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NON-FINANCIAL DETERMINANTS OF FINANCIAL DISTRESS AMONG FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE

[1*] **Muchiri Waititu**
muchiriwaititupete@gmail.com

[2**] **Dr. Florence Memba**

[1] *Msc Finance student, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya*

[2] *Lecturer, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya*

***Abstract*:** *The importance of predicting financial distress has been increasing due to severe effects of failure on the operations of a firm, its environment and whole economy. This research examined how corporate governance, formal strategic planning and quality standards contribute to the financial distress of firms listed in the NSE.*

Significance: *The capital markets authority (CMA) and the NSE can benefit in terms of capacity building and enhancing the ability of listed firms to maintain strong financial stability before and after listing. Investors will know of factors whose absence may lead to distress and the status of companies listed in the NSE.*

Methodology: *This study adopted descriptive and quantitative methods to obtain and analyse data. The period of coverage was 2015. A sample of 37 firms which excluded financial institutions, investment companies, insurance companies, the Nairobi Securities Exchange itself and firms in the growth enterprise market segment was used.*

Findings: *It was expected that firms with strong corporate governance, effective formal strategic planning and high quality standards have better control procedures that minimize their financial distress. The study concludes that corporate governance has direct positive relationship with the financial distress of the firms. The effectiveness of board of directors with respect to its independence, the ability of management to performance contract and appraise employees, the effectiveness of audit committee, internal and external auditors ultimately minimized financial distress.*

Keywords: *financial distress, formal strategic planning, non-financial determinants, Nairobi Stock Exchange*

1. Introduction

Recently, there have been many corporate failures in Kenya and only a few companies that have gone into receivership have managed to come out financially healthy. However, some companies thrived hence the question remains why some are performing poorly while others succeed. There is need to examine if there are distinct strategic orientations distinguishing succeeding from failing firms. Many managers focus on succeeding, at least in the short run, but there is need to focus on signals of weakness, causes and possible remedies before they reach crisis (Harlan and Marjorie, 2002).

It may appear that making profit for any commercial enterprise is enough. A survey conducted on a number of CEOs in America however showed that they did not place strong and consistent profit as their top priority, in fact it was ranked fifth (Hitt *et al.*, 2003). Instead they regarded a strong and well thought-out strategy as the most important factor to make a firm promising in the future. Achieving acceptable financial results is crucial because without adequate profitability and minimal likelihood of financial distress, a company's pursuit of strategic vision, long term health and ultimate survival is jeopardized.

Thompson et al (2004) recommends two distinct performance yardsticks; one relating to financial performance and the other relating to strategic performance. The company's performance in terms of its strategic well-being, its competitiveness and market position is crucial and unless its performance in the market place reflects improving competitiveness and market penetration, its progress will not be inspiring and its ability to minimize financial distress is in doubt. A firm's financial distress measures are lagging indicators that reflect the result of the past decisions and organizational activities. Its lead indicators are future financial distress expectations to achieve competitiveness and distress in the market place (Thompson *et al*., 2004).

Conversely, various studies have identified and used different non-financial determinants. Prudential supervision is captured by Short, Kevin & Darren, (2002) who researched the impact of supervision and monitoring on financial stability and found that the variable affects financial stability. Suto (2003) used ownership concentration as one of the non-financial determinants in his study. Maury and Pajuste (2015) researched on how investor protection of large shareholders impacted on financial distress of firms and recommended the need for firms to protect investors' interests and resources.

According to Noe, Micheal and Jun (2003), financial distress of a firm is dependent upon the size, composition and independence of the BOD. They also found that experience of management team plays significant role in determining financial distress of a company. Berger and Bouwman (2009) and also Wen *et al*., (2002) show an inverse relationship between tenure of directors and financial distress of various firms in Europe. Therefore the various non-financial determinants of financial distress have been the center of attraction for many researchers across the globe but there seems to be lack of the same study with specific attention to Kenya consequently the need for the current study.

The purpose of this study was to identify the strategies undertaken by firms to minimize financial distress. This study utilized the Edward Altman's Z'-score MDA model which provides the framework for gauging the financial distress. Though MDA models do not provide much guidance on how they should be applied to emerging markets, they have already been tested in emerging markets and used with good results (Pereiro, 2006).

Statement of the Problem

Financial distress is relevant due to the impact on workers, shareholders, customers, suppliers, communities and the financial entities (Carter and Van Auken, 2006). Previous studies attributed financial distress or weakness to factors like economic turbulence, change in demand, high debt, restrictive monetary policy, high interest rates, inadequate capital structure and poor financial management (Pompe and Bilderbeek, 2005; Denis& Denis, 1995; Sheppard & Chowdhury, 2005; Segarra & Callejon, 2002). Most of these studies emphasized quantitative drivers with only few focusing on qualitative factors.

There has been increasing trend of failure of Kenyan firms. However, some listed companies seem to thrive so the question remains why some are performing poorly while others are succeeding. The use of an early warning

system model is critically important to make a reliable measure of any company's financial health since companies that are strong today may not be strong tomorrow and companies that are weak today will survive. There is need to examine if there are distinct factors distinguishing succeeding from failing firms. Maina and Sakwa (2010) looked at financial distress among listed firms at the NSE; Mueni (2011) examined the usage of Altman's model in the prediction of corporate failure at the NSE; Mohamed (2012) looked at bankruptcy prediction of firms listed at the NSE while Odipo and Sitati (2009) looked at the applicability of Altman's model in in Kenya. None of these examined factors that lead to financial distress or weakness and measures that entities may adopt to avoid failure and optimize performance. This study seeks to fill this research gap.

Objectives of the Study

The main objective of the study was to examine how different factors affected firms' financial distress.

Specific Objectives

1. Establish the effects of corporate governance on financial distress of firms listed in the NSE.
2. Determine the effects of formal strategic planning on financial distress of firms listed in the NSE.
3. Examine the effects of quality standards on financial distress of firms listed in the NSE.

