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**IMPACT OF SECTORS ON DEFAULT PREDICTION:
 THEORETICAL DISCUSSION**

This study investigates the failure of debt default control and the ratio of cash flow to Pakistan's credit rating, measured by the combination of forecasts. Pakistan credit rating information is available online, it provides information on loan defaults in a timelier manner. Therefore, market participants and probable stakeholders would not need to trust solely on an assessor's view of the previous accounting period to predict bankruptcy. The determination of the existing investigation is to explore the basis of default prediction. There are certain variables which are important in knowing the reasons in sectors/industries before falling into the category of default. It has been revealed that firm's profitability, size and tangibility are the important variables through which we can analyze the firm's position.

Keywords: financial distress; profitability; size; tangibility.

Суреш Рамакришна, Ага Амад Набі, Мелаті Ахмад Ануар
ВПЛИВ ФАКТОРУ ГАЛУЗІ НА ПРОГНОЗУВАННЯ
БАНКРУТСТВА: ТЕОРЕТИЧНА ДИСКУСІЯ

У статті досліджено явище неможливості прогнозування процесів формування заборгованості та банкрутства за даними пакистанських кредитних рейтингів. Інформація кредитних рейтингів Пакистану завжди наявна онлайн та її оновлення є доволі своєчасним. Однак учасникам ринку та іншим потенційним стейкхолдерам не варто орієнтуватись виключно на неї при прогнозуванні ймовірності банкрутства. Досліджено максимально повний набір факторів, що визначають процес банкрутства. Виділено низку найбільш суттєвих для прогнозування банкрутства за галузями факторів. Серед них слід окремо відзначити: рівень прибутковості, розмір компанії та матеріальність активів.

Ключові слова: фінансовий крах; прибутковість; розмір компанії; матеріальність активів.

Табл. 2. Літ. 13.

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ВЛИЯНИЕ ФАКТОРА ОТРАСЛИ НА ПРОГНОЗИРОВАНИЕ
БАНКРОТСТВА: ТЕОРЕТИЧЕСКАЯ ДИСКУССИЯ

В статье исследовано явление невозможности спрогнозировать процессы формирования задолженности и банкротства по данным пакистанских кредитных рейтингов. Информация кредитных рейтингов Пакистана всегда доступна онлайн и её обновление происходит довольно своевременно. Однако участникам рынка и другим потенциальным стейкхолдерам не стоит ориентироваться только лишь на неё при прогнозировании возможных банкротств. Исследован максимально полный набор факторов, определяющих процесс банкротства. Выделен ряд наиболее важных для прогнозирования банкротств по отраслям факторов. Среди таких факторов отдельно стоит выделить: уровень прибыльности, размер компании и осязаемость активов.

Ключевые слова: финансовый крах; прибыльность; размер компании; осязаемость активов.

Introduction. The starting point of this paper is the argument that the explanatory power of the sector effect is amplified across developing countries as a result of the Asian financial crisis. In conjunction with that, the investigation is likely to be more

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effective as this study adopts a particular country from Asian markets that has been strongly influenced by the Asian financial crisis. Based on these criteria, Pakistan would be the best choice and is a unique example for various reasons. Firstly, Pakistan was hit badly by the financial crisis but managed to overcome it by taking own initiatives and also help and guidance from the International Monetary Fund (IMF). Secondly, Pakistan is an emerging market that is developing at a steady rate. The advancement and vibrancy of its financial market, particularly the financial institutions market, is observable in comparison to other emerging markets. Beaver (1967) and Altman (1968) did pioneering the work in these areas and developed univariate and multivariate models using various financial ratios to predict business failures. Beaver (1967) using a dichotomous classification test to determine the error rate of potential creditors experience if included in the basis of financial ratios or company failure. Beaver (1967), Altman (1968), Zavgren (1983) and many more used the ratio analysis to predict firms to be defaulted or not. They normally look at the problem with the ratios as big firms having fine assets and less liability can get credit easily through banks and some of them normally used Moody to allow credit as a threshold.

This research also included financial ratios and some other economic factors to look on the conditions and nature of results that change. The work also includes all the financial variables that have been used by Beaver (1967) and Altman (1968) and these include: liquidity, solvency, leverage, profitability and activity ratios. These all are financial variables while the economic variables that will be added to this research are interest rates, inflation, GDP, volatility and financial distress. As the sectors function in business environments with different degrees of expansion, competition and market awareness, thus, the study looks on how the nature of a sector or an industry may have effect on the bankruptcy prediction of firms across sectors/industries in developing countries. Keeping in scrutiny the sector/industry significance, this study firstly, highlights the dissimilarity of important bankruptcy determinants across industries/sectors. In various financial periods the nature of sectors or industries may differently influence firms bankruptcy. Hence, the study also highlights the differences of bankruptcy prediction determinants across sectors/industries during pre- and postfinancial crisis periods. In previous literature there has been some arguments on the default prediction determinants with respect to firm size within a particular sector or industry (e.g., Aryeetey et al., 1994; Jordan et al., 1998; Esperanca et al., 2003; Abor, 2008).

The objective of the current research. The existing study is to scrutinize the power of profitability, size, and tangibility on financial distress for non-financial sectors. To provide a wide analysis, we would mostly concentrate on corporate finance. Specifically, the objectives of the current study are the following:

1. To investigate the significant determinants of bankruptcy prediction across sectors.
2. To make a comparison whether and how sector specific determinants of bankruptcy prediction differ across sectors.
3. To ascertain whether and how the bankruptcy prediction theories are pertinent in economy and how they explain the behavior of each sector.

Significance of the current research. Under standard environments, a significant effect of this study is twofold, namely, academic growth and political influence.

