FINANCIAL PERFORMANCE AND MANAGEMENT DIFFERENCES: A COMPREHENSIVE STUDY ON CAUSES OF FINANCIAL DISTRESS FOR ALBANIAN BUSINESSES

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Abstract

This paper studies the financial and management quality reasons of financial distress for the companies operating in Albania. The research follows the analysis of Dhamo and Kume (2015, 2016) regarding the quantitative and qualitative approach used for performance differentiation among companies who are facing financial distress, and those who are not facing financial distress. We use the methodology employed by Altman (2000) in assessing the probability of bankruptcy of privately owned enterprises, through the Z' and Z". We observe the financial performance differences of companies, which are classified as "bankrupt" versus companies that are classified as "non-bankrupt". We compare, through a survey, the differences in management of "bankrupt" versus "non-bankrupt" companies, as per model classification. Moreover, we analyze the probability of default trends of the energy, construction, telecommunication, transportation, fast-moving consumer goods and retail sector in Albania through the period 2011-2014. The data used are the financial statements and surveys of companies, who are ranked the biggest in terms of yearly turnover, as per the Albanian Tax Authority classification. We shrink the list, by including in the study only the companies that have accepted to respond to the survey so far, by resulting in a total of 60 companies.

Introduction

This research follows the investigation of reasons for financial distress of businesses operating in Albania, initiated in the previous works of Dhamo and Kume (2015, 2016).

One of the main objectives of the study is identifying causes of potential default. The seminal work of Altman (1968) on predicting failure through multi discriminant analysis of financial ratios, which is then followed by other studies of Altman et al. (1977, 2000, 2005, 2013, 2014), shows that business failure is affected by liquidity of firms' assets, cumulative profitability over time, asset productivity, sales generating ability of assets, and financial leverage. The Z models proposed by Altman, which include the original Z model, Z' model, Z" model, and emerging market model, show two types of errors. Type I error occurs when the model considers failed companies as non-failed, while Type II error occurs when the model considers non-failed companies as failed. There have been evidenced many pros and cons in the literature regarding Altman's predictive approach for business failure. Hayes (2010) confirms that Z" model has a 94% predictive power in the retail sector of the US. Altman et al. (2014) evidenced that Z" model may perform well in different countries. The author shows that Z" models work well for Italian manufacturers, if used with caution (Altman et al, 2014). Muminovic (2013) suggests that local market model should perform better than Altman Z models in the local context.

As many of the previously mentioned studies show, the predictive power of the financial ratios does not explain much of the reasoning of companies' financial distress. Gaskill et al. (1993) evidences that retail businesses poor managerial functions, ineffective advertising/ promotional strategy, failure to generate long term business plan and personnel plan, are all factors that may cause business failure. Ropega (2011) show that the combination of both financial and organizational analysis, may help businesses track the proper actions to avoid failure. Ahmad and Seet

(2009) evidence that in Australia and Malaysia failure comes from lack of clear business direction, conduct research, recognize opportunities, organization and relationship skills. Zilbershtein (2013) stresses out that successful entrepreneurs are proactive, consider the firm as people centered entity, engage others in their decision process.

Following the suggestions of Ropega (2011), our research focuses on the financial performance and management differences of failed and non-failed companies operating in Albania. We use the Z models approach, suggested by Altman (2000) for evidencing "bankrupt" and "non-bankrupt" companies in the sample considered in this research. We use a modified version of the survey method suggested by Nikolic et al. (2015), as presented by Dhamo and Kume (2015), for identifying the management differences between "bankrupt" and "non-bankrupt" companies considered in this study.

Next it is briefly described the methodology of the research. Section three presents the sources of the data used in the Z-Score assessment and survey results. Section four the bankruptcy potential results of the construction, energy, fast-moving consumer goods (FMCG), retail, transportation and telecommunication sector through the period 2011-2014. Next section describes the differences in liquidity of firms' assets, cumulative profitability over time, asset productivity, sales generating ability of assets, financial leverage and management of "bankrupt" and "non-bankrupt" companies considered in this study. Conclusions of this research are presented in the last section.

Research Methodology

Following the reasoning of Dhamo and Kume (2016), we use the Z' and Z" models suggested by Altman (2000) for identifying "bankrupt", and "non-bankrupt" firms in the sample used in this research.

