# A STUDY OF BANKRUPTCY PREDICTION IN SRI LANKA

By

#### KASTHURI ARACHCHIGE KAMAL GNANAWEERA

Student Registration#: 5266FM2009029

A research submitted to the
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of the requirements for the

Degree of Master of Business Administration (Finance)

#### **DECLARATION**

"The work described in this research was carried out by me under supervision of Dr. P.D Nimal, Senior lecturer, and report on this has not been submitted in whole or in part to any university or any other institution for another degree or diploma."

Mr. K.A.K Gnanaweera

Reg: 5266FM2009029

Date: 14/12/2011

#### CHAPTER 1

#### **INTRODUCTION**

#### 1.1 Background of the Study

Almost all stake holders, Managers, stockholders, lenders and employees are concerned about their firm's financial status. If the financial status of the firm is not satisfactory the job security of managers and employees is not guaranteed, and stockholders' equity and lenders' privileges are at stake. The state, as a regulator in a market, has concerns about the occurrence of financial distress of corporations (Xu and Zhang, 2004). This creates a demand among executives, employees and stockholders for information on the financial status of the firm, to be sure of its future. Further, management makes frequent inquiries and regular efforts to react to a continuous demand on how financial distress is predicted.

The recent credit crunch in the US share market which was initially triggered by the sub-prime issue, resulted in the collapse of a large number of financialinstitutes viz., banks, corporations and stock markets. Most of Europe still faces financial difficulties and economic hardships, which do not seem to have feasible solutions. Similarly in 2006, the Saudi Arabian Stock market collapsed losing over 1300 points in the price index, 65% of it at the top level. This phenomenon had an adverse outcome on a large portion of the population and several deaths and cases of serious illnesses are recorded as a result (Al-Rawi, 2008). This was the first time such an event had occurred in the

#### **SUPERVISOR APPROVAL**

I approve the Research Paper titled "Study of Bankruptcy Prediction in Sri Lanka" by K.A.K. GNANAWEERA; Student Registration#: 5266FM2009029, for the submission to The Faculty of Management & Commerce, University of Sri Jayewardenepura, Sri Lanka in partial fulfillment of the requirement of the Master of Business Administration in Finance Degree.

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14/12/204

Dr. P D Nimal

Coordinator - MBA Program

Senior Lecturer

Department of Finance

University of Sri Jayewardenepura

Sri Lanka

Date

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I look forward to an exciting and challenging future with success!

#### **ABSTRACT**

The most pervasive reason for a firm to be gone in distress and possible failure is some type of managerial incompetence. Many external stakeholders are not involved in the day-to-day business procedures of a company but need to know the financial health of a company they have interests in. Financial reporting has become an important module of communication between a corporates and stakeholders. The quest of finding a simple and accurate bankruptcy prediction system or model is in high demand by many stakeholders to detect the present and future health of a company. Many researchers depend on different kind of models but Altman's Z-score model is being used significantly in many organizations, worldwide, because of its level of accuracy and simplicity of calculation using freely available financial data. The purpose of the research is to determine the accuracy and predictability of Altman's Z-score model(s): Z" and Z", in Sri Lankan context.

This research examines 33 de-listed companies and good companies (listed); 2 to 3 year periods prior de-listing by using their financial information to calculate Z-score value. Further, this study examines Z-score values for de-listed & bankrupted companies with good companies and de-listed & non-bankrupted companies with good companies 2 and 3 year periods prior de-listing to identify bankruptcy prediction accuracy of Altman's Z-score model(s).

This study identifies that the Z" model achieved 92% prediction accuracy when it is applied to de-listed and bankrupted companies 3 years prior to de-list and 100%

prediction accuracy when it is applied to de-listed and bankrupted companies 2 years prior to de-list. Conversely the  $Z^{**1}$  model achieved 83% prediction accuracy when it is applied to de-listed and bankrupted companies 3 years prior to de-list and 100% prediction accuracy when it is applied to de-listed and bankrupted companies 2 years prior to de-list.but the  $Z^*$  model predicted 13% of de-listed and non-bankrupted companies 3 years prior de-listing which may lead to insolvency and 19% of de-listed and non-bankrupted companies 2 years prior de-listing which may lead to insolvency. Further the  $Z^{**1}$  model predicted 13% of de-listed and non-bankrupted companies 3 years prior de-listing which may lead to insolvency and 13% of de-listed and non-bankrupted companies 2 years prior de-listing which may lead to insolvency. Therefore according to evidence suggests the prediction accuracy of  $Z^{**1}$  modelslightly betterthan the  $Z^*$  model.

The results obtained in this study are subject to information restraints as availability of relevant information for de-listed companies was limited. Hence further research is needed to evaluate the soundness of the Z-score model(s) for bankruptcy prediction in Sri Lankan Context.

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#### **ABBREVIATIONS**

AMW Associated Motorways

ANN Artificial Neural Networks

ASPI All Share Price Index

**BE** Book value of Equity

CFA Charted Financial Analyst

CO. Company

CSE Colombo Stock Exchange

**DEV.** Development

EBIT Earnings Before Interest & Tax

FD Financial Distress

**GP** Gross Profit

**LTD** Limited

M & A Mergers & Acquisition

MDA Multiple Discriminant Analysis

MN. Million

MVE Market Value Equity

NDB National Development Bank

NO. Number

PLC Public Limited Company

**PROP.** Property

**PVT.** Private

**ROC** Registrar of Companies

SLT Sri Lanka Telecom

UK United Kingdom

USA United States of America

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