Hafizullah, Shah & Khalid (2012) analyze that by going through literature review and came to the conclusion different variables are important in finding the current position of sectors/industries and if they are unable to pay off its loan then the sector is falling on the category of default. The corporate test suggests that both earning and interest rate has significant impact on corporate vulnerability. In relation to this, Kayo and Kimura (2011) found that the mechanism between financial distress and firm-level determinants is indirectly influenced by industry-level and country-level factors both at developed and developing markets. Non-financial companies in Pakistan are under superior influence of long-term obligations in default prediction. This study will show that the factors expressively impact the financial distress in this sector from profitability, size and tangibility.

Research method:

1. Method of data collection. The sort of statistics used in this study is panel and secondary data which is systematized and used in the previous literature by different scholars by the assistance of the tributary source called "Financial statement analysis of companies (non-financial)". The research is concentrated on non-financial businesses and the investigation uses for all these firms the ordinary least squares regression irrespective the fact that it might lead to some mistakes in the model and linearly fit the regression line likewise.

2. Regression model. The constant coefficient regression model is recognized in the period for cross-section and panel data through pooling in. Constant coefficient model assumes there is no cross sectional or time stern significance in the data as these ranges are predictable to be persistent in pooled OLS.

3. Variables' explanation:

Profitability. Defined as earnings before interest and taxes to the total net assets as follows: Profitability = EBIT/Total Assets.

Firm's size. The range is calculated as: Size = Log of total assets.

Tangibility. Tangible assets refer to the total fixed assets and total assets. Fixed assets are mostly real estate assets, and this signifies loan guarantee funds safety and secure stable housing. So, the tangibility of fixed assets can be calculated as: Tangibility = Gross Fixed Assets / Total Assets.

Results. Table 1 shows the mean, standard deviation, minimum, maximum and number of observations for leverage and firm-level determinants based on the balanced overall sample and sectors. The dependent variable is financial distress and it is a dichotomous variable. The independent variables are profitability (EBITTA), size (LNSALES), tangibility (TANGIB).

Table 1. Descriptive Statistics

	Minimum	Maximum	Mean	SD
Profitability	-2.46	29.00	.05	0.5
Size	5.45	16.8	12.2	1.49
Tangibility	0.01	2.50	0.54	0.21

Table 2. Correlation Matrix

Variables	Proftability	Size	Tangibility
Profitability	1		
Size	0.21	1	
Tangibility	-0.10	0.06	1

Table 2 shows the correlation matrix between financial distress and firm-level determinants based on the balanced overall sample and sectors. The independent variables are profitability (EBITTA), size (LNSALES), tangibility (TANGIB).

Findings. The investigation of the study reveals that the variables which have the impact on sectors default prediction are important and useful. In the similar studies Sabir and Malik (2012) used 3 variables (profitability, tangibility and non-tax debt shield), Ahmed et al (2010) used size, profitability and leverage, Shah and Khan (2007) deployed profitability, size and volatility, Hijazi and Tariq (2006) used size and tangibility and Ijaz (2011) introduced profitability, size and tangibility variables. Our findings show that profitability has a negative relation with default prediction, whereas size and tangibility are positively related to default prediction. The literature review shows that profitability, size, tangibility are the 3 variables which are most important to detect the bankruptcy of a firm and they have significant impact on default prediction across sectors. Different authors like Shaheen and Malik (2010), Kakani and Reddy (1998), Hijazi and Tariq (2006) and Afza and Hussain (2011) identified 4 variables (profitability, tangibility, non-tax debt shield and size) which easily measure the financial position of an industry. This leads us to the conclusion that business with more "physicality" of fixed assets use extra control as immovable assets are used for providing security and certainty in disbursing long-term loans carefully.

Conclusion. Profitability has negative impact on default prediction as industry is more profitable when it has less possibility of default. As for the size it has significant and positive relation with default prediction. Tangibility has positive impact on default prediction. This signifies that companies either use internal funding or equity financing for meeting their long-term investment results and this has its influence in funding judgment. Feidakis and Rovolis (2007) found a negative relationship between profitability and short-term debt across European construction firms. An inverse relationship of profitability with leverage, similar results are observable in Malaysia, Pakistan, and Turkey across industrial firms as it is stated by (Pandey, 2001; Shah and Khan, 2007). This signifies a negative earnings forecast default correlation. Suto (2003) stated that size of a company is a leading factor to leverage by illustrating that larger firms can easily issue debt. Major construction companies are often heavily on debt financing, which seems to be the second largest factor after the physical variables having a significant impact on default prediction (Baharuddin et al., 2011). Pandey (2001) built a fixed effects model and Chotigeat and Pandey (2004) – a merge GLS model. A negative correlation was observed between tangible short- and long-term debt with the total debt to display a negligible value. We also believe that short-term debt secures more than long-term debts. However, Fraser (2006) and Jong (2008) noted that tangibility is positively related to the use of listed companies across Malaysia. Recently Baharuddin (2011) found that tangible assets have greater influence the total debt of construction companies in Malaysia. Our tangible forecasts show a positive correlation with default. Therefore, tangibility is positively related to leverage, as has proven previously in literature (De Jong et al., 2008; Mittoo and Zhang, 2008). In addition to confirming the positive correlation between debt and tangible, Frank and Goya (2009) further stressed that tangibility is a basic factor, one of market drivers. Growth, taxes and no debt tax shield is also negatively correlated, and risk is positively correlated with the leverage of companies in the automobile

industry of Pakistan. There hasn't been any study on default prediction in Pakistan. Most investigations regarding default prediction are focused on developed countries. So, Pakistan being a developing country would be an ideal choice for further research in this direction. The theoretical findings suggest that these variables are important for future studies as they show the financial performance and position of industry and the study has the potential to be discussed with empirical results in the future to strengthen this emerging concept.

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