

Comparison of Working Capital Management, Capital Structure and Real Investment Policies among Active and Bankrupt Firms in Tehran Stock Exchange

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Abstract

Financial planning is one of the important factors affecting firm success in a way to maximize firm value through proper combination of assets, debts and equity. Policies of working capital management, real investment and capital structure are the most important components of financial planning. The aim of this research is to identify the differences in working capital management, real investment and capital structure between active and bankrupt firms. Statistical population of the research is all listed firms in Tehran stock Exchange during 2009-2014. Finally 186 firms are chosen as statistical sample of the research based on systematic sampling. The data has been analyzed by two-sample t test using SPSS software. The findings indicate that among measures of working capital management, accounts payable period and accounts receivable period differ among active and bankrupt firms. But inventory turnover period and cash turnover period are not different. Among measures of capital structure, findings confirm difference in long term debt to total asset ratio, short term debt to total assets ratio and total debt to total asset among active and bankrupt firms. But it doesn't confirm the result for debt to equity ratio. Finally active and bankrupt firms don't have differences fixed assets.

Key words: Bankruptcy; Working capital management; Capital structure; Fixed assets; Tehran Stock Exchange

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INTRODUCTION

With the expansion of business and economic activities of firms in competitive markets, firms are doing all their best to obtain a larger market share as well as their main purpose which is the higher profitability. This condition causes bankruptcy phenomenon which has spread dramatically in recent years. The financial crisis is caused by the two main reasons, internal and external factors (Handoo & Sharma, 2014). Newton (1990) also divides the reasons of bankruptcy in two main categories of internal and external organizational reasons. The most important internal factors affecting firm's bankruptcy can be considered as components of financial planning including working capital management, capital structure and real investment policies (Asgarnezhad Nouri & Soltani, 2016).

Working capital policy is one of the factors affecting bankruptcy. The aim of working capital management is to select a unique combination of current assets and short term debts in order to achieve a balance between the firm profitability and risk. In most of the financial literatures, working capital parts are associated with a balance discussion between risks and return because working capital management is a type of risk and return topic. Strategies associated with high risk and return are addressed perky policy and strategies with lower risk and return are called moderate policy and finally strategies with the lowest risk and return are called conservative

policy. Inappropriate working capital management is a reason for the failure of most bankrupt companies. They may have a good financial status in long term but they start to lose their competing ability due to the insufficiency of working capital (Zohdi, Valipour, & Shahabi, 2010).

Capital structure of companies is another factor which can lead to financial crisis in case of incorrect application. Achieving optimal capital structure to maximize profitability and value and to minimize cost of capital is one of the important research topics for financial specialists. Financial economy researchers found a correlation between capital structure and profitability, but it is not similar according to financial operation of corporates and differs according to type of financial structure and economic condition of countries (Sadeghi Shahedani, Chavoshi, & Mohseni, 2012). Thus capital structure decisions are important issues.

Finally, researches have proved the point that firms with higher tangible and fixed assets in their capital structure have rarely used debts in their financing and have rarely faced financial problems (Matemilola, Beny-Ariffin, & McGowan, 2013). The amount of investment in fixed capital of firms indicates the confidence level of the owners and administrators about the profitability of the business (Fathi, Azarbaijani, & Asgarnezhad Nouri, 2013). In other words growing firms are investing more in their fixed assets while bankrupt companies are going to lose their abilities to own fixed assets due to their financial dysfunction.

Due to what discussed before, the main purpose of this article is to compare policies of working capital management, capital structure and fixed investment among active and bankrupt firms.