Research Hypothesis

H_0: There is no significant relationship between corporate governance and financial distress of firms listed in the NSE.

H_0: There is no significant relationship between formal strategic planning and financial distress of firms listed in the NSE.

H_0: There is no significant relationship between quality standards and financial distress of firms listed in the NSE

Operationalizing the Variables

The existence of audit committee, internal audit and managers' educational level were proxies for good CG. These were dummy variables taking values of 1 if firm had internal auditor/audit committee and 0 if firm did not have them. Manager educational level was also measured as a binary variable taking value of 1 if CEO had a university degree and 0 if not (Lussier & Corman, 1996; Lussier & Pfeifer, 2001; Aragon-Sanchez & Sanchez-Martin, 2005). The existence of external auditor was assumed with value of 1 since only audited financial statements were used. CG component was the average of the four components.

The study determined whether a firm had FSP; the value was 1 if present and 0 if not, (Perry 2001; Lussier & Pfeifer 2001). Budgetary control system had value of 1 if in use and 0 if not in use (Hoque & James, 2000). The FSP variable was the average of these two items.

Quality certification was used as a proxy for QS. This was a dummy variable with value of 1 when the company possesses quality certification and value of 0 otherwise (Quazi & Padibjo 1998; Sun, 2000).The level of financial distress which is a continuous variable was measured using the Z'-score.

Research Methodology

This study adopted descriptive and quantitative methods to obtain and analyse data. The period of coverage was 2015. A sample of 37 firms which excluded financial institutions, investment companies, insurance companies, the Nairobi Securities Exchange itself and firms in the growth enterprise market segment was used. Independent variables comprised firms' strategic approaches namely corporate governance, formal strategic planning and quality standards while the dependent variable was financial distress as measured by Edward Altman's Z'-score. Relationships between variables were measured using regression analysis, correlation coefficients and two-way analysis of variance. Qualitative information related to strategic variables were gathered through a questionnaire addressed to the relevant firm's chief finance officer and two other senior employees in the finance department while quantitative information to identify firms' financial distress was gathered from the audited financial statements of the firms filed with Nairobi Securities Exchange and Capital Markets Authority.

Response Rate

The questionnaire for respondents was prepared and distributed randomly to a sample of 111 respondents. Out of this, a total of 67 filled in and returned questionnaires. This gave a percentage return rate of 60.36% which is satisfactory to carry on with data analysis as stipulated by Creswell (2009) who posited that a return rate of above 50% of the sample size is good for data analysis.

Reliability test

Through pilot testing, inconsistencies were corrected to enhance the reliability of research instruments. A reliability coefficient of 0.783 was then obtained which was satisfactory for main data collection exercise as stipulated by Creswell (2013) who opines that a reliability score of 0.60 and 0.85 is enough for data analysis. The results are presented in table 1 below.

Table 1: Reliability Statistics

Cronbach's Alpha	Number of Items
0.783	46

Effect of Corporate Governance Mechanisms on Financial Distress

The first objective was to examine the effect of CG as measured by BOD and management on financial distress. Tentative questions were formulated and respondents were required to respond. The results are presented in table 2.

Table 2: Corporate Governance Mechanisms

	Yes		No	
	%	F	%	f
Firm discloses its governance structures and policies	93	62	7	5
Firm disclose the amount of executives' compensations	63	42	37	25
Firm have a formally documented ERM strategy	100	67	0	0
Firm disclose its ownership structure	94	63	6	4

Firm exercise the one-share one-vote rule indiscriminately	94	63	6	4
	Yes		No	
Board of directors	%	F	%	f
BOD contain at least one-third of members as independent members	84	56	16	11
Presence of maximum limit of the years a BOD member can serve	94	63	6	4
BOD committees chaired by independent members	60	40	40	27
BOD committees consist of at least three non-executive members	66	44	34	23
	Yes		No	
Management	%	F	%	f
Firm have a written human resource policies and procedures manual	93	62	7	5
Firm have a written succession plan	84	56	16	11
Firm have a performance contracting system	66	44	34	23
Firm have periodic written staff appraisals	94	63	6	4
Firm been the subject of litigation for better terms by employees in the past five years	75	50	25	17

As presented in table 2, the study found that most firms disclose their governance structures and policies as was represented by 93%. In agreement, Ho and Wong (2011) found that firms that disclose their governance structures and policies demonstrated good CG practice which ultimately led to improved financial distress. The study also found that firm discloses the amount of executives' compensations as shown by 63% whereas 94% of the firms were also found to disclose their ownership structure. The findings were supported by Demsetz and Lehn (2015) who also found that disclosure of the board compensation rates, government ownership structures, institutional ownership structure and foreign ownership structures promotes financial distress.

It was also found that most firms have a formally documented ERM strategy as indicated by 100%. The position is affirmed by Kleffner, Lee and McGannon (2013) who found that 81 companies had a formally documented ERM strategy while the rest were either in the process of adopting one or ignored it completely. According to them, firms that had formally documented ERM strategy had also laid down strategies to enhance the ERM effectiveness which in turn improved their financial distress. The study also found that most firms exercise the one-share one-vote rule as indicated by 94%. The findings contradict Snyder (2011) who found that most of the studied firms did not practice the One Person-One Vote Rule whereas the few which practice One Person-One Vote Rule demonstrated a sense of openness which ultimately boosted stakeholder confidence thus presence of firm performance.

Regarding BOD, the study found that 84% contain at least one-third of members as independent members. The results contradict the findings by Johari, Saleh, Jaffar and Hassan (2009) who found that out of the 74 studied firms in Malaysia, only 17 had one third independent board members. The remaining companies did not embrace the essence of involvement of non- executive directors in the board. It was also established that there is presence of maximum limit of the years a BOD member can serve as supported by 94% and this was affirmed

by Johari, Saleh, Jaffar and Hassan (2009) who found that most Dutch companies had a 5 year limited period in which board members could serve.

