

**PARTIAL LEAST SQUARES BASED FINANCIAL DISTRESSED CLASSIFYING
MODEL OF SMALL CONSTRUCTION FIRMS**



**RESEARCH MANAGEMENT INSTITUTE (RMI)
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA**

BY :

**AMIRAH HAZWANI ABDUL RAHIM
IDA NORMAYA MOHD NASIR
ASMAHANI NAYAN**

NOVEMBER 2014

Contents

1. Letter of Report Submission	iii
2. Letter of Offer (Research Grant).....	iv
3. Acknowledgements	v
4. Report.....	1
4.1 Executive Summary	1
4.2 Introduction	2
4.3 Brief Literature Review.....	5
4.4 Methodology	6
4.5 Results and Discussion.....	8
4.6 Conclusion and Recommendation.....	11
4.7 References/Bibliography	12
5. Research Outcomes.....	14
6. Appendix.....	15

2. Letter of Offer (Research Grant)

Bahagian Penyelidikan & Jaringan
Industri (PJI)
Tel:04-4562075/2077*Faks:04-4562223

Universiti Teknologi MARA (UiTM) Kedah
Peti Surat 187, 08400 Merbok, Kedah
Tel : 04-4562277 Faks : 04-4562223
e-mail : pjikdh@kedah.uitm.edu.my



Ruj. Kami : 600-UiTMKDH (PJI.5/4/1/1/12)
Tarikh : 29 Mei 2013

Puan 'Amirah Hazwani Abdul Rahim
Pensyarah
Jabatan Sains & Teknologi
UiTM Cawangan Kedah

Tuan/Puan

KELULUSAN PERMOHONAN DANA KECEMERLANGAN 01/2012

Tajuk projek	:	Partial Least Squares Based Financial Distressed Classifying Model Of Small Construction Firms
Kod projek	:	600-UiTMKDH (PJI.5/4/1/1/13)
Kategori perojek	:	Kategori B (2013)
Tempoh	:	01 Jun 2013 – 31 Mei 2014
Jumlah peruntukan	:	RM 5, 000.00
Ketua projek	:	Puan 'Amirah Hazwani Abdul Rahim

Dengan segala hormatnya perkara di atas adalah dirujuk.

Sukacita dimaklumkan bahawa pihak Universiti telah meluluskan cadangan penyelidikan tuan/puan untuk membiayai projek penyelidikan di bawah Dana Kecemerlangan UiTM.

Bagi pihak Universiti kami mengucapkan tahniah kepada tuan/puan kerana kejayaan ini dan seterusnya diharapkan berjaya menyiapkan projek ini dengan cemerlang.

Untuk tujuan mengemaskini, pihak tuan/puan adalah diminta untuk melengkapkan semula kertas cadangan penyelidikan sekiranya perlu, mengisi borang setuju terima projek penyelidikan dan menyusun perancangan semula bajet yang baru seperti yang diluluskan.

Sekian, Terima kasih.

"Transformasi Berkualiti Ke Arah Kecemerlangan"

Yang benar

PROF. MADYA DR. HAIDAR DZIYAUDDIN
Rektor
UiTM Cawangan Kedah

S K
Ida Normaya Mohd Nasir

4. Report

4.1 Executive Summary

The study on the classification of firms' financial distress was made popular by Altman (1968). Up until today, banks use Altman's ratio to rate credit credibility of potential borrowers. Since then many works replicate, improvise or use different statistical and non-statistical methods to improve the classification rate of financial distress. Most of these works dealt with information gathered from large companies as information on small companies are limited and not easily available. The aim of this research is to fill in the gap and extends the work done in Abd Razak and Wan Asma' (2012) by looking at the predictive ability of information gathered from Malaysian small firms.

The sample will be healthy and financially distressed small listed firms. We will use the logit model and partial least squares discriminant analysis to determine the predictive variables of financial failure. Partial least squares is a popular method for soft modelling in industrial applications. The outcome of this work will bring benefit to the management of companies and bankers. The management could monitor the performance of their companies and for lenders, the ability to distinguish bad distressed firms that eventually failed from the good healthy ones will reduce the incidence of bad debts.

4.2 Introduction

4.2.1 Background

Numerous research have been developed to identify indicators of corporate financial distress. If financial distress cannot be relieved, it can lead to bankruptcy. Bankruptcies affect entrepreneurs, depositors, creditors, auditors and other stakeholders. Therefore, it is very interesting to know factor that leads to bankrupt. Most studies on financial distress were studies on failure of large public firms as financial information of small firms are not easily available and limited. Unlike large public firms, small firm are not required by the regulators to submit full financial report at the end of each financial year.

In the 60's, researchers used statistical approach which includes univariate or multivariate model to identify financial ratios that could classify companies into failure or non-failure groups (Ko et al.,2012). According to Gilbert et al., (1990) financial variables used to identify bankrupt firms from non-bankrupt firms are different from those variables used to discriminate financially distressed firms from the bankrupt ones.

Financial ratios are assumed to be powerful prediction models for assessing the financial distress of a firm (Hossari & Rahman, 2005). According to Karas and Reznakova (2012), the ratios that are significant in predicting bankruptcy are quick assets turnover, capital turnover and total assets value. Yazdanfar and Nillson (2008) showed that from MDA result, the three financial ratios solvency, quick ratio and return on assets are significant in discriminating between bankrupt and non-bankrupt firms for a one-year prediction horizon. Abd Razak & Wan Asma' (2012) found that financial ratios will become less predictive when combined with non-financial information in bankruptcy prediction model. Majority of business failure papers as predictors use financial ratios, while in the real life banks combine financial and nonfinancial variables.