1. LITERATURE REVIEW

1.1 Bankruptcy

A firm is addressed as bankrupt when it has problems fulfilling its financial commitments. A firm may use debt in its operational financing, but by doing so the firm is exposed to financial distress and if the firm doesn't treat the distress it may experience bankruptcy. Gordon describes financial distress as a decrease in profitability that may cause disability to pay back debts and interests in his academic studies (Kordestani, Tatli, & Kotharifar, 2014). Wtaker (1999) considers financial constraints a condition in which cash flow of the firm is lower than interest of long term loans (Al-Kassar & Soileau, 2014). Newton (1998) divided bankruptcy in steps: 1. The incubation period. 2. Cash deficit period. 3. Disability period to pay financial debts. 4. Serious disability to pay debts and bankruptcy.

Most financially distressed companies experience such condition as a result of weak management. Altman divides

costs of financial distress in two categories and direct costs including unforeseen costs for lawyers, accountants, specialists, consultants and indirect costs including spectrum of intangible opportunity costs. Higgins also divides financial distress to sale of assets in low prices, high cost of investment, opportunity costs, cost of losing customers, re obtaining credit profile and conflict of interests (Kordestani et al., 2014).

1.2 Bankruptcy and Working Capital Management

The manner of managing working capital has always been one of the most important subjects in financial management. Working capital management is an optimal combination of different items of working capital, assets and debts, in a way to maximize wealth of stakeholders (Dastgir & Honarmand, 2014).

Working capital management directly affects firm profitability and continuously tries to maximize profit. Researches show strong support for an inverted U-shaped relation between investment in working capital and firm performance, which implies the existence of an optimal level of investment in working capital that balances costs and benefits and maximizes a firm's value (Baños-Caballero, Garcia-Teruel, & Martinez-Solano, 2013). Correct selection of managing strategies of current assets and debts in different conditions leads to the optimal strategy. About working capital a good policy is the one which maximizes the wealth. In practice it is not very easy to perform such policies because multiple variables must be controlled at the same time (Bahar Moghadam, Yazdi, & Yazdi, 2011).

Incomprehension about effects of working capital on profitability and inability of manager to plan and control components of working capital management lead to lack of profit and bankruptcy. Lots of business failures are due to inability of financial managers to plan and control their current assets and debts. The importance of working capital management is because of its direct effect on liquidity and profitability. The efficient management of working capital not only secures the firm in financial turbulence but also enhances competitive condition and profitability of firm (Anvari Rostami, Sajjad Pour, & Yablouei, 2014).

1.3 Bankruptcy and Capital Structure

Capital structure is a combination of debt and equity which finances firms in long term. The main goal of the capital structure is to maximize the market value of a firm through appropriate combination of long term funds. This combination which is named optimal structure minimizes the average cost of capital. Research domain of capital structure is fairly expansive and is of great importance for financial specialists. Achieving an optimal capital structure has always been a challenge and presented theories in this field have always tried to clearly explain the real behavior of firms financing. In summary we can

conclude from theories given in capital structure field, that theories of Miller and Modigliani and static balance support the positive relation between profitability and capital structure, while Hierarchical theory declares a negative relation between profitability and capital structure (Sadeghi Shahedani et al., 2012). During credit expansions, companies have been unable to build enough liquidity to survive the contractions, especially those enterprises with unpredictable cash flow streams which end up with excess debt during business slowdowns (Handoo & Sharma, 2014).

1.4 Bankruptcy and Real Investment

Fixed assets include buildings, machinery, vehicles and products which are used in production cycle and make it possible. These assets shouldn't be ignored in our analysis even if they don't have direct effect on production (Eickelkamp, 2015). The previous studies support the effect of fixed assets on the firm financial performance. The increase of investment in fixed assets causes an increase in agility of the firm. For example increase of investment in fixed assets in energy sector of china during 2003 until 2006 caused a hundred percent growth in this sector (Lili & Peng, 2011). The existence of fixed assets support the firm productivity in sudden increase of production (innovation, high demand and etc) and decreases risk in such condition (Skuras, Tsegenidi, & Tsekouras, 2008).