The Z′ model is:

$$Z' = 0.717(X_1) + 0.847(X_2) + 3.107(X_3) + 0.420(X_4) + 0.998(X_5) \quad\quad (1)$$

Where,
X1 = Working Capital/Total Assets (a measure of liquid assets relative to total capitalization)
X2 = Retained Earnings/Total Assets (a measure of relative cumulative profitability over time)
X3 = EBIT/Total Assets (a productivity measure of firms' assets)
X4 = Book Value of Equity/Book Value of Total Debt (a measure of the relative tolerance regarding decline in value of assets until the company becomes insolvent)
X5 = Sales/Total Assets (a measure of the sales generating ability of company's assets)
Z' = Overall index value

If the Z' score is lower than 1.23, than the company is considered as bankrupt. If the score is higher than 2.9, than the company is non-bankrupt. A score between 1.23 and 2.9, considered as zone of ignorance, does not indicate anything regarding financial distress.

The Z'' model leaves out the sales generating ability of companies' assets, since it is considered an industry impact, as indicated below:

$$Z'' = 6.56(X_1) + 3.26(X_2) + 6.72(X_3) + 1.05(X_4) \quad\quad (2)$$

If the Z" score is lower than 1.1, than the company is considered as bankrupt. If the score is higher than 2.65, than the company is non-bankrupt. A score between 1.1 and 2.65, considered as zone of ignorance, does not indicate anything regarding financial distress.

If a company is categorized as "bankrupt" from both Z' and Z" models in the last year of available data (2014), we categorize it as bankrupt in our study. If a company is categorized as "non-bankrupt" from both models in the last year of available financial data (2014), we categorize it as non-bankrupt in our study. Although we are aware that such methodology gives only an "estimate" whether a company is bankrupt or not, it is imposed by the lack of data/publications of bankrupt firms operating in Albania as well as problems with current legislation regarding the process of bankruptcy for private companies.

We use a modified version of the methodology of Nikolic et al. (2015), presented by Dhamo and Kume (2015), for evidencing the management differences between firms categorized as bankrupt and those categorize as non-bankrupt.

Nikolic et al. (2015) survey targets the evidencing of whether individual characteristics of entrepreneurs and/or non-individual characteristics of businesses affect failure of the companies. The authors consider individual characteristics the demographics, professional experience, motivation of SME startup, etc. Nikolic et al. (2015) divides non-individual as internal, like business age, sector, life cycle in time of distress, number of employees, financial resources, infrastructure in the surrounding region of operations, and external, like political, economic and social issues, technological, ecological and legislative issues.

The revised questionnaire was conducted to 60 businesses, who have been assessed in terms of bankruptcy potential through the Z' and Z" model. These companies are part of the "VIP" list of the Albanian Tax Authority. The respondents of the survey were either finance managers or the general managers of the firms. The analysis of the survey result is presented in section 5.

Data

This work uses the list of VIP companies from the Albanian Tax Authority. The list includes the biggest tax paying firms operating in Albania. We have referred to the list published by the Albanian business magazine "Monitor" in 2015.

The financial information of the companies classified as VIP is obtained from the official website of the National Registration Center of the Republic of Albania. We use the current assets, current liabilities, total assets, total liabilities, sales, EBIT, retained earnings, book value of equity, for the years 2011, 2012, 2013 and 2014, which serve as input for the explanatory variables X1, X2, X3, X4 and X5 in Z' and Z" models. From all the universe of the biggest tax paying firms operating in Albania, this research considers the 60 businesses who have answered to our survey.

Next section presents a thorough analysis of the bankruptcy potential for the construction, telecommunication, FMCG, transportation, retail and energy sectors of Albania through the period 2011-2014.

Description of Z' and Z" Model Results by Sector under study

This research studies 60 companies categorized as "VIP" from the Albanian Tax Authorities. The most representing sectors in the sample are the construction, energy, fast-moving consumer goods (FMCG), retail, telecommunication and transportation sectors. Table 1 shows Z' and Z" performance statistics for the six most represented sectors through the period 2011-2014.

The construction sector seems to dominate "the worst" performers during the last three years of the study, although the 2011 performance, based on Z" score, was the best. Moreover, the Z' score qualifies the sector as "bankrupt in 2014. However, for the period 2011-2012, Z" model qualifies the sector as "non-bankrupt".

Based on the Z' model, the energy sector seems to be the best performing in terms of lack financial distress, during the period under consideration. The model qualifies this sector as "non-bankrupt" during in all the four years.

The fast-moving consumer goods sector shows the lowest probability of default in 2013, based on both models. However, the same year, the sector shows the highest level of variability of its companies for the level of financial distress, compared with other sectors.

