Shareholding			
	Frequency	**Percent**	**Cumulative Percent**
No	10	12.3	12.3
Yes	71	87.7	100.0
Total	81	100.0	

Table 4, given above, showed that around 88 percent firms have some form of institutional investors whereas in around 12 percent firms, none of the institutions have invested. Being a very common form of capital arrangement in Pakistan, institutional investors make major investment in the businesses that is why they remain very vigilant about their invested money.

For measuring organizational bankruptcy, Altman's Z score was calculated. Table 5, given below, presents findings related to Altman's Z-score. This is given below.

Table 5: Altman's Z Score

Z-Score Range	Frequency	Percent	Cumulative Percent
Less than 1.1	20	24.0%	24.0%
1.1 – 2.6	9	11.80%	35.80%
2.61 - 4.00	8	9.88%	45.68%
4.01 - 5.00	6	7.41%	53.09%
5.01 - 10.00	14	17.28%	70.37%
10.01 - 15.00	13	16.05%	86.42%
15.01 - 20.00	3	3.70%	90.12%
20.01 and above	8	9.88%	100.00%
	81	100.00%	

According to Altman, a score of less than 1.81 is an indicator of financial distress of the firm. Likewise, if the Z score is 1.81 or more and less 2.6 then it is the grey area. Moreover, a score of 2.6 and higher is an area where firms are safe. From the above table, it can be seen that there were around 24 % firms who were facing financial distress whereas there were around 12 % firms who were in indifferent zone. Remaining over 64 firms were safe and had been enjoying good financial strength. For over 30 % firms, value of Z score was more than 10, which indicates that these firms have very strong financial positions.

The aim of this research was to analyze the relative influence of ownership structure and board structure on potential organizational bankruptcy. This relationship was estimated using multiple-regression where dependent variable was organizational bankruptcy and independent variables include CEO/Chairman duality, CEO's shareholding, CEO compensation, and institutional block holdings. Following are the outputs of multiple-regression.

Table 6: Model Summary b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643a	.4134	.482	7.2465

a. Predictors: (Constant), Duality, CEO Share, CEO Comp, IBH
b. Dependent Variable: Organizational Bankruptcy (OBR)

According to results of multiple-regression, value of R-square was 0.4134 which indicated that 41.34 % change in the dependent variable (organizational bankruptcy) was caused by independent variables (CEO/Chairman duality, CEO's shareholding, CEO compensation and institutional block holdings). Higher value of R-square is better but keeping in mind that code of corporate governance has several dimensions and this study has targeted four of them, it can be asserted that value of 41.34 % is not very low. Regarding multiple-regression, next thing to evaluate is the analysis of variance. This is given below in ANOVA table.

Table 7: ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8361.764	4	2378.226	45.919	.000b
	Residual	8719.401	179	51. 971		
	Total	17081.165	183			

a. Predictors: (Constant), Duality, CEO Share, CEO Comp, IBH
b. Dependent Variable: Organizational Bankruptcy (OBR)

First column identifies the number of models in the analysis. Value of 1 confirms that we have one model in discussion. Main values to be noted here are of F-statistic and p-statistic. The value of F statistics was 45.919 that is greater than 2 which means overall model is better. To substantiate level of significance of the researcher, value of p-statistics was also computed where p value is below 0. 01. From this value, it can be inferred that margin of error related to interpretation of findings was less than 1 percent which shows quite high level of confidence.

Furthermore, coefficients obtained from multiple regression analysis are given in table 8.

Table 8: Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	28.751	3.391		4.143	.000
	Duality	0.401	0.179	0.414	4.918	.000
	CEO Share	0.381	1.619	0.421	2.715	.000
	CEO Comp	0.610	0.219	0.159	.815	.000
	IBH	1.066	0.154	0.412	1.140	.000

* *Abridged output*

a. Predictors: (Constant), Duality, CEO Share, CEO Comp, IBH (Institutional Block Holding)

The values given in table 8 were used for developing regression equation 2 which is given below.

$$OBR = 28.751 + 0.401 Duality + 0.381\ CEO\ Share + 0.610\ CEO\ Comp + 1.066\ IBH \qquad \text{(Equation 2)}$$

The values of coefficients show the relative influence of each independent variable on the outcome variable. It is evident that all explanatory variables were positively associated with organizational bankruptcy.