Therefore decisions of the managers about the way of managing fixed assets depend on various criterions. (Yao, Percy, & Hu, 2015). The way of utilization of these assets in production cycle and the lifetime of these assets are some of these criterions. It has been proved that a negative relationship exists between the firm debts and their utilization of fixed assets (Filbek & Gorman, 2000).

2. RESEARCH BACKGROUND

Hondoo and Sharma (2014) in an article studied capital structure and financial performance of 780 non-private and private firms registered in India, finally the determinants of capital structure named as profitability, growth, the asset visibility, size, cost and liabilities, the tax rate and the rate of debt. Ukaegbu (2014) in an article titled importance of working capital management in profitability of companies, the relationship between the effectiveness of working capital and the profitability of the firms studied. This paper presents a quantitative approach to data of production firms registered in Egypt and Kenya, Nigeria and South Africa. The findings show that there is a strong reversed relationship between profitability and cash turnover period. Khajavi, Dadash, and Rezaei (2014) in a study used data envelopment analysis approach (DEA) and investigated the relation between capital structure, ownership structure and performance. In which examined the issue of whether firms with higher performance

have more debt in the capital structure and whether the concentration of ownership in firms has performance impact? The results indicate that capital structure (debt ratio) and structure of ownership (ownership concentration) have significant positive effects on the performance of the firm. Results also showed that the performance of the firm has significant positive impact on the determination of capital structure in firms. Setayesh and Mansouri (2014) in a study entitled comparative study of the mechanisms of corporate governance in financially active and distressed firms listed in Tehran Stock Exchange, showed that the low percentage of non-bound directors in the board of financially distressed firms in comparison to active firms is one of the reasons for the firm financial distress. Banos-Caballero et al. (2013) in an article entitled, working capital management, corporate performance and financial constraints, check out the relationship between working capital management and performance of firms in the sample of non-financial firms in England. Unlike previous studies, the results showed an inverse U-shaped relationship between investment in working capital and performance of firms. This means that there is an optimal level of investment in working capital that maximizes the value of the firm. Izadinia and Taki (2010) in a study of working capital management effects on the viability of the firms listed in Tehran Stock Exchange set their primary purpose to provide empirical evidence about the impact of working capital management on profitability of firms. The regression results show that the cash turnover period and return on assets has created a significant inverse relationship, as well as high investment in inventory and accounts receivable is resulting in low profitability. Filbeck and Gorman (2000) studied the relationship between the rate of utilization of fixed assets and capital structure to generate profits in the sectors of industry, oil and mining. Finally, the findings show a positive association between use of fixed assets and income level.

3. RESEARCH METHODOLOGY

This research is practical and quasi-experimental and events associated (based on historical information). The data is based on actual data from the financial statements of listed firms in the Stock Exchange of Tehran.

Statistical population of research is all firms listed in Tehran Stock Exchange, from 2008 to 2013 which are over 442 firms. Statistical sample selected in this study is those corporations listed in the Tehran Stock Exchange, which have the following features:

- Were active during the years 2008 to 2014 in stock exchange and have presented financial reports over the years to exchange.
- The end of the financial year is on last day of year.
- They aren't investment companies, banks and insurance companies and service companies.

- Their financial data is available.

By imposing these features, it became clear that the end of the fiscal period of 74 companies wasn't end of the year. The information of 159 companies was not available on the relevant sites and 23 companies were banks, investment companies and financial intermediaries as well as services. Finally, 186 companies remained as our sample in this research.

In this study to gather theoretical foundations we used different specialized publications of Persian and English. To collect data and information, we also visit the website of Technology Management Co. of Tehran Stock Exchange, website of research management, Islamic Studies of Stock Exchange Organization of Tehran, the comprehensive system of information publisher from Exchange Organization (Codal network) and the practical software of Dade Pardaz.

3.1 Research Variables

According to goal of the study variables are bankruptcy, working capital management, capital structure and the non-current investment (fixed).