The study found that BOD committees are chaired by independent members as represented by 60%. In agreement, Perry and Shivdasani (2001) state that outsider-dominated BOD is more likely to initiate restructuring programs following a significant performance decline. Further, it was found that BOD committees of most firms consisted of at least three non-executive members as represented by 66%. In Shleifer and Vishny (1997), non-executive directors are often used as a device to increase the independence of the BOD. Their presence is thought to improve the effectiveness of internal controls. It was also found that most firms have a written human resource policies and procedures manual as supported by 93%. In concurrence, Dowling (2008) indicates that there is need for every organization to have written financial, human resource and organizational policies which every employee in the firm can be subjected to.

It was also revealed that most firms have a written succession plan as agreed by 84%. Most firms were found to have a performance contracting system as was shown by 66% while 94% were found to have periodic written staff appraisals. Coughlan and Schmidt (1985) disagree by indicating that the pressure of performance contracting and appraisals among other evaluation mechanisms may make employees become risk averse and make them concentrate on short-term targets at the expense of long term strategic investments. The study finally found that most firms have been the subject of litigation for better terms by employees in the past five years as was indicated by 75%. In concurrence, Boden and Nucci (2000) established that many private institutions in Asia had been subject of regular litigation by employees who have been demanding for increment in payment. From the findings, it can be said that most firms embraced CG mechanisms such as BOD and management of human resources.

Effectiveness of Risk Management, Board and Audit Committees

In order to gauge the effectiveness of ERM, BOD and audit committees, the respondents were required to state their level of satisfaction or dissatisfaction. The results are presented in figure 1 next page.

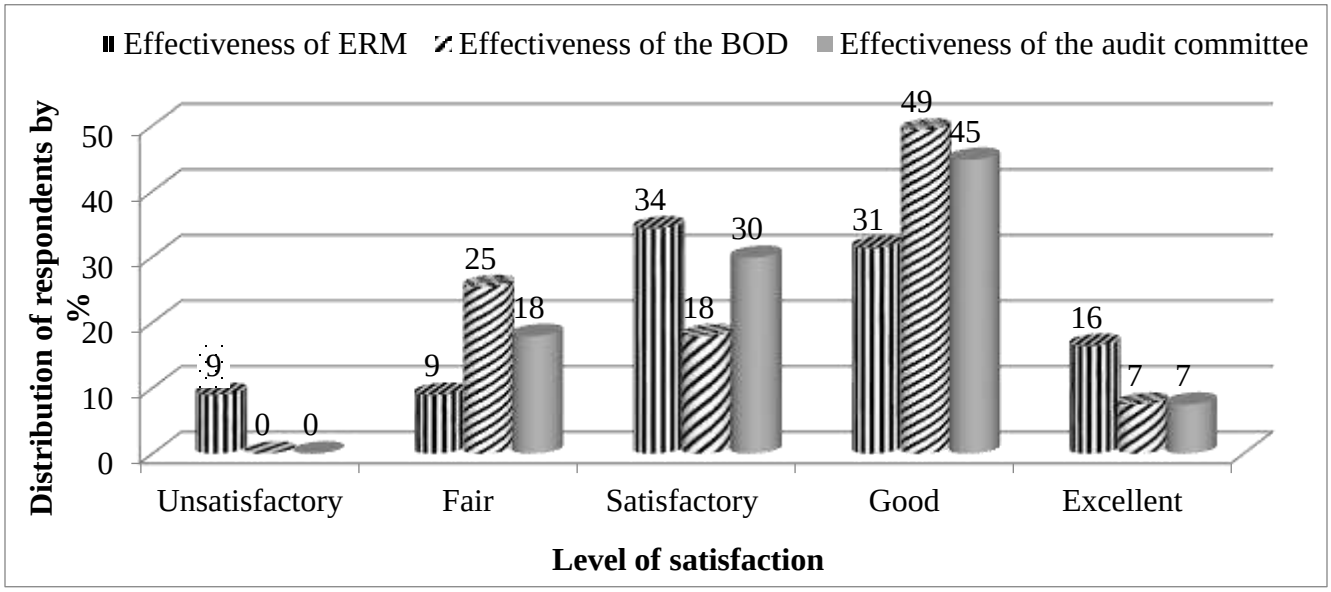

Figure 1: Effectiveness of Firms' ERM, BOD and Audit Committees

The findings in figure 1 show that 34%, 31% and 16% of the respondents indicated that the ERM of their respective firms were satisfactory, good and excellent respectively. The study also found that respondents indicated that the ERM of the firms were unsatisfactory and fair on a similar representation of 9%. The high satisfactory level is supported by Kleffner, Lee and McGannon (2013) who assert that firms that had formally documented ERM strategy had also laid down strategies to enhance the ERM effectiveness.

The study also found that BOD was effective as indicated by 49%, 18% and 7% of the respondents who said it was good, satisfactory and excellent respectively. In support, Bhagat *et al.,* (1987) propose that there should be a balance between executive and non-executive directors in an organization as this enhances their effectiveness. Audit committee was also found to be good at 45%, satisfactory at 30% and excellent at 7%. The findings concur with the position taken by Zeff (2013) who opines that effectiveness of audit committee results to sound financial distress in organizations. The results could be interpreted to imply that ERM, BOD and audit committees of the studied firms were effective.

Experience of Internal Auditors

The respondents were asked to state their level of experience with respect to audit, finance, taxation and CG. The findings are shown in table 3.

Table 3: Experience of Internal Auditors

	0-5 Years	5-10 Years	11-15 Years	Over 15 years
Internal auditor experience	3	24	42	31
Experience of senior staff 1	9	67	24	0
Experience of senior staff 2	28	66	6	0
Experience of senior staff 3	43	51	6	0

As presented in table 3, the study established that internal audit had garnered adequate experience as supported by 42% who had 11 to 15 years' experience, 31% who had over 15 years of experience and 24% of the respondents who had 5 to 10 years of experience. In support, Hermanson (2017) argues that auditors and key finance staff should have at least 10 years of experience in relevant fields such as finance, taxation, financial reporting, fraud and detection. This he argued could be enhanced through exposure to professional employee training and development. Senior staff 1 was also found to be experienced at 5 to 10 years and 11 to 15 years as indicated by 67% and 24% respectively. Again the study found that most senior staff 2 had 5 to 10 years of experience and 0 to 5 years of experience and these were represented by 66% and 28% respectively.

