A Consensus on Financial Analysis and Corporate Bankruptcy

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ABSTRACT

Financial analysis and the predictive power of financial ratios in failure prediction context has been well known subject in the literature of finance and accounting since 1960s. However, it has not been taken important issue in the developing counties like Nepal. Thus this study has attempted to assess the consensus on financial analysis and predictive ability of financial ratios on prediction of corporate bankruptcy on the basis of the opinions received from twenty two respondents including managers, chartered accountants and academicians. Based on respondents' opinion, this study also showed that the main purposes of financial analysis among the respondents have been found paradoxical. While the default of payment of loans and high debt equity ratios are found as the main symptoms of corporate bankruptcy. Using weighted mean of respondents' opinion, of the fifteen financial ratios, the ratios of LDSE, TDTA, CFTD, WCTA and QACL are found the five most powerful financial ratios as predictors of corporate bankruptcy respectively.

Keywords: *Corporate Bankruptcy, Corporate Failure, Financial Distress, Financial Ratios, Predictive Power, Consensus etc.*

Section 1
INTRODUCTION

The studies of Ramser and Foster (1931), Patrick (1932), Winakor and Smith (1935), Beaver (1966 1968), Altman (1968a, 1968b), Meyer and Pifer, 1970) Deakin, (1972), Edmister (1972), Libby (1975) Ohlson (1980), Aziz and Lawson (1989), Dambolene and Khoury (1980), Andreas et al.(2004); Kennedy (1975); Hillegeist et al.(2004); Dichev (1998); Bongini et al.(2000) had concluded that financial ratios are useful in prediction of corporate bankruptcy. These studies had investigated and compared the financial variables of bankrupt and non-bankrupt companies and attempted to develop failure prediction models. These studies concluded that financial ratios can predict corporate failure at least three years prior to bankrupt or failure. Therefore, attempt has been made to find out the purpose of financial analysis, reasons and symptoms of corporate failure and the consensus among the practitioners on predictive ability of financial ratios in failure prediction context

The main objective of this study is to assess the consensus on financial analysis and predictive ability of financial ratios on corporate bankruptcy in the context of Nepal. Other specific objectives are (i) to find the purpose of financial analysis, (ii) symptoms of corporate failure, and (iii) predictive ability of financial ratios in failure prediction context and (iv) observe how the findings of this study are similar to previous studies.

This study has been organized into five sections. Section one deals with Introduction of study that background of study and objective of the study, while section two deals with literature review. Research methodology has been explained in section three. Section four explains empirical results. Last section describes the summary and conclusion of study.

Section 2
REVIEW OF LITERATURE

Bankruptcy can be viewed strictly in the legal sense of liquidation while it can be taken to be financially distress when it begins occurring loss, default in payment of loans, operating cash shortage etc. (Beaver, 1966). However, some studies defined bankruptcy as the inability of a firm to pay its financial obligations while other defined it as the condition of overdraw bank account, huge amount of accumulated loss, accumulated loss exceeds it

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paid up capital, non-payment of preferred dividend, tax, salary and wages to employees etc. A firm is regarded financially distressed or bankrupt when it is not likely to continue its operations, or pay dividend to its shareholders or pay wages to its employees (John, 1993). There is no unanimous meaning of corporate bankruptcy of a firm. In the absence of bankruptcy act, this study has classified a firm as bankrupt if its net worth is negative in at least three consecutive years.

The studies of Ramser and Foster (1931), Patrick (1932), Winakor and Smith (1935), Mervin (1942), Hickman (1958), Saulinier and et al: (1958) were more concerned with comparative study of financial ratios of failed and non-failed firms. The findings of these studies were different from one to another. These studies found financial ratios of failed firms were always lower or deteriorating than non-failed firms. But, no financial ratios were tested their statistical significance that resulted no unanimous findings and difficult to generalize these results. Beaver (1966) used statistical technique of financial ratios to study the predictive power of ratios. After 1966, studies were carried out to develop statistical model of financial ratios to predict corporate bankruptcy but found different ratios as predictor of corporate failure.