3.1.1 Bankruptcy Measurement

Same as some domestic researches conducted, financially distressed firms (bankrupt) include companies that are subject to article 141 of the Commercial Code according to identification of Tehran Stock Exchange. The bankrupt companies are which the volume of accumulated losses is high, but they are not in a situation to sell their assets and distribute the cash. According to Article 141 of the Commercial Code, if a firm loses at least half of its capital, the board shall immediately invite stakeholders and hold the extraordinary general meeting of shareholders, to vote and to get to a decision for dissolution or survival of the firm (Dastgir & Honarmand, 2014). The study also uses article 214 of commercial code to classify the statistical sample into two groups of bankrupt firms and active firms.

3.1.2 Working Capital Management Measurement

The most important indicators of working capital management include accounts payable days, accounts receivable days, inventory turnover period and the cash conversion cycle that in the following parts come the definition and measuring variables (Samadi Lorgani & Imeni, 2013).

To calculate accounts payable days, the following formula is used (Ukaegbu, 2014):

$$APP = \frac{AP \times 365}{DCOGS}$$

In which APP indicates accounts payable days, AP indicates accounts payable and cost of goods sold is DCOGS (Samadi Lorgani & Imeni, 2013).

To calculate accounts receivable days, the following formula is used (Samadi Lorgani & Imeni, 2013):

$$ARP = \frac{AR \times 365}{S}$$

In which ARP is the accounts receivable period, AR is accounts receivable and the S is sale of the firm (Samadi Lorgani & Imeni, 2013).

To calculate inventory turnover period, the following formula is used (Nasirzadeh & Rostami, 2012):

$$INC = \frac{I * 365}{DCOGS}$$

Where INC is inventory turnover, IDCOGS is cost of goods sold (Nasirzadeh & Rostami, 2012).

To calculate cash conversion cycle, the following formula is used (Fakhari & Rouhi, 2013):

$$CCC = INC + ARP - APP$$

In the above equation CCC is cash, INC is inventory turnover, ARP is accounts receivables period and APP is accounts payable period (Samadi Lorgani & Imeni, 2013; Nasirzadeh & Rostami, 2012).

3.1.3 Capital Structure Measurement

Capital structure as well as other variables assessed in this study is considered. Debt to equity ratio, short-term debt to asset ratio, long-term debt to total assets ratio and debt to equity ratio are considered as the most important criteria of capital structure.

To calculate debt to total assets ratio, the following formula is used (Castro, Felix, Julio & Maria, 2015):

$$L = \frac{TL}{TA}$$

In the above equation L is indicating the debt ratio, TL is total debt and TA is total assets (Naeim Pour, Nemati, & Alavi, 2012).

To calculate long-term debt to total asset ratio, the following formula is used (Kashani-Poor & Momeni, 2009):

$$LTDTA = \frac{LTD}{TA}$$

In which LTDTA indicates long term debts to total asset, LTD indicates long term debts and TA shows total assets (Dehghan Zadeh & Zeraatgari, 2013). To calculate short-term debt to total assets ratio, the following formula is used (Kashani-Poor & Momeni, 2009):

$$STDTA = \frac{STD}{TA}$$

Where STDTA shows short- term debt to total asset ratio, STD and TA show short-term debts and total assets (Dehghan Zadeh & Zeraatgari, 2013).

To calculate total debt to equity ratio, the following formula is used (Sadeghi Shahedani et al., 2012):

$$DTE = \frac{TD}{TE}$$

In which DTE indicates Debt to Equity, TD indicates total debt of the firms and TE shows Total equity (Dehghan Zadeh & Zeraatgari, 2013).

3.1.4 Real Investment Measurement

The other variable in this study is the fixed investment that indicates the capital investment of the firm in order to maintain and improve the firm productivity. One of the most important criteria used to measure the capital investments is net fixed assets. Fixed assets include the buildings, machinery, vehicles and products that are used in the production cycle and make it possible. Fixed assets should not be overlooked in assessments, even if they do not have a direct impact on the production cycle (Eickelkamp, 2015).