Further, the study found that senior staff 3 had experience of 5 to 10 years and 0 to 5 years as shown by a representation of 51% and 43% respectively. From the findings, it can therefore be said that internal audit staff understood CG issues that involves audit, taxation and finance. In agreement, Kane (2004) indicates that that investing in companies has historically relied upon audited financial statements when making investment decisions and has depended upon auditors and the accounting profession and experience to confirm the accuracy and completeness of financial information.

Quality of Internal and External Audit

The study sought to establish the level of agreement or disagreement with various statements regarding internal and external audit. The findings are shown in table 4.

Table 4: Internal and External Audit

	Yes %	f	No %	f
Internal Audit				
Firm has written financial policies and procedures manual	100	67	0	0
Mandatory professional development hours for each member of IAF and finance team	49	33	51	34
Directors always act on IA reports comprehensively and on a timely basis	84	56	16	11
External auditor generally request for and utilize the reports of the internal auditor	84	56	16	11
Firm have an anonymous hotline for reporting frauds	51	34	49	33
Firm have an elaborate whistle blower protection system	42	28	58	39
External Audit				
Firm have a written policy on rotation of external auditing firms	94	63	6	4
Directors always act on points raised by auditor on time	82	55	18	12

According to the findings in table 4, the study found that there were mandatory professional development hours for each member of IAF and finance team as supported by 51%. Respondents said that staff could be given time to attend professional development classes and other career development opportunities. Cullinan (2004) argues that the auditing profession's ability through training and development and/or willingness to protect investor interests must be given priority. The study found that directors always act on IA reports comprehensively and on a timely basis as was shown by 84%. This according to Miller and Bahnson (2004) protect the investors' confidence hence they could continue investing.

The study also found that external auditors generally requested for and utilized the reports of the internal auditor as reported by 84%. This was supported by Christopher, Sarens and Leung (2009) who say that the external auditor should be sufficiently involved in the audit as they have the sole responsibility for the audit opinion expressed and be able to utilize the reports of the internal auditor. On whether firms have an anonymous hotline for reporting frauds, the study found that 51% agreed with the statement while 49% objected an indication that the views of the respondents leaned slightly towards presence of hotline for reporting frauds. In Miller and Bahnson (2004, auditors have a responsibility to be "gatekeepers" to protect the investing public, but many auditors have failed to honor their gatekeeper role with a resulting increase in risk passed on to investors.

The study lastly found that most firms have no elaborate whistle blower protection system as reported by 58% while 42% indicated that their respective firms have elaborate whistle blower protection systems. In agreement with the findings, Sarens and De Beelde (2016) advise that for effectiveness of the audit committee there is need for firms to have an anonymous hotline for reporting frauds as well as whistle blower protection system that can always conceal and or immunize the identity of whistleblowers. This could thus be interpreted to mean that while not a majority, many firms do have elaborate fraud reporting mechanisms that could help minimize fraudulent activities.

Regarding external audit, the study found majority of the firms have a written policy on rotation of external auditing firms as supported by 94% of the respondents. This is an indication that majority of firms have written policies that promote the productivity of auditors. In conformity, Zeff (2013) indicates that having written

rotation policy of less than three years will assist the outsourcing company to control any chances of malpractices by external auditors as a result of having overstayed in a given organization.

On whether directors always act on points raised by the auditor in the management letter on a timely basis, 84% agreed with the statement. It can therefore be said that management always address the issues raised by auditors on a timely basis in order to enhance the financial distress of firms. In disagreement, Kane (2004) notes that many directors in the developing countries rarely act on auditing reports but those who attempt to act on the reports are guaranteed success.

The respondents were again asked to state the major committees of the BOD. Committees such as audit committee, nominating committees, salary and remuneration committees, corporate governance committees, audit risk committees and finance and investment committees were the major committees in the board. The major committees as identified by Bacon and Brown (2015) are audit committee, stakeholders relationship committee, compensation and remuneration committee, executive committee, nomination and governance committee and CSR committee. The respondents also indicated that performance contracting was meant for top management and to some extent senior employees.

Regarding academic qualifications, bachelors or master's degree in finance, accounting, auditing, risk management and credit management were some of the known academic qualifications upheld by the internal audit staff. Chow and Rice (2012) indicate that it is mandatory for esteemed organizations to employ persons who are qualified with good educational background. He suggests that a bachelor's degree or a master's degree in accounting can be very significant consideration as and when employing or outsourcing auditing team.

Respondents were again requested to mention some professional associations the IA and at least two of the senior most staff of IAF were members of. As established, respondents were members of Institute of Certified Public Accountants of Kenya (ICPAK), National Association of Securities Dealers (NASD), Institute of Internal Auditors (IIA), Association of Certified Fraud Examiners (ACFE) and Information Audit Control Associations (ISACA). In support, Miller and Bahnson (2004) opine that it is prudent that auditing team are members of internationally recognized professional associations. However, some respondents indicated they were not members of any association in Kenya. It was also realized that IA submit financial reports to BOD while others indicated that the IA reports were submitted to head of audit department who will then share with BOD.

Effect of Formal Strategic Planning on Financial Distress

The second objective was to examine the effect of FSP on financial distress. Tentative questions were formulated and respondents were required to respond. The results are as presented in the subsequent sections.

