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An Appraisal of Financial Health of BSNL through Altman Z"-Score Model: An Analtical Study

Abstract

Generally, the main objective of business organization is to maximize profit. Though, Bharat Sanchar Nigam Ltd. (BSNL) being a government company, its priority to serve the nation in terms of its telecom services is commendable. Simultaneously, it is important for the company to have a bright future outlook. Currently, BSNL is facing deadly competition due to entry of Reliance Jio in the year 2016 and merger of Vodafone India in September, 2018 which plunged revenues of the company. This study attempts an appraisal of financial health of BSNL from the year 2012-13 to 2017-18 to make out whether company will be able to stay alive or leading to bankruptcy by using Altman Z"-Score Model. The study is constructive for stakeholders and having managerial implications.

Keywords: Financial Health, BSNL, Telecom Services, Bankruptcy, Z"-Score Model.

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Introduction

The telecom sector is growing rapidly and is expected to contribute immensely to India's Gross Domestic Product as per report of the Boston Consulting Group. India has become the world's second-largest telecommunications market. As of January 2019, India has witnessed a 165% growth in app downloads in the last two years. Liberal telecom policies and Foreign Direct Investment (FDI) backed up by good demand; it is among top five sectors for generating employment opportunities in the country. India remained as the world's fastest growing market for Google play downloads in the second and third quarter of 2018. India has surpassed USA and became the second largest market in terms of number of app downloads in the year 2017. Over the next five years, rise in mobile-phone penetration and decline in data costs will lead to addition of 500 Million new internet users in India thereby creating opportunities in the said sector. With daily growing subscriber base, there have been a plenty of investments and technological developments in the sector. According to Department of Industrial Policy and Promotion, the telecom industry has attracted FDI worth US$ 32.45 Billion during the period from April 2000 to December 2018[1]. Besides, FDI cap in the telecom sector has been augmented from 74% to 100%.

BSNL was incorporated on 15th September, 2000.[2] It took over the business of providing telecom services and network management from the former central government Departments of Telecom Services and Telecom Operations from 1st October, 2000 on *going concern basis*. It is one of the largest and leading public sector units providing wide-ranging telecom services in India. Despite of amazing expansion in telecom sector, BSNL is struggling in terms of poor performance and is searching for its continued existence. BSNL is 100% owned by the central government.[3] Total employees of BSNL were 1,83,522 as on 31.3.2018 of which 48,455 were executive employees and 1,35,067 were non-executive employees. Total employees of the company include 33,698 Scheduled Caste, 9,897 Scheduled Tribe, 21,239 Other Backward Caste, and 332 Ex-Servicemen employees. The company has implemented Ind-AS and the transition date for implementation of Ind AS was 01.04.2015. According to Telecom and IT minister Ravi Shankar Prasad, "Low tariffs due to fierce competition in the mobile segment, high staff cost and absence of 4G services (except in few places) in the data-centric telecom market are the main reasons for losses of BSNL".[4] Struggling with poor cash flows from services and a severe financial crunch and large workforce of 1.76 lakhs, BSNL is looking for non-core asset monetization under the broad policy of the government. Time-bound monetization of land assets, mobile towers and fibre networks will facilitate BSNL to earn some money in hard-hitting times of declining revenues and mounting losses. Further, BSNL is expected to incur losses of over Rs. 14,000 crores for the financial year 2018-19 and its revenue is expected about Rs. 19,308 crores, according to Lok Sabha Minister. The market share of the services or products of BSNL viz., Landline has been 61.80%, 58.63% and 56.15% for the years 2014-15, 2015-16 and 2016-17 respectively.[5] It is observed that such market share of the company shows a declining trend which is a cause of concern. Similar trend has been observed with respect to market share of Broadband (ADSL) services. However, there seems a slight improvement in market share of GSM and WLL services in the above mentioned periods.

The financial performance of BSNL has not been very encouraging and loss from the year 2012-13 to 2017-18 has been Rs. 7884.44 Crores, 7019.76 Crores, 8234.09 Crores, 4859.16 Crores, 4793.21 Crores, and 7992.85 Crores respectively. Further, it has been observed that the employee benefits expense remains a major expense, approximately 44% of total expenses over the years.