In order to investigate importance of the firms' failure risk factor and its relation to size and book-market effects, Dichev (1998) attempted and found that bankruptcy risk cannot be rewarded by higher returns. Thus, the size and book to market effects are unlikely due to a distress factor related to bankruptcy risk. The firms with high bankruptcy risk earn substantially lower risk than average returns while, liquidity variables are found significant to predict bankruptcies (Bongini et al., 2000).

All these models were developed in their respective country and situations. However, no such studies are carried out in the context of Nepal. In this study therefore, attempts to analyze purpose of financial analysis symptoms of failure and predictive power of financial ratios on the basis opinion obtained from various types of respondents.

Section 3
RESEARCH METHODOLOGY

1. Research Design

This study is a descriptive, exploratory research based on primary data. Research work is designed to obtain the answers of all research questions raised and to assess the symptoms of failure, reasons and predictive ability of financial ratios of Nepalese firms.

2. Nature and Sources of Data

A survey questionnaire was designed in five point likert scale and the respondents were asked to rate 1 for very important and 5 for least important fifteen financial variables (ratios) that they perceive important on prediction of corporate bankruptcy. In addition, respondents were also asked to mention purpose of financial analysis as well as the symptoms of bankruptcy in a multiple choice question on the basis of their perception about the corporate bankruptcy or financial distress of a company. The questionnaire was distributed to chief executives, finance officers, academicians and chartered accountants of various companies. Ten executive managers and finance managers were required to fill up the questionnaires but only nine of them answered and returned the questionnaires on time. Out of ten academicians, six of them completed and returned in usable questionnaires, while seven out of ten chartered accountants responded on time. *(Annexure-1)*

3. Research Variables

In order to find the predicate ability of financial ratios, fifteen financial ratios were selected from previous studies. They are:

Table No.1: List of Selected Financial Ratios

- Current assets to current liabilities (CACL)
- Working capital to total assets (WCTA)
- Quick assets to current liabilities (QACL)
- Long-term debt to shareholder's equity (LDSE)
- Net worth to total debt (TDSE)
- Total debt to total assets (TDTA)
- Retained earning to total assets (RETA)
- Market value of equity to book value (MVBV)
- Sales to total assets (STA)
- Sales to inventory turnover (SIT)
- EBIT to total assets (EBITTA)
- Net income to net worth (NINW)
- Net income to total assets (NITA)
- Cash flow to total assets (CFTA)
- Cash flow to total liabilities (CFTD)

4. Method of Data Analysis

Prior studies indicate that researchers generally test and evaluate corporate failure statistical techniques. In this study, consensus approach has been used to determine propose of financial analysis, symptoms of corporate failure, and predictive ability of financial ratios in prediction of corporate bankruptcy. Thus data has been collected from structured questionnaire that is processed and interpreted using weighted mean, percentage and raking techniques.

Section 4
EMPIRICAL RESULTS

Many studies have been used of financial ratios as predictor of financial distress or bankruptcy. But, corporate bankruptcy or distress is a judgmental task that differs from analyst and another. This may support or contradict the findings of statistical models that used financial ratios as the predictor of corporate bankruptcy. In this study, consensus approach has been applied to test the support or contradict the findings of statistical models or previous findings of financial ratios as predictor of corporate bankruptcy.

1. Purpose of Financial Analysis

This has been felt important to study the purpose of financial analysis by different respondents. To determine purpose of financial analysis, the respondents were given seven options or purposes and were asked them to answer one or more options and they perceive important purpose.

Table No. 2
Purpose of Financial Analysis

Table No.2 presents the purpose of computing financial ratios in percentage. The percentages of each alternative purpose are computed dividing the numbers of responses by total numbers each type of respondents.