Firms' Planning Horizon

The respondents were required to state the firms' planning horizon and the findings are shown in table 5**.**

Table 5: Firms Planning Horizon

	< 0.5 Years	0.5-1 Years	1-5 Years	5-10 Years	10-15 Years	**Total**
Short term plans	75	21	4	0	0	**100**

Medium term plans	0	0	33	69	0	**100**
Long term plans	0	0	0	43	57	**100**

The results in table 5 reveal that 75% and 21% of the firms had short term plans of less than 0.5 years and 0.5-1 year respectively. In Carter and Van Auken (2006), while planning generally leads to better decisions, poor planning can be a cause of significant business weakness thus the need for effective plans that can strategically be rated as short, medium and long term depending on firm strategic plans. The study further found that 69% and 33% of the firms had medium term plans of 5 to 10 years, 1 to 5 years respectively. The study also found that 57% and 43% of the firms had 10 to 15 years and 5 to 10 years long terms plans respectively. According to Schwenk and Shrader (2013), FSP had statistically significant relationship with financial distress of all public institutions in the USA. Therefore each firm should have a planning span that ranks as both short and long as this will suit well in each and every strategic plan of a company. From the findings it can be said that firms that were studied do have short, medium and long term plans as strategic planning tools that could help in minimize financial distress.

Level of Participation in Strategic Planning and Budgeting

The respondents were requested to indicate the levels of participation in strategic planning and budget making processes. The results are indicated in table 6.

Table 6: Participation in Strategic Planning and Budget Making Process

	Strategic planning		Budgeting process	
	Yes	No	Yes	No
All functional departments and key employees participate in process	85	15	75	25
Only a few functional departments and key employees participate in process	39	61	29	71
Only finance department and its employees participates in process	22	78	28	73

Data in table 6 reveals that all functional departments and key employees participated in strategic planning and budget making processes as represented by 85% and 75% respectively. It was also found that 61% and 71% disagreed that only a few functional departments and key employees participated in strategic planning and budget making process. The study also found that 78% and 73% disagreed that only finance department and its employees participates in strategic and budget masking processes. The latter results affirm the notion that all functional departments do actually participate in the budget making and strategic planning processes. The findings are supported by Schwenk and Shrader (2013) who recommended that all departments and key employees should be allowed to participate freely in the process of planning and budgeting.

Effects of Quality Standards on Financial Distress

The third objective was to examine the effect of QS on financial distress. Tentative questions were formulated and respondents required responding .The results are presented in figure 2.

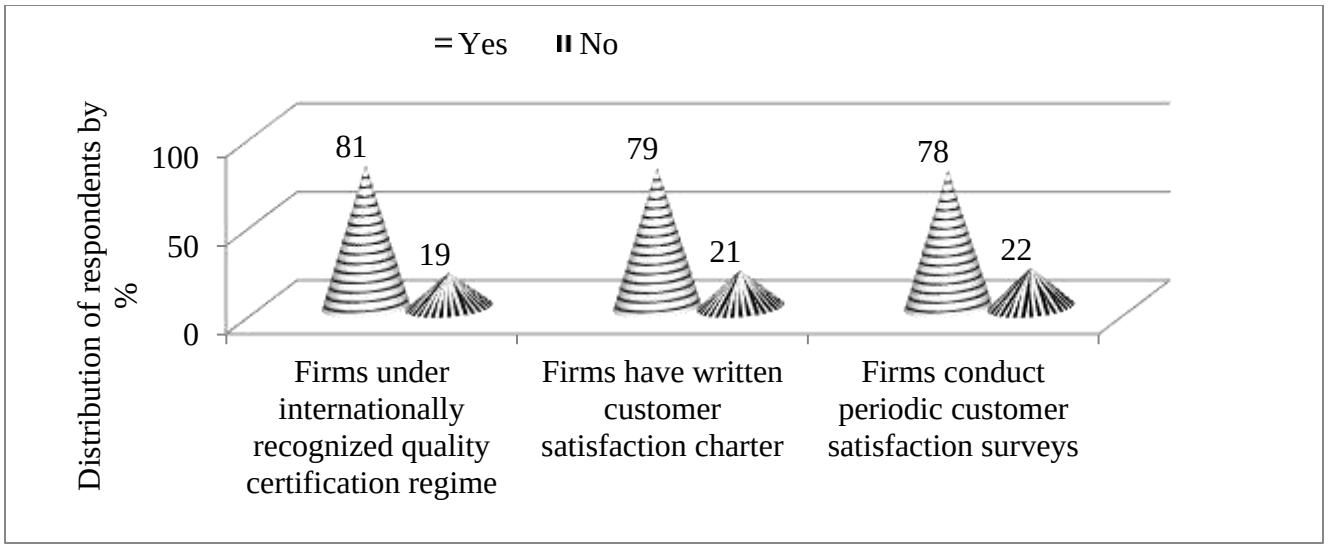

Figure 2: Distribution of Firms by Quality Standards

As presented in figure 2, the study found that majority of the firms were under internationally recognized quality certification regime as reported by 81%. This was important as it enhances the recognition of such firms internationally thus exposing them to global markets which could ultimately lead to improved financial distress. However, of those firms that are not affiliated to any regime, some indicated they are at advanced planning stage while others remained noncommittal with the issue. Mendel (2012) concludes in his study that most organizations in developing countries with specific attention to Sub Saharan Africa are not very keen in registering with International Organization for Standardization (ISO) in order to help market their products and services.

It was also found that 79% of the firms had written customer satisfaction charter. The availability of written customer satisfaction charter could help in improving customer satisfaction. Anderson and Sullivan (2013), agree and say that those firms that have a written customer satisfaction charter excel in financial distress than firms that do not in any way have them. They recommended that all firms should adopt customer satisfaction charters.

The study further found that most firms did conduct periodic customer satisfaction surveys as supported by 78%.This was an indication of many companies wanting to offer quality products and services in order satisfy customer's needs, taste and preferences. In support of the findings, Coulson-Thomas (1992) indicates that quality is a strategic tool that companies use to increase market share or maintain competitiveness in the sense that it essentially for the competitiveness and the company's success since their competitive advantage is often based on reliability and quality rather than price (Prajogo & Brown, 2006). Further, Anderson and Sullivan (2013) recommend that companies should frequently carry out customer satisfaction surveys in order to outrival their competitors and consequently achieve optimum financial distress.