The Problem of the Study

BSNL represents one of the vital segments of telecom industry in India. Though it is a government company and its main focus is to render services to the nation but any business in deed desires some profit for its survival and thereby growth and development. Some government companies have reported losses, like BSNL. It is mostly due to passive control which leads to inefficiencies and thereby incurring loss has become a burning issue in public sector undertakings. The company suffered loss from the year 2012-13 to 2017-18, probably due to competition and company's failure to offer latest technology based products and services such as 4G, though ensuing 5G remains a challenge. Continuous losses augur future challenges for business to survive, search for its viability, and yearn for turnaround in short term and to avoid financial distress in long term. Therefore, to ensure good business conditions, it is rational to make appraisal of financial health of BSNL and to ascertain whether it is going to face financial distress. Therefore, this study is justified as per current depressing business scenario of BSNL and hence it is required to determine whether company is going towards bankruptcy or still there is possibility of its business revival.

Objective of The Study

To make an appraisal of financial health of BSNL through Altman Z"-Score Model.

Review of Literature

Traditionally, financial statement analysis was used to assess credit worthiness of a business (Beaver et al., 2010)[6.] Now days, financial statement analysis has been used by stakeholders for multiple purposes. Basically, studies related to bankruptcy are divided into two parts.

One type of studies comprise of case studies, wherein only one company is a sample or a particular company is evaluated for its financial performance to ascertain its continuity. For e.g., Saini (2018)[7] studied Gujarat State Fertilizers Company for the years from 2008 to 2017 and found that the company belongs to grey zone except for the year 2008-09 and signals that overall the financial situation of the company is a serious concern. Similarly, Sinku and Kumar (2014)[8] studied SAIL and concluded that bankruptcy is unlikely to occur in the next two years. Further, Kumar (2016)[9] studied ONGC for a period of five years from 2010-11 to 2014-15 and concluded that company is doing well. Therefore, bankruptcy is unlikely to occur in the next two years indicating overall good financial health of the entity. Chaitanya (2005)[10] also attempted to study the financial distress of IDBI. Senapati and Ghosal (2016)[11] studied distress possibilities through ratios based on annual reports of the company. Prasad and Kumari (June 2013)[12], also studied India Tourism Development Corporation for the year 2007 to 2011 and concluded that the company was in too healthy zone for the period 2007 to 2009 but it has come in healthy zone in last two years of study i.e., 2010 to 2011, and therefore management should be cautious about its performance in order to avert bankruptcy. Nirmala & Karpagavalli (2012)[13] studied Asian Paints for the period 2001-2010. They had shown that the company is too healthy.

Other type of studies includes large sampled studies such as Altman (1968)[14] used Multiple Discriminant Analysis (MDA) to construct a bankruptcy calculation Model. He used five ratios to develop a Z Score which could predict about the financial health of a company. His study was based on sample of 66 manufacturing companies, of which 33 firms in the bankrupt-group and 33 firms in the non-bankrupt group. Ray (2011)[15] also investigated the financial health of automobile industry in India for the period, 2003-04 to 2009-10. Study analysed and depicted 'Grey Zone' which means there exist uncertainty about credit risk of firms within the automobile industry and advised to be cautious about their performance. Overall financials were considered viable but may result into bankruptcy in near future. Sajjan (2016)[16] studied six companies which were listed on Indian stock exchanges, of which three were from manufacturing sector and other three were from non-manufacturing sector. The time frame for the study was five years from 2011 to 2015. The study revealed that none of the companies belonged to safe zone except for few years. Most of the companies were in distress zone which indicated possible bankruptcy in near future.

Research Design

The study uses annual reports as main source of data. Nature of data is secondary. The period for the study is 2012-13 to 2017-18. Annual reports were downloaded from website of company. It is case study which has indentified specific problem of company's survival and attempts an appraisal of financial health through Z" Score Model.

Altman's Model

The original Z-Score was developed for predicting the possibility that a company would go bankrupt (Altman, 1968).[17] This model was meant for public manufacturing firms and eliminated all firms which were having assets less than $1 Million. Such model was not proposed for small, non-manufacturing or non-public companies. Altman et al[18] developed the Z'-Score Model for private manufacturing companies. Further, they also developed the Z''-Score Model for private general firms and those in the service sector in emerging markets.