Finally, using SPSS software we tested whether a significant relationship between organized information and corporate bankruptcy exists or not. For this purpose indicators are defined as interval variables and bankruptcy is defined as a nominal variable. The two-sample t test was used for data analysis. The results will be presented in the next section.

3.1.5 Results

In this section before the test of hypotheses, initially comes the descriptive analysis of the variables will be. Table 1 represents descriptive statistics of the variable bankruptcy:

**Table 3
Results of Two-sample t Test**

Variable	Mean for active firms	Mean for bankrupt firms	Degree of freedom	t-student	sig.
Accounts payable period	133.34	288.45	53.33	2.06	0.044
Accounts receivable period	135.27	228.47	54.17	0.5	0.04
Inventory turnover period	192.93	193.49	1110	0.01	0.99
Cash conversion cycle	194.93	133.51	1110	-1.31	0.188
Debt to asset	0.61	1.1	1168	6.23	0.000
Long-term debt to assets	0.08	0.24	56.31	2.88	0.006
Short-term debt to assets	0.52	0.85	1168	4.44	0.000
Debt-to-equity	2.75	1.9	56.24	-0.1	0.916
Net fixed assets	931327.57	748213.17	1168	-0.37	0.706

According to the first hypothesis, the accounts payable period is different among the active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t

**Table 1
Descriptive Analysis of the Firm Bankruptcy Variable**

Financial situation	Absolute frequency (year-company)	Relative frequency (percentage)
Bankrupt	57	4.9
Active	1113	95.1
Total	1170	100

Based on the results presented in Table 1, the total number of observations is 1170 year-company. Within this amount 1113 years—company belongs to active firms and 57 years—company are bankrupt firms. So the percentage of active firms and bankrupt firms are respectively 95.1 and 4.9 percent. On this basis, it can be concluded that bankruptcy is not a common and widespread phenomenon among firms of Tehran Stock Exchange.

Table 2 also shows the descriptive analysis of indicators of research variables including working capital management, real investment and capital structure.

**Table 2
Descriptive Analysis of Indicators of Working Capital Management, Capital Structure and Fixed Investment**

Variable	Number of observations	Mean	Standard deviation
Accounts payable period	1112	140.87	182.77
Accounts receivable period	1114	139.79	164.39
Inventory turnover period	1112	192.96	318.91
Cash conversion cycle	1112	191.94	334.36
Debt to asset ratio	1170	0.63	0.59
Long-term debt to assets ratio	1170	0.09	0.14
Short-term debt to assets ratio	1170	0.54	0.54
Debt-to-equity ratio	1170	2.71	17.87
Fixed assets	1170	922406.61	3568462.34

After descriptive analysis of the collected data, later in this paper the hypotheses will be tested and discussed. As explained in the previous section, two sample t test will be used for hypothesis analysis. The results are shown in Table 3.

value is 2.06. Also Sig is 0.044 which is smaller than 0.05. The average payment period for active firms and bankrupt firms are respectively 133.34 and 288.45. Which indicates

that period for bankrupt firms are more than active firms. Thus, according to the description, the first hypothesis is confirmed which claimed a difference of accounts payable period among active and bankrupt firms.

According to the second hypothesis, accounts receivable period is different among active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t value is 2.1. Also Sig is 0.04 which is smaller than 0.05. Average of accounts receivable period in active and bankrupt firms are respectively 135.27 and 228.47 which shows that the period for bankrupt firms are more than active firms. Thus, according to the description, the second hypothesis is confirmed, which claimed a difference in this measure among active and bankrupt firms.

The third hypothesis claims a difference in inventory turnover period among active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t value is 0.01. Also Sig is 0.99 which is more than 0.05. According to the description, the third hypothesis is rejected which claimed a difference in inventory turnover period among active and bankrupt firms.