Altman's Z' Score of Selected Listed Firms

The Altman Z' Score was computed for 2015 to gauge financial distress. The study used the following key; Z' < 1.23 means financially weak; Z' > 2.90 means financially strong and 1.23 <Z' <2.90 means gray area. The results are summarized in Table 7.

Table 7: Altman Z' Scores of Selected Listed Firms

Firms	Z'	Firms	Z'
B.O.C Kenya Ltd	1.76	KenolKobil	1.13
Carbacid Investments Ltd	1.66	Umeme	2.22
Mumias Sugar Co. Ltd	2.08	Sameer Africa Limited	3.03
Eveready East Africa Ltd	1.69	Car and General Kenya	1.12
Safaricom Limited	3.22	Williamson Tea Kenya Limited	3.23
Kenya Airways	6.38	East Africa Portland Cement Company	1.19
Hutchings Biemer Limited	1.32	East African Cables Limited	0.98
Nation Media Group	2.03	Crown-Berger (Kenya)	1.12
Longhorn Kenya Limited	1.27	Bamburi Cement Limited	2.64
Express Kenya Limited	2.09	ARM Cement Limited	3.19
British American Tobacco Kenya Ltd	1.62	Sasini Tea and Coffee	4.12
East African Breweries Ltd	3.33	Rea Vipingo Sisal Estate	4.13
Unga Group Ltd	2.22	Limuru Tea Company Limited	3.13
Kenya Orchards Ltd	4.61	Kapchorua Tea Company Limited	2.22
Kengen	1.83	Kakuzi Limited	3.29
TPS Serena	2.44	Eaagads Limited	2.19
Kenya Power and Lighting Company	3.12	Standard Group Limited	3.7
Uchumi Supermarkets	0.96	Total Kenya Limited	1.39
Scangroup	3.51		

The Z-score data in table 7 found that Safaricom Limited, East African Breweries Ltd, Sameer Africa, Sasini Tea and Coffee, Rea Vipingo Sisal Estate, Kakuzi Limited, Limuru Tea, Kenya Power and Lighting Company, Kenya Airways, Scangroup, Kenya Orchards Ltd, Williamson Tea Kenya Limited, ARM Cement Limited, and Standard Group Limited were financially stable for the year 2015. The study found that Mumias Sugar Co. Ltd, Umeme, Express Kenya Limited, Nation Media Group, Unga Group Ltd, Hutchings Biemer Limited, Bamburi Cement Limited, Kapchorua Tea Company Limited, Kengen, British American Tobacco Kenya Ltd, Total Kenya Limited, B.O.C Kenya Ltd, Longhorn Kenya Limited, Carbacid Investments Ltd, Eaagads Limited, and Express Kenya Limited, were found to be in gray zone for the year 2015. The rest of the companies (KenolKobil, Car and General Kenya, East African Cables Limited, East Africa Portland Cement Company, Uchumi Supermarkets and Crown-Berger) were found to be financially distressed in the year 2015.

Correlation Analysis

The first inferential statistic used was Pearson correlation coefficient that describes the degree and direction of relation between two variables. The results are presented in table 8 next.

Table 8: Correlations

		Corporate governance	FSP	Quality certification	Financial distress
Corporate governance	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	37			
FSP	Pearson Correlation	.244*	1		
	Sig. (2-tailed)	.046			
	N	37	37		
Quality certification	Pearson Correlation	.093	.003	1	
	Sig. (2-tailed)	.452	.979		
	N	37	37	37	
Financial distress	Pearson Correlation	.625*	.375**	.355*	1
	Sig. (2-tailed)	.014	.002	.034	
	N	37	37	37	37

*. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed).

The correlation in table 8 indicates that CG is positively related to FSP at 0.244 and also statistically significant to one another at 0.046. The study also found that CG was related to QS at 0.093 and insignificant to each other at 0.452. The study also found that CG was positively correlated to financial distress at 0.625 with statistical significance level of 0.05. In congruence, Miller and Bahnson (2004) found that corporate governance indices have positive and statistically significance relationship with financial distress hence an improvement in the indices of corporate governance would lead to reduced financial distress.

Regarding FSP, the study found that the variable was positively correlated to QS at 0.003 but statistically insignificant at 0.979. The study again found that FSP was positively correlated to financial distress at 0.697 and statistically significant to each other at 0.01. In support, Schwenk and Shrader (2013) study found that non-financial elements such as corporate governance and quality financial reporting have positive relationship with financial distress an indication that an increase in the non-financial determinants leads to decrease in financial distress.

Concerning QS, the study found that the variable had positive correlation with financial distress at 0.355 and also statistically significant to each other at 0.034. In disagreement, Terziovski *et al*., (1997) in a study of 1,000 firms in Australia and New Zealand found that QS had no significant, positive relationship with business performance. From the findings, it can be said that all the independent variables were significantly related to dependent variable. This can be interpreted to imply that an increase in each of the variables could lead to a decrease in financial distress of the studied firms by coefficients to be determined in regression analysis.

Two-Way ANOVA

The second inferential statistic used was F-statistic using two-way ANOVA that describes overall variance accounted for in the model. The results are presented in table 9.

Table 9: Tests of Between-Subjects Effects

Source	Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2167.132[a]	50	43.343	106.544	.000	.811
Intercept	206311.710	1	206311.710	318302.652	.000	2.000
Corporate	215.458	15	15.147	41.005	.000	.989
FSP	373.574	5	81.802	151.872	.000	.973
Quality	17.251	2	7.511	18.369	.000	.814
Corporate * FSP	1.181	8	.089	.669	.706	.234
Corporate * Quality	2.411	5	.416	1.001	.412	.167
FSP * Quality	1.515	3	.468	1.301	.289	.170
Corporate * FSP * Quality	0.001	0	.401	1.200	.644	0.000
Error	7.167	16	.317			
Total	23105.000	37				
Corrected Total	1637.104	36				

a. R Squared =0.757 (Adjusted R Squared = 0.712)

The results in table 9 show that the probability of CG, FSP and QS is 0.000. The results are an indication that all the independent variables are statistically significant to financial distress an indication that an improvement in each of the variables results to decreased financial distress. The probability of CG and FSP, CG and QS, FSP and QS was found to be 0.706, 0.326 and 0.261. The results could be interpreted to imply that all the variables had statistical significance level with financial distress and this is supported by Ho and Wong (2011) who also found positive statistical relationship between financial determinants and financial distress.