Table 1. Summary Statistics of the Z' and Z'' model for the main sectors considered in the study

Sector	2011			2012			2013			2014		
		Z'	Z''		Z'	Z''		Z'	Z''		Z'	Z''
Construction	Mean	2.04	3.72	Mean	1.74	2.72	Mean	1.56	2.47	Mean	1.07	1.38
	Min.	0.38	-0.94	Min.	0.53	-0.51	Min.	0.39	-4.96	Min.	-3.60	-16.65
	Max	4.92	10.84	Max	4.42	8.53	Max	4.02	9.74	Max	3.27	7.64
Energy	Mean	6.60	3.30	Mean	7.61	3.28	Mean	3.10	1.84	Mean	6.34	2.70
	Min.	1.20	-2.40	Min.	0.61	-2.76	Min.	-0.01	-3.35	Min.	0.72	-2.70
	Max	26.48	15.73	Max	49.81	6.87	Max	16.44	6.55	Max	54.45	16.90
FMCG	Mean	3.01	3.38	Mean	2.59	3.96	Mean	9.89	11.44	Mean	2.99	4.14
	Min.	0.79	0.77	Min.	0.55	1.06	Min.	0.78	1.58	Min.	0.74	1.08
	Max	5.70	6.72	Max	4.44	7.68	Max	57.51	61.86	Max	5.06	8.26
Retail	Mean	3.01	3.28	Mean	3.59	4.36	Mean	3.69	4.65	Mean	3.86	5.79
	Min.	0.33	0.22	Min.	0.33	0.16	Min.	0.38	-0.14	Min.	0.38	0.11
	Max	6.02	8.52	Max	5.09	9.43	Max	6.47	13.36	Max	7.17	16.10
Telecommunication	Mean	1.09	1.08	Mean	1.90	3.85	Mean	2.32	4.89	Mean	1.72	2.48
	Min.	-0.88	-2.94	Min.	-0.92	-3.63	Min.	-1.10	-5.34	Min.	-2.44	-13.68
	Max	3.57	7.48	Max	6.16	17.72	Max	6.89	20.39	Max	7.20	21.99
Transportation	Mean	1.92	3.61	Mean	4.77	7.19	Mean	1.86	4.08	Mean	1.74	3.25
	Min.	1.33	2.61	Min.	1.31	1.30	Min.	0.97	0.46	Min.	1.32	-1.06
	Max	2.98	4.96	Max	12.11	16.67	Max	3.42	7.73	Max	2.88	6.21

The retail sector is qualified as "non-bankrupt" through all the period based on both models, while the transportation sector is qualified as "non-bankrupt" through all the period based on Z" score. The telecommunication sector is qualified as "bankrupt", based on both models, in year 2011.

This section describes the probability of default trends of the six main sectors represented in this study. The construction sector, based on our sample, seems the most performing one, in terms of Z score, while the energy sector seems the best performing based on Z' model. The retail sector is qualified as "non-bankrupt" independently from the model or year of consideration, while the telecommunication sector is qualified as "bankrupt" in year 2011. Next section analyzes the differences in financial characteristics and management of "bankrupt" and "non-bankrupt" companies, from the sample considered in this study.

Description of Financial and Management Differences between "Bankrupt" and "Non-Bankrupt" Companies

We aim to identify the financial and management differences between the "bankrupt" and "non-bankrupt" from the sample considered in this paper. Based on the financial information sample used, Z' models shows a 54% probability that the company classified as "default" in 2011 is classified as default through all the period, including 2014. A similar result is achieved by using Z" model, with a 45.5% probability of default through all the period for companies that classified as default since the beginning of the period. Such results suggests that, although Z' and Z" model may predict "bankruptcy" for companies at a specific year, such companies may not face real financial distress afterword.

However, the main constraint of this research is the lack of information regarding "bankruptcy filings" or alternatively "bank default cases" for the companies under consideration. Such information is not public in Albania. In this circumstances, for describing the financial performance and management differences between "bankrupt" and "non-bankrupt" companies, we consider as "bankrupt" firms that have a Z' score lower than 1.23 and a Z" score lower than 1.1 in 2014, and "non-bankrupt" firms that have a Z' score higher than 2.9 and Z" score higher than 2.65 in 2014. Based on this methodology, from the sample of 60 companies, 12 are classified as "bankrupt" and 17 are classified as "non-bankrupt".