Financial ratios for measuring Z"-Score Model for non-manufacturing companies in emerging markets:

X_1 = (current assets − current liabilities)[19,20] / total assets

X_2 = retained earnings / total assets

X_3 = earnings before interest and taxes / total assets

X_4 = book value of equity / total liabilities

Z"-Score Model for emerging markets: $Z'' = 3.25 + 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$

Table 1: Altman's Z"-Scores and Indentified Zones

Situation	Z-Score	Identified Zones
I	Below 1.1	Bankruptcy Zone
II	Between 1.1 and 2.6	Grey Zone
III	More than 2.6	Safe Zone
Source: *Altman, Edward I., Alessandro Danovi and Alberto Falini, Z-SCORE MODELS' APPLICATION TO ITALIAN COMPANIES SUBJECT TO EXTRAORDINARY ADMINISTRATION, 1-15 retrieved https://www.google.com/search?client=firefox-b-d&channel=trow&q=Altman+E+I+%281968%29+Financial+ratios%2C+discriminant+analysis+and+the+prediction+of+corporate+bankruptcy*		

Findings

An appraisal of financial health is done through financial ratios. These ratios are multiple variables for deriving Z" Score in emerging markets. These financial ratios are presented in Table 2.

Table 2: Financial Ratios

Years	X_1	X_2	X_3	X_4
2012-13	-0.02	0.11	-0.08	0.05
2013-14	0.02	0.04	-0.08	0.06
2014-15	-0.07	-0.08	-0.11	0.07
2015-16	0.02	-0.14	-0.05	0.07
2016-17	-0.03	0.39	-0.04	0.04
2017-18	-0.05	0.33	-0.07	0.04
Source: Authors' calculations from annual reports.				

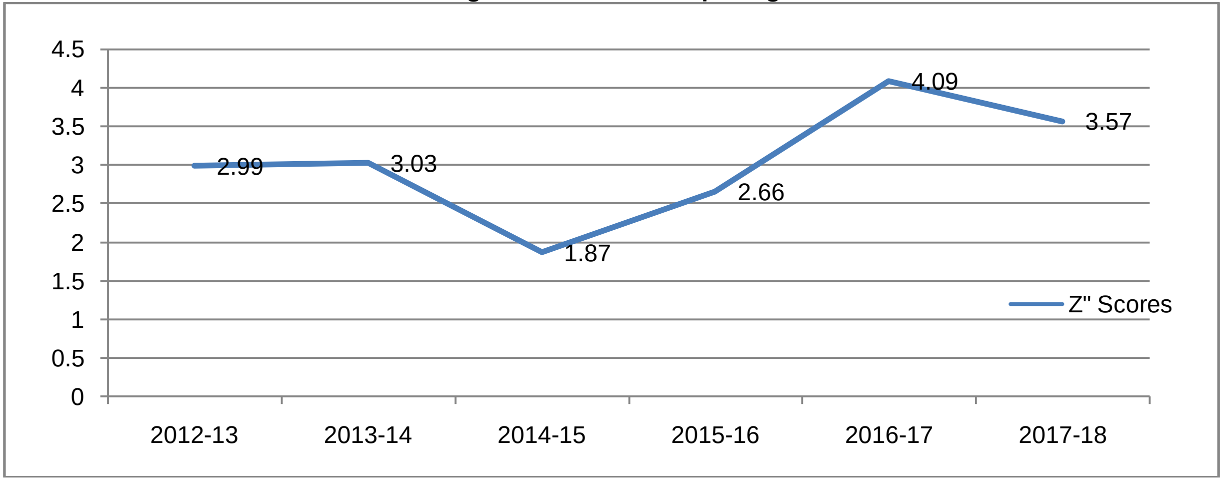
1. Table 2 depicts net working capital in relation to total assets and shows fluctuating trend over six years of the study. This ratio is negative in four of six years.
2. Retained earnings in relation to total assets too shows fluctuating trend and earnings are better in last two years compared with first three years of study. It shows more retention and ploughing back of profit in recent past years. If company retains more, effective cost of capital will be less as not much of debt will be required which leads to interest outlay. As government is only shareholder in the company, it is possible but company should have good operating profits to survive in long term in competitive telecom business.
3. EBIT in relation with total assets is also exhibiting inconsistent trends. Distinctly, from other financial ratios, it is negative in all the years of the study which is not good for the company. Possibilities of over-assets, under assets, unproductive assets are apparent and assets are not sufficiently contributing to operating profits.
4. Relationship between book value of equity shares and total liabilities shows proportion of owners' capital in comparison with total liabilities of the company.