Regarding partial Eta square, the study found that CG, FSP and QS were partially Eta squared at 0.99, 0.97 and 0.81 respectively. Thus CG had the greatest impact on financial distress followed by FS and QS in that order.

Lastly, the adjusted r squared indicates that 71.2% of the variance in financial distress is attributable to CG, FSP and QS. In social sciences research, this is a high value, indicating strong relationships between the independent variables and financial distress. The results also affirm the findings under correlation analysis. In agreement, Parker *et al.,* (2002) study among distressed firms concluded that CG mechanisms and FSP had strong linear relationship with financial distress of studied firms.

Multiple Comparisons

As indicated in tests of between-subjects effects, the average financial distress is not equal for all different CG, FSP and QS levels. Multiple comparisons tested the means that are different using Tukey's Honest Significant Distress (HSD) post hoc test. The output is in table 10.

Table 10: Multiple Comparisons

Dependent Variable: Financial Distress Tukey HSD						
					95% Confidence Interval	
Variables		Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
CG	1	-1.2256*	.18121	.000	-2.3443	-1.5511
		2.3362*	.20011	.000	-4.1166	-2.0061
FSP	2	2.5181*	.15622	.000	1.5428	2.4217
		-1.3121*	.22335	.000	-1.7652	-0.5361
Quality certification	3	-3.0055*	.21712	.000	3.3215	4.4568
		2.2141*	.24149	.000	0.6306	1.7643

Based on observed means, the error term is Mean Square (Error) = .448.

As shown in table 10, the difference between financial distress and CG is 2.34. The difference between financial distress and FSP is 2.52 while the mean difference between financial distress and QS is 2.21. Both the asterisk (*), confidence interval and p-value show that the difference is statistically significant. The findings resonate with the correlation analysis and tests of between-subjects results that were presented in the above sub sections.

Regression Analysis

In this section the study presents the regression results. Regression was to determine the relationship between independent variables and dependent variable. The results are presented in the subsequent sections.

Table 11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893[a]	.813	.801	2.99321

a. Predictors: (Constant), Standardization quality , Firm strategic planning, Corporate governance

The model summary in table 11 shows that the coefficient of determination R is 0.801 which implies that 80.1% of the variation in financial distress is explained by CG, FSP and QS. The remaining 19.9% can be explained by other variables not included in the study. This implied that there exists a very strong positive relationship between the variables. The high R square and adjusted R is an indication that there is a high variation that can be explained by the model. In support, Falshaw *et al*., (2006) study found weak relationship between non-financial determinants such as board diversity, CEO duality, and size of audit committee (indicators for CG), CSR, firm planning (independent variables) and financial stability (dependent variable). In yet another study, Van den Berghe and Levrau (2014) found that non-financial determinants of financial distress among French firms had a variation with the financial distress. The study used analysis of variance to test whether the regression model was a good fit for the data.

Table 12: ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3369.123	1	432.124	671.221	.001[b]
Residual	54.441	36	2.101		
Total	2174.299	66			

a. Dependent Variable: Financial distress

b. Predictors: (Constant), Standardization quality, Firm strategic planning, Corporate governance

The ANOVA results for regression coefficients in table 12 showed that the significance of the F statistics is 0.001[b] which is less than 0.01. This meant that there is a significant relationship between independent variables and dependent variable as supported by Van den Berghe and Levrau (2014) whose study found that measures of corporate governance, strategic plans, quality certification and quality financial reporting have positive relationship with financial distress of Dutch firms.

Table 13: Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	9.243	1.043		7.153	.000
	Corporate governance	1.208	.251	.521	22.961	.041
	FSP	1.023	.059	.434	19.234	.023
	Standardization quality	1.187	.104	.342	8.987	.015

a. Dependent Variable: Financial Distress

The Regression model: $Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + ei$

The model therefore takes the form of:

Financial Distress= α_0+1.208CG+1.023FSP+1.187QS+ ei

The coefficient results in table 13 show that a unit increase in CG would lead to decrease in financial distress by a factor of 1.208. The same variable was statistically significant to financial distress at 0.041 (0.000< 0.05). A unit increase in FSP would lead to decrease in financial distress by a factor of 1.023. The variable was also found to be statistically significant to financial distress at 0.023, a p-value that is less than 0.05. A unit increase in QS would lead to increase in financial distress by 1.187 with a statistical significance level of 0.015 (p-value< 0.05). At 5% (0.05) level of significance and 95% level of confidence, all the tested variables had a direct positive relationship with financial distress. In a nutshell, corporate governance was the highest non-financial determinant of financial distress and this was followed by standardization quality and formal strategic planning in that order. The results concur with a study carried out by Schwenk and Shrader (2013) which found that formal strategic planning, board independence, board composition and board size had statistically significant relationship with financial distress of all public institutions in the USA.

Chi-Square Tests for Hypothesis

The study used the Chi Square to test the hypothetical significance level between two variables of the study. A chi-squared test was utilized to attempt rejection of the null hypothesis that the data were independent. The results are presented in the subsequent sections.

H_0: There is no relationship between CG and financial distress.

Table 14: Hypothesis Test for Corporate Governance

Chi-Square	21.212[a]
Df	15
Asymp. Sig.	.011

Since *p*-value = 0.011<0.05, the null hypothesis was rejected. The study concludes that CG has statistically significant relationship with financial distress. The findings concur with Zeff (2013) who found that CG components had statistically positive relationship with financial distress.