The fourth hypothesis of research predicts a difference in the cash conversion cycle between active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t value is -1.31. Also Sig is 0.188 which is more than 0.05. According to the description, the fourth hypothesis is rejected which claimed a difference in cash conversion cycle among active and bankrupt firms.

Based on the fifth hypothesis of study, debt to asset ratio is different among active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t value is 23.6. Also Sig is 0.000 which is less than 0.05. Thus, according to the description, the fifth hypothesis is accepted which claimed a difference in debt to asset ratio among active and bankrupt firms. Averages of debt to asset ratio in active and bankrupt firms are respectively 0.61 and 1.1, which indicates that this ratio is bigger in bankrupt firms. Based on what discussed, the fifth hypothesis is accepted.

Based on sixth hypothesis of research, long-term debt to asset ratio among active and bankrupt firms is different. Results of Table 3 show that in two-sample t test, Student-t value is 2.88. Also Sig is 0.006 which is more than 0.05. The averages of long-term debt to assets ratio for active and bankrupt firms are respectively 0.08 and 0.24, which shows this ratio in bankrupt firms is more than active firms. Thus, according to the description, the sixth hypothesis of study is confirmed, which claimed a difference in long-term debt to asset ratio among active and bankrupt firms.

Based on seventh hypothesis of study, the amount of short-term debt to asset ratio among active and bankrupt firms is different. Results of Table 3 show that in two-sample t test, Student-t value is 4.44. Also Sig is 0.000 which is less than 0.05. Averages of short-term debt to assets ratio in active and bankrupt firms are respectively 0.52 and 0.85. So the ratio is more in bankrupt firms.

Thus, according to the description, the seventh hypothesis of research is accepted which claimed a difference in short-term debt to asset ratio of active and bankrupt firms.

Based on eighth hypothesis of the research, the debt-to-equity ratio is different among active and bankrupt firms. Results of Table 3 show that in two-sample t test, Student-t value is -0.1. Also Sig is 0.916 which is more than 0.05. Thus, according to the description provided, the eighth hypothesis of research is rejected which claimed a difference of debt-to-equity ratio among active and bankrupt firms.

Based on ninth hypothesis of research, fixed investment among active and bankrupt firms is different. Results of Table 3 show that in two-sample t test, Student-t value is -0.37. Also Sig is 0.706 which is more than 0.05. Thus, according to the description provided the ninth hypothesis of research is rejected which claimed a difference in fixed investment among active and bankrupt firms.

DISCUSSION

As the results of first hypothesis show, amount of accounts payable period is different among active and bankrupt firms and for this reason it can be important as one of the variables considered in studying firm's bankruptcy. The smaller the value of this ratio for active firms shows that this group of firms could take action in a shorter period of time to settle accounts payable because of the financial situation. But due to poor financial situation, bankrupt firms have been forced to take more time to pay accounts payable. Findings are compatible with findings of Taghizadeh Khangah, Akbari Khosroshahi, and Ebrati (2012).

According to the results of second hypothesis and the difference in value of accounts receivable period between active and bankrupt firms, accounts receivable period can be considered as one of the useful indicators in understanding firm financial conditions. The obtained mean values show that bankrupt firms have wider credit policy against active firms because of offering more deadlines to get receivables. Such a phenomenon can be result of the fact that bankrupt firms have been forced to motivate their customers to pay in more time for to prevent decrease in sales income. But active firms have been able to achieve their desired profit level even with reducing accounts receivable period. Findings are compatible with findings of Taghizadeh et al. (2012) and Enqvist, Graham, and Nikkinen (2014).

According to the results of third hypothesis, it is found that inventory turnover period cannot be involved in the identification of the firm's financial situation. Findings are not compatible with findings of Taghizadeh et al. (2012) and Kumar and Bahl (2014).

Based on the results of the fourth hypothesis, it is concluded that cash conversion cycle is ineffective like other indicators of working capital management in categorization of active and bankrupt firms. Findings are compatible with findings of Taghizadeh et al. (2012).