Table 2. Summary Statistics of the Financial Ratios for the bankrupt and non-bankrupt companies for 2014

		WC/TA (X1)	RET.EAR/TA (X2)	EBIT/TA (X3)	EQ BV/TL (X4)	SALES/TA (X5)
Bankrupt	Mean	-0.267	-0.228	-0.054	0.154	0.476
	Min.	-1.184	-1.442	-0.674	-0.538	0.166
	Max.	0.129	0.119	0.085	0.456	1.109
Non-Bankrupt	Mean	0.425	37.609	23.271	3.128	86.421
	Min.	-0.009	-0.463	0.012	0.303	0.145
	Max.	0.921	633.945	392.882	13.936	1387.205

Table 2 shows that firm's cumulative profitability over time, asset productivity and sales generation ability (valid for Z' model) are the main drivers of difference in probability of default between "bankrupt" and "non-bankrupt" firms. Liquidity of firm's assets and financial leverage seem to influence by less the probability of default for Albanian companies, based on the sample considered in this study. Negative working capital, cumulative profits and EBIT seems to be the main financial reason for companies to face "bankruptcy", based on the Z models used in this research.

Based on the data from Table 3, time spent at work seem not to positively influence the financial performance of companies in terms of probability of default. "Non-Bankrupt" company managers work less hours per week, as compared with "bankrupt" company managers. Surprisingly, while "bankrupt" managers seem to spend most of their time for strategic decision making in the function of companies performance, "non-bankrupt" managers dedicate most of their time to the administrative work.

While "bankrupt" managers value more self-confidence, need for achievement, risk taking and internal locus of control as personal characteristics for companies success, "non-bankrupt" managers value more education as personal characteristics for company's success. Times spent for social responsibility work is valued more from "non-bankrupt" managers than from "bankrupt" managers, as a way to spend free time.

Financial motives seem to be a more important motivation for "non-bankrupt" managers to startup a business than for "bankrupt" managers. "Bankrupt" managers do value more than "non-bankrupt" managers the desire to be independent, job satisfaction, self-fulfillment, good network, employment creation and additional financial resources as a motivation for business startup. It seems that financial motives may drive "non-bankrupt" managers to be more motivated than "bankrupt" managers in running the firm.

Table 3. Management Differences between "Bankrupt" and "Non-Bankrupt" Companies - The Influence of Individual Characteristics

Individual Characteristics Categories	Individual characteristics Sub-Categories	Questionnaire results for "Bankrupt" Companies	Questionnaire results for "Non-Bankrupt" companies
Professional experience	Number of hours spent at work weekly	53	49
Professional experience	Proportion of time spent in solving strategic problems/decision making/addressing the operational challenges, weekly	47.27%	41.50%
Professional experience	Proportion of time spent in administrative work, weekly	45.19%	53.81%
Personal characteristic	Time spent for social responsibility works (average rank)	3.42	3.59
Personal characteristic	Self-confidence is the most important personal characteristic of entrepreneur for success of companies (average rank)	5.5	4.82
Personal characteristic	Need of achievement is the most important personal characteristic of entrepreneur for success of companies (average rank)	5.58	4.88
Personal characteristic	Risk taking is the most important personal characteristic of entrepreneur for success of companies (average rank)	5.67	5.12
Personal characteristic	Internal locus of control is the most important personal characteristic of entrepreneur for success of companies (average rank)	4.83	3.65
Personal characteristic	Education is the most important personal characteristic of entrepreneur for success of companies (average rank)	4	4.71
Motivation for company startup	My motivation for Entrepreneurship startup was desire to be independent (average rank)	5.17	5.41
Motivation for company startup	My motivation for Entrepreneurship startup was financial motives (average rank)	5.08	5.94
Motivation for company startup	My motivation for Entrepreneurship startup was job satisfaction (average rank)	5.08	4.5
Motivation for company startup	My motivation for Entrepreneurship startup was self fulfillment (average rank)	5.25	4.75
Motivation for company startup	My motivation for Entrepreneurship startup was good networks (average rank)	3.75	3.06
Motivation for company startup	My motivation for Entrepreneurship startup was employment creation (average rank)	3.5	2.81
Motivation for company startup	My motivation for Entrepreneurship startup was access to additional financial resources (average rank)	4.42	4

Based on the data from Table 4, in terms of non-individual characteristics, management of receivables/payables, delegation of responsibilities, difficulties in absorption of new technology, and level of clearing transactions, seem to dominate companies problems in "bankrupt" firms more than in "non-bankrupt" firms. "Non-bankrupt" firms though consider a bigger problem, as compared with "bankrupt" firms, the level of fixed assets free from any burden/inscription. Such problem priorities may indicate that "bankrupt" managers focus more on the liquidity management of the company on a daily bases, and "non-bankrupt" managers seem to focus more on finding ways to finance growth opportunities for the company.