Purposes	Academicians (%)	Managers (%)	Chartered Accountants (%)
To meet banking requirements	17	56	57
To meet shareholders requirements	50	22	29
To reveal firms strength and weakness	100	56	71
To meet creditors requirement	17	33	0
To compare with competitors	67	33	43
To meet legal requirements	17	44	43

The results of this table indicate that the dissimilarities among the respondents: academicians, managers, chartered accountants in the subject of purpose of financial analysis. Academicians' purpose of ratio analysis is to revealing the strength and weakness of a company like managers and chartered accountants while the competitive analysis us another main purpose but it is one of the least preferable purpose for managers and

chartered accountants. However, the most important this is that purpose of financial analysis among the respondents found paradoxical. They have given less preference in shareholders requirement except academicians.

2. Symptoms of Bankruptcy

A firm cannot directly move on the stage of bankruptcy that some symptoms have been shown before going them. To determine whether or not there is difference in the opinions of respondents about the symptoms of bankruptcy firms, they were asked to answer one or more symptoms of corporate bankruptcy selected from previous studies and text books as they perceive.

Table No. 3
Symptoms of Corporate Bankruptcy

Table No.3 represents the percentage of responses given by various respondents about the symptoms of corporate bankruptcy or distress of a company. This percentage of responses is computed dividing the number of responses by the total numbers of respondents and multiplied by 100. Out of total 22 respondents, six academicians, seven chartered accountants and nine managers. The lowest percentage indicates the least important and the highest shows that most important.

Symptoms of Bankruptcy	Academicians (%)	Managers (%)	Chartered Accountants (%)
Default on payment of loan	67	56	100
Regular loss for last three years	50	33	43
Decrease in market value of stock	33	22	43
Continuous decrease in sales	67	44	29
Negative operating cash for years	17	0	43
Poor liquidity ratio	17	67	57
High debt ratio	50	56	57

The results show that the respondents' opinions are ambiguous except in case of high debt equity ratio as symptoms of corporate bankruptcy. The academician rated default on payment of loan, decrease in numbers of customers, high debt equity and regular loss as the major symptoms of corporate bankruptcy while negative operating cash flow, poor liquidity and decrease in market values of shares have been perceived less important. In the opinion of managers, default on payment of loans, poor liquidity, and high debt equity ratios are the major symptoms of corporate bankruptcy. Decrease in market value and negative cash flow makes no difference. The chartered accountants gave the default on payment of loan or dues, as the first major symptom of bankruptcy and decrease in sales and numbers of customers the least important symptoms.

3. Predictive Power of Financial Ratios

To determine the predictive power of financial ratios, mean weight and rank of each variable have been computed and determined the predictive power of ratios in the opinion of respondents.

Table No. 4
Weighted Mean and Rank of Corporate Bankruptcy

Table No.4 shows the numbers of respondents, total weight, mean weight and rank of fifteen ratios randomly arranged in survey questionnaire to 22 respondents. The question of each ratio was given in five point likert scale and required them to rate according to their important that relate to their decision. Where one (1) in assigned for very important and five (5) for the least important. Total weight is computed by multiplying numbers of responses of each ratio and corresponding scale point. The mean is computed by dividing total weight by the total numbers of respondents. While ratio with low mean weight close to one (1) is very important and close to five (5) is the least important. Based on this criterion, each ratio is ranked from one to

fifteen, one for the most important ratios for prediction of corporate bankruptcy while fifteenth for the least important.