According to fifth hypothesis based on different amount of debt ratio, it can be used as criteria for awareness of possibility of firm's bankruptcy. Based on average amount of debt ratio, it is concluded that bankrupt firms mainly rely on debts (outside the firm) in order to finance required funds. But financing policies among active firms are based on resources within the firm (such as sale of new shares, cumulative profit and etc.). Financial researchers believe that excessive debt due to creation financial obligations associates with increase of financial risk and possibility of firm's bankruptcy. Findings are compatible with findings of Khajavi et al. (2014).

Sixth and seventh hypotheses of the research suggest that long term debt to total asset and short term debt to total asset can be used to identify active and bankrupt firms too. The percentages of long-term and short-term debt in order to finance are more for bankrupt firms. While this situation is reverse for active firms. According to the explanations provided in the debt ratio, it can be said that the increase in long-term and short-term debts due to creation of financial commitments will lead to firm bankruptcy. Findings are compatible with findings of Rahimian, Rezaei, and Masteri (2011).

Finally, the results of ninth hypothesis show that the amounts of investment of active and bankrupt firms on fixed assets do not have significant difference. So any a certain results about firm financial future cannot be achieved from fixed and generating assets of firms and in this regard it's essential to consider internal factors and dominant situation in firm's external environment. Findings are not compatible with findings of Dastgir and Ghanizadeh (2014) and Chahine, Arthurs, Filatotchev, and Hoskisson (2012).

CONCLUSION AND RECOMMENDATIONS

The purpose of this study is to compare differences of indicators referred to financial planning among active and bankrupt firms to provide an understanding about relations between working capital policies, financing decisions and real investment with success or failure of organizations. The results of data analysis based on two-sample t test showed that among indicators of working capital management, amount of accounts payable period and accounts payable period are different between active and bankrupt firms in Tehran stock exchange and its value have been more for bankrupt firms against active firms. But there is not a significant difference between active and bankrupt firms due to inventory turnover period and cash conversion period. Also active and bankrupt firms in Tehran stock exchange have different state in terms of financing decision indicators (i.e. debt to asset, long term debt to total asset and short term debt to total asset). The amount of above three index have been greater for bankrupt firms against active firms. But debt to equity ratio doesn't have significant difference among active and bankrupt firms. Finally, the conclusion was that active and bankrupt firms accepted in Tehran

stock exchange don't have significant difference with one another in amount of investment.

Based on the results, the following suggestions are presented for successful financial programming and efficient financial structure adjustment for managers of different firms:

- It is recommended to investors in Tehran stock exchange to evaluate the probability of firm bankruptcy, based on accounts payable period among indicators of working capital management; debt to equity, long term debt to total asset, short term debts to total asset and debt to equity among capital structure indicators. In addition, firm fixed investments can't provide accurate information for assessment of firm financial state.
- In order to avoid the risk of bankruptcy it is suggested for managers of firm accepted in Tehran stock exchange to decrease the accounts payable period and accounts receivable period as much as possible.
- Based on the research findings, the more firms use debts for financing, the closer they will get to the bankruptcy. So it's suggested that firm's accepted in Tehran stock Exchange finance more from equity (internal resources); unless the rate of returns on assets is more than debt rate.

Also we announce the following suggestions for future research:

- It is suggested to compare the differences between market-based indicators and cash flow-based indicators among active and bankrupt firms.
- It is suggested to examine the differences of active and bankrupt firms by non-financial ratios such as macroeconomic indicators, political state and etc.
- It is suggested to examine the impact of fixed (actual) investments on firm financial performance.
- It is suggested to examine the differences among indicators of working capital management, capital structure and real investment using other methods such as logistic regression, neural networks and etc.

Finally, it should be noted that the lack of access to financial data of some of the firms in statistical society, the lack of access to domestic and foreign papers and also limited number of previous studies related to the fixed investment management were the most important restrictions of this study.

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