Table 4. Management Differences between "Bankrupt" and "Non-Bankrupt" Companies - The Influence of Non-Individual Characteristics

Non-Individual Characteristics Categories	Non-Individual characteristics Sub-Categories	Questionnaire results for "Bankrupt" Companies	Questionnaire results for "Non-Bankrupt" companies
Internal Influences	Management of receivables/ payables, as internal factor, can have importance for companies' problems (average rank)	7.33	6.88
Internal Influences	Delegation of responsibilities, as internal factor, can have importance for companies' problems (average rank)	5.67	4.35
Internal Influences	Difficulties in absorption/acquisition of new technology/innovation, as internal factor, can have importance for companies' problems (average rank)	5.58	4.53
Internal Influences	The level of fixed assets free from any burden/inscription, as internal factor, can have importance for companies' problems (average rank)	3.33	3.53
Internal Influences	The level of clearing/barter transaction, as internal factor, can have importance for companies' problems (average rank)	4.92	3.06
Internal Influences	The decision maker for the cash management	Owner/General manager	General Manager/Finance Manager
Internal Influences	The Main use of dividends	Finance other Businesses/Investments	Luxuries and Others
Internal Influences	When considering a new investment, the main factor affecting the decision	Future Cash Flows of Investments	Future Value of Investment
Internal Influences	Number of Employees	101-250	51-100
External Influences	Transportation system is important infrastructural issue of the surrounding region of my company (average rank)	3.83	4.65
External Influences	Enough qualified work force in the region is important infrastructural issue of the surrounding region of my company (average rank)	2.83	4.41
External Influences	Economic issues , as external factor, can have importance for companies operational problems (average rank)	5.58	4.06

The cash management delegation seem to be a way to fight distress, since in "non-bankrupt" companies such duty may be exercised from the Finance Manager as well. The need for liquidity seems to influence the choice of the main factor affecting the new investment decision for "bankrupt" managers.

"Bankrupt" managers blame the economy as an external factor to the company's problems, while "non-bankrupt" managers consider improved transportation system and enough regional qualified workforces as important external factors to solve company's problems.

This section summarizes the differences in financial performance and management of the "bankrupt" and "non-bankrupt" companies. Cumulative profitability, sales generation ability and productivity seem to influence the financial default of companies, which were part of this study.

Managers of "non-bankrupt" companies value more education as important factor for entrepreneurial success, while they spend less time at work than "bankrupt" managers. The financial needs seem to be an important motivation for better managing a business. "Non-bankrupt" managers seem to focus more on financing growth opportunities, while "bankrupt" managers seem to focus more on financing company's liquidity needs. Managers of the "bankrupt" companies, as per the qualification used in this paper, consider the economy an important external factor for firm's distress, while managers of "non-bankrupt" companies consider the improve of the transportation system and enough qualified workforce as external solutions to their business problems. Next section summarizes the conclusions of this study.

Conclusions

This research focuses on identifying the financial performance and management differences between companies that classify as "bankrupt" and companies that classify as "non-bankrupt". We use the Z' and Z" model parameters and boundaries as a classification mode for the 60 businesses analyzed in this research, using the financial data of end of year 2014. We use a modified version of the survey suggested by Nikolic et al. (2015), presented in the research of Dhamo and Kume (2015), for identifying management differences between bankrupt and non-bankrupt firms. Moreover, based on the summary statistics of default models Z' and Z", we describe a sectorial performance for six different sectors of the Albanian economy through the period 2011-2014.

We observe the retail sector as "non-bankrupt" through all the period under consideration, while the construction sector as the worst performing sector, for the period under study.

Cumulative profitability over time, sales generation ability of company's assets and asset productivity seem to be the main influencers of the business default, based on the sample used in our research.

Improving Education and prioritizing individual financial needs may drive companies away from default, independently from the amount of time spent at work. An improved transportation system and qualified workforce are the external most important criteria for managers of "non-bankrupt" firms.

A natural extension of this research is the increase of the sample under consideration, since including only sixty companies may not drive statistically robust conclusions, although this study shows some guidelines for future specific research on the individual and non-individual motives of business failure. Another extension may be the use of real default data instead of Z' and Z" criteria in classifying firms as "bankrupt" and "non-bankrupt", in countries where such data are available.

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