H_0: There is no relationship between FSP and financial distress

Table 15: Hypothesis Test for Formal Strategic Planning

	Formal strategic planning
Chi-Square	41.051[a]
Df	7
Asymp. Sig.	.000

Since *p*-value = 0.038 < 0.05, the null hypothesis was rejected. The study concludes that FSP has statistically significant relationship with financial distress. The results are in harmony with the results obtained by Perry and Shivdasani (2001) which found that effective FSP has significant relationship with financial distress.

H_0: There is no relationship between QS and financial distress

Table 16: Hypothesis Test for Quality Standardization

	Standardization quality
Chi-Square	15.342[a]
Df	6
Asymp. Sig.	.017

Since *p*-value = 0.017 < 0.05, the null hypothesis was rejected. The study concludes that firm QS have statistically significant relationship with financial distress of the selected firms. In congruence, Anderson and Sullivan (2013) found that firms that had registered with a given ISO regime demonstrated strong financial position and vice versa. This meant that QS had positive relationship with firms' financial distress.

Summary

Effect of Corporate Governance on Financial Distress

Regarding effects of CG on financial distress, CG was positively related to FSP and the two were statistically significant to one another; CG was related to QS but insignificant to each other and CG was positively

correlated to financial distress and statistically significant to each other. The fact that CG was related to financial distress means that increase in CG could lead to decrease in financial distress. The two-way ANOVA tests found that the probability of CG was statistically significantly related to financial distress meaning increase in CG leads to decreased financial distress. The results approve the correlation findings that there is statistically significant relationship.

Regarding partial Eta square, CG was partially Eta squared to financial distress though it had the second greatest positive effect on the dependent variable and this is supported by the regression coefficient results which also found that CG had the highest effect. The high adjusted r squared indicates that the variance in financial distress was attributable to CG as witnessed by strong relationships. The multiple comparisons tests by use of post hoc test found that the CG had the asterisk (*), confidence interval and p-value less than 0.05 which showed that the difference was statistically significant. The findings resonate with correlation analysis and tests of between-subjects results that found positive significant relationship between variables.

Effect of Formal Strategic Planning on Financial Distress

FSP was positively correlated to QS but statistically insignificant and positively correlated to financial distress and statistically significant indicating that increases in FSP could result to decrease in financial distress. In concurrence, the two-way ANOVA results found that the probability of FSP was statistically significant to financial distress. Thus two-way ANOVA results confirm correlations findings. This, therefore, implies that an increase in FSP by any unit results in the firms' financial distress decrease.

On partial Eta square, FSP was partially Eta squared to financial distress and had the second greatest positive impact contradicting regression coefficient results which found it to be having the lowest effect. The fact that the variables had high adjusted r squared indicates strong relationship and that FSP strongly contributes to a reduction in the financial distress of the studied firms. The results affirm the findings under correlation analysis. The evidenced asterisk (*), confidence interval and p-values in chapter four show that the difference is statistically significant. The findings resonate with the correlation analysis and tests of between-subjects results that established significant and positive relationship between formal strategic planning and financial distress.

Effect of Quality Standards Planning on Financial Distress

Concerning effect of quality standardization on financial distress, the study found that the variable had positive correlation with financial distress and also statistically significant to each other. This, therefore, implies that an increase in quality standardization could lead to a decrease in financial distress of the selected firms. The results of two-way ANOVA on tests of between results found that the probability of quality standardization is significantly related to financial distress.

Regarding partial Eta square, the study found that quality standardization was partially Eta squared to financial distress but was considered to have the least positive impact on financial distress opposing regression which found it be having the second most positive effect on financial distress. The adjusted r squared of the variable indicates that the variance in financial distress is attributable to quality certification as well. In social sciences research, this is a high value thus indicating strong relationships between the independent variable and financial distress. The results also affirm the findings under correlation analysis. The multiple comparisons results show that both the asterisk (*), confidence interval and p-values of quality certification indicates that the difference is statistically significant. The findings also resonate with the correlation analysis and tests of between-subjects results that found statistical significance levels. The regression coefficient also shows that a unit increase in

standardization quality would lead to a decrease in financial distress of the firms which is an indication of direct positive relationship between QS and financial distress. Coulson-Thomas (1992) indicates that QS is a strategic tool that companies use to increase market share or maintain competitiveness. It is essentially for companies' competitiveness and success since competitive advantage is often based on reliability and quality rather than price (Prajogo & Brown, 2006).

Conclusions

Aspects of CG such as BOD, management, internal audit, external audit and audit committees had direct positive relationship with financial distress. Thus effectiveness of BOD with respect to independence and ability of management to performance contract and appraise employees as well as the general effectiveness of audit committee ultimately minimize financial distress of firms. Embracing FSP as indicated by involvement of all departments in budget making processes and in strategic plans through planning horizons with respect to short, medium and long term plans had positive significant association with the financial distress hence the variable is deemed to have played great role in decreasing financial distress.

QS, measured by quality certification had positive significant influence on financial distress. Firms that were recognized under international regimes adhered to products and service quality which helps in improving their financial strength thus decreasing distress.

Recommendations

Firms should have effective BOD with adequate mix of executive and non-executive members, limited maximum years of membership and be gender balanced. The BOD must have effective audit committee to spearhead issues related to auditing to enhance CG in totality. By embracing these facts, the firms could reduce financial distress. To remain financially strong, all firms should embrace effective FSP practices by grouping related financial activities into short term, medium and long term plans. Adopting FSP could effectively assist them in embracing appropriate budget making process whereby all relevant functional departments are involved in all stages of planning. The study found that many firms lacked ISO certification thereby compromising their financial success. All firms should register with international ISOs' to improve the quality of their products and services and also carry out frequent customer satisfaction surveys so as to minimize chances of being financially distressed. The study presumes that if and when the recommendations are embraced, financial weaknesses and gray area performances among firms will be minimized hence decreasing the probability of firms being financially distressed.

Areas of Further Study

The study proposes that a similar study should be carried out with specific reference to listed organizations excluded from this study. Other non-financial determinants may also be analyzed for effect on financial distress.

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