Table 3

Computation of Z" Scores from financial ratios

Years	Computation	Z" Score
2012-13	3.25 + [(6.56 x -0.02) + (3.26 x 0.11) + (6.72 x -0.08) + (1.05 x 0.05)]	2.99
2013-14	3.25 + [(6.56 x 0.02) + (3.26 x 0.04) + (6.72 x -0.08) + (1.05 x 0.06)]	3.03
2014-15	3.25 + [(6.56 x -0.07) + (3.26 x -0.08) + (6.72 x -0.11) + (1.05 x 0.07)]	1.87
2015-16	3.25 + [(6.56 x 0.02) + (3.26 x -0.14) + (6.72 x -0.05) + (1.05 x 0.07)]	2.66
2016-17	3.25 + [(6.56 x -0.03) + (3.26 x 0.39) + (6.72 x -0.04) + (1.05 x 0.04)]	4.09
2017-18	3.25 + [(6.56 x -0.05) + (3.26 x 0.33) + (6.72 x -0.07) + (1.05 x 0.04)]	3.57
Source: Authors' calculations from annual reports.		

Figure 1: Line chart depicting Z" Scores



According to Z" Score Model in emerging markets, BSNL was under safe zone in all years of study except in the year 2014-15. In the year 2014-15, company was in grey zone and therefore, it was uncertain to predict its bankruptcy considering that year.

Conclusion

An appraisal of the financial health is an integral part of any business for its survival. An assessment of financial performance aids stakeholders, in particular managers and regulators for well-timed decisions and thereby effectively governing corporations. Financial ratios facilitate understanding of financial performance. Z"-Score Model developed by Altman is based on combination of financial ratios and is praiseworthy contribution as it facilitates in detection of corporate bankruptcy of which companies should be cautious, particularly when they are struggling and continuously incurring losses. If failure can be predicted timely, management can take corrective action such as a merger, demerger or reconstruction to avoid potential bankruptcy and revive business (Ray, 2011)[21]. The early warning signals through Z" Score Model predicting corporate problems early enough can assist companies to get out of financial difficulties (Saini 2018)[22]. Otherwise, the existence of the financial distress if remains undetected can lastly show the way to corporate bankruptcy (Salehi and Abedini 2009)[23]. Based on an appraisal of financial health of BSNL through Altman Z" Model in emerging markets, it is concluded that bankruptcy of BSNL in unlikely to occur in near future as it is in safe zone for the all years of study except for the year 2014-15, wherein the company was is grey zone and to augur its bankruptcy in that year was uncertain. Therefore, it is advocated that company must be cautious about its bankruptcy status and must strive to improve financial performance to ensure its continued existence and survival in the years to come as there is cut-throat competition in the telecom sector.

Suggestions

As BSNL is a loss making undertaking, the suggestions offered are as follows:-

1. Restructuring business internally, externally, to assess over- assets, under-assets and proper valuation of assets.
2. To take measures to reduce employee benefits expenses, to solve problem of over-staffing.
3. Modernisation of infrastructure and assets base if required, if it is practicable to compete in latest products or services in the telecom sector, e.g. 4G and 5G.
4. Divestment of whole or part business to private sector or to another government undertaking for betterment of stakeholders.

Limitations of the Study

The study is based on the secondary data and covers only the period from 2012-13 to 2017-18.[24] Further, it is a case study and covers only one company in the telecom sector, so constraints of small samples are implied. The study also suffers from inherent limitations of ratio analysis as financial ratios are the basis for Z" Score Model for emerging markets. For e.g., the book value of equity is used in calculation of financial ratios which is far-away from reality.

Endnotes

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