5. DISCUSSION

Results of multiple-regression reveal significant relationship between bankruptcy and duality of CEO (p value < 0.01). Positive value of duality coefficient indicates that if CEO/Chairman duality exists; both positions occupied by separate persons, Z score will improve. Good Z score will create strong financial position of the companies with fewer chances of bankruptcy. Hence, researcher accepted alternate hypothesis (H_{1-1}) and confirmed that there is a significant influence of

CEO/Chairman's duality on potential for bankruptcy. These finding are aligned with earlier work of Yermack (1996) and Azeez (2015) who also acknowledged that presence of two separate persons on the post of CEO and Chairman lead to more supervision and control on the activities on the organization. Due to this increased accountability, managers are better able to focus on their duties, which increases overall performance of the organization.

Relationship between bankruptcy and CEO's compensation was also significant as its p value was less than 0.01. In table 8, beta value of CEO's compensation is 0.610, higher than that of CEO/Chairman duality and CEO's shareholding, which suggests greater influence of CEO's compensation on potential for bankruptcy. This asserts that if organizations would offer higher salaries to their CEO, then it brings enhanced Z score (financial strength of the company) and lower solvency risk. We accepted second alternate hypothesis (H_{1-2}) to confirm that there is a significant influence of CEO's compensation on potential for bankruptcy. The findings of our research are consistent with the findings of Mazur and Wu (2016) who put forth that CEO's compensation has a positive influence on the organizational performance. Likewise, Nulla (2013) argued that in order to improve organizational performance, CEO's compensation should be tied with organization performance.

Analysis of relationship between bankruptcy and CEO's shareholding revealed that there is a significant association between the two variables (p value < 0.01). The value of coefficient was positive, yet smallest, implies its weakest influence on organizational performance viz-a-viz chances of bankruptcy of organization. High equity interest of CEO entitles him for high profits/losses and CEO will ensure not to suffer from losses. Organization can bridge the interest of shareholders with employees by giving equity ownership to senior management including CEO. This safeguards financial position of the organization. With this, we also accepted third null hypothesis ($H_{1\text{-}3}$) and asserted that there is a significant influence of CEO's shareholding on potential for bankruptcy. Our findings were in harmony with Mazur and Wu (2016) who suggested that percentage of CEO's shareholding is positively associated with firm's performance. Likewise, our findings were also consistent with McConnell, McKeon and Xu (2010) who urged that organizations give equity stakes to their CEOs so that organizations can ensure their CEOs continually strive for improving the level of performance of the organizations.

Lastly, our fourth null hypothesis ($H_{1\text{-}4}$) was also accepted as p value regarding institutional block holding (IBH) was also significant (less than 0.01). Values given in table 8 presents positive value of beta of IBH entail positive association between CEO's shareholding and organization's chances of bankruptcy. The highest value of its beta denotes the greatest impact on organizational bankruptcy. As a matter of fact, institutional investors make sizeable investment. As large amount of money is on stake, these investors hire experts to conduct a detailed analysis of financial position of organization. Such analysis may reveal shortcomings of management. In order to avoid such situation, management may behave proactively and take necessary steps to improve organizational performance. Our findings were consistent with the research of Zhang, Piesse and Filatotchev (2015) who suggested that presence of institutional investors has a positive impact on the performance of the organization. Moreover, findings of our results also matched with research of Manzaneque, Merino and Priego (2016) who confirmed relation between organizational performance and presence of institutional shareholders.

6. CONCLUSION AND RECOMMENDATIONS

The aim of this research was to analyze the relative influence of ownership structure and board structure on potential organizational bankruptcy. Secondary data related to bankruptcy of organization, CEO's compensation, CEO's shareholding, CEO/Chairman duality of position and presence of institutional stakeholders was obtained from annual reports of chosen companies. For analysis of proposed hypotheses, multiple-regression analysis was carried out. Findings revealed significant influence of CEO/Chairman duality, CEO's shareholding, CEO compensation, and institutional block holdings on potential of organizational bankruptcy. These results helped us to meet our research objectives. However, we recommend that shareholders should develop performance indicators/metrics for comparing organizational performance. Achievement of metrics by directors should be rewarded by bonuses. Also, CEO's compensation should be linked with company's performance. In addition, directors can be made equity holders to reduce conflict of interest with shareholders. An implementation of these suggestions may lower the level of bankruptcy risk. Future studies can be directed towards other countries with larger sample to confirm these findings. The findings of this research have brought fresh perspective on the current state of CG in Pakistan. Likewise, this research made contextual contribution by analyzing the issue in Pakistani context. To the best of our knowledge, it was the first project to investigate the organizational bankruptcy with this set of chosen variables so this research made contribution to the literature. From the methodological perspective, we have made contribution by selecting cross-sectional sample of both healthy and weak firms for analysis of phenomenon.

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