Ratios	1	2	3	4	5	No. of Res.(N)	Weight	Mean	Rank
LDSE	14	2	2	1	3	22	43	1.95	1
TDTA	8	8	3	3	0	22	45	2.05	2
CFTD	9	5	3	3	1	21	45	2.14	3
WCTA	8	5	6	1	2	22	50	2.27	4
QACL	7	4	5	5	1	22	55	2.50	5
CFTA	5	6	6	2	2	21	53	2.52	6
CACL	8	4	5	2	4	23	59	2.57	7
EBITTA	3	7	9	0	3	22	59	2.68	8
NITA	4	7	4	4	3	22	61	2.77	9
TDSE	5	5	5	4	3	22	61	2.77	10
STA	2	6	7	3	4	22	67	3.05	11
RETA	3	5	4	6	4	22	69	3.14	12
NINW	3	6	4	2	7	22	70	3.18	13
SIT	3	2	9	4	4	22	70	3.18	14
MVBV	1	6	1	10	4	22	76	3.45	15

According to Table No.4, lowest weighted means are the lowest mean weights are 1.95, 2.025, 2.14, 2.27 and 2.50 of the ratios LDSE, TDTA, CFTD, WCTA and QACL respectively indicating the most important financial ratios as predictors of corporate bankruptcy. While the ratios of MV/BV, SIT, NINW, RETA, and STA with higher mean weights are 3.45, 3.18, 3.18, 3.14, and 3.05 respectively evidenced the least important in prediction of corporate bankruptcy.

Section -5
CONCLUSIONS

This study mainly aims to test the predictive power of financial variables or ratios using on the basis of responses received from twenty two respondents. This study concludes that the respondents' opinions are ambiguous except in case of high debt equity ratio and default on payment of loans as symptoms of corporate bankruptcy. Of the purpose of financial analysis, to reveal strength and weakness is the main objective of the all respondents while meeting banking requirement is the second main objective of financial analysis of managers and chartered accountants while the academicians ranked the objective of comparing with competitors as second purpose. Thus, the purpose of financial analysis among the respondents found paradoxical. The respondents have no unanimous opinions for the purpose of financial analysis. Managers and chartered accountants have given less priority in meeting shareholders requirements except academicians as a purpose of financial analysis. Like previous studies, this study concludes that the ratios of LDSE, TDTA, CFTD, WCTA and QACL are the most important financial ratios as predictors of corporate bankruptcy in Nepalese context respectively. Thus, the findings of this study are consistent with the findings of previous studies. However, this study can be further extended by increasing numbers of respondents and variables in future.

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Annexure- 1

Prediction of Corporate Bankruptcy in Nepal
A Survey Questionnaire

1. Name of respondent (Optional): 2. Sex:
3. Name of organization (optional) 4. Established Year
5. What is the main purpose of computing financial analysis?

Tick (√) one or more options as they relate to your decision.

- To meet banking requirements
- To meet shareholders requirements
- To reveal firms strength and weakness
- To meet creditors requirement
- To compare with competitors
- To meet legal/Government requirements

6. What do you think the initial signals/symptoms of bankruptcy or financial distress of an organization?

Tick on one or more symptoms they relate to your decision.

_____ Default on payment of loan or dues
_____ Regular loss i.e. no profit since last three years
_____ Decrease in market value of stock
_____ Continuous decrease in sales or no. of customers
_____ Negative operating cash for last at least three years
_____ Poor liquidity ratio (CR ratio 2:1 and QR ratio 1:1 or less)
_____ High debt equity ratio > 1

7. In your opinion, which of the followings ratios possess predictive power for predicting bankruptcy of financial distress of a firm?

Rate these ratios based on their predictive power that relates your decision.

	High				**Low**
Financial ratios	1	2	3	4	5
Long-term debt to shareholder's equity (LDSE)					
Total debt to total assets (TDTA)					
Retained earning to total assets (RETA)					
Cash flow to total assets (CFTA)					
Sales to total assets (STA)					
Cash flow to total debt (CFTD)					
Working capital to total assets (WCTA)					
Quick assets tot current liabilities (QACL)					
Current assets to current liabilities (CACL)					
Earning before interest and tax/ total assets (EBITTA)					
Net income to total assets (NITA)					
Total debt to shareholders' equity (TDSE)					
Net Income to net worth (NINW)					
Sales to inventory turnover (SIT)					
Market value of equity to book value (MVBV)					