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The Role of Business Cycles on the Relationship between the Company's Working Capital and the Profitability of Listed Companies in Tehran Stock Exchange

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Abstract
Working capital management is one of the most important areas in financial management and business management taken into account, because it directly affects the liquidity and profitability of companies, the probability of bankruptcy for companies exposed to inappropriate management of working capital despite there is a positive profitability. Therefore, in this study to investigate the role of business cycles on the relationship between working capital and profitability of the company in the companies listed in Tehran Stock Exchange during the period 2010-2014will be discussed. In this study, 107companies in the period was determined. In order to reflect the profitability of the company of two variable rate of return on assets (ROA) and net operating income (GOI) was considered. Multivariate regression was used to test the significance of using the t test and F. Finally, it was determined that, in the first model the cycle of debt rate of return on assets is a significant and positive. While in the second model the cash conversion cycle, converting inventory and accounts receivable and a net operating profit is significant and positive.
Keywords: working capital, return on assets, operational net profit, Tehran Stock Exchange

1. Introduction

Working capital management is a key component of corporate finance management because it directly affects profitability (Gill et al., 2010). Working capital is the firm's investment in short-term assets such as cash, short-term securities, accounts receivable and inventory, and net working capital is defined as current assets minus current liabilities (Mohammadi, 2009).

Efficient working capital management is recognized as an important aspect of financial management practices in all organizational forms. In acknowledgement of this importance, the CFO Magazine publishes an annual study of corporate working capital management performance in many countries. The extensive literature indicates that it impacts directly on corporate liquidity (Kim et al., 1998; Opler et al., 1999),profitability (e.g., Shin and Soenen, 1998; Deloof, 2003; Lazaridis and Tryfonidis, 2006; Ukaegbu, 2014),and solvency (e.g., Berryman, 1983; Peel and Wilson, 1994).It is reasonable to assume that economy-wide fluctuations exogenous to the operations of the firm play an important role in the demand for firms' products and any financing decision. Korajczyk and Levy (2003), for instance, suggest that firms time debt issuance based on economic conditions. Also, given that retained earnings are a significant component of working capital, business cycles can beside to affect all enterprises financing source through its effect on economic growth and sales. For example, when company sales weaken it engenders earning declines, thereby, affecting an important source of working capital. The recent global economic downturn with crimping consumer demand isan excellent example of this. The crisis, characterized by plummeting sales, put a squeeze on corpo-rate revenues and profit margins, and subsequently, working capital requirements. This has broughtrenewed focus on working capital management at companies all over the world.

The literature on working capital, however, only includes a handful of studies examining the impact of the business cycle on working capital. An early study by Merville and Tavis (1973) exam-ined the relationship between firm working capital policies and business cycle. More recent studieshave investigated the degree to which firms' reliance on bank borrowing to finance working capitalis cyclical (Einarsson and Marquis, 2001), the significance of firms' external dependence for financing needs on the link between industry growth and business the cycle in the short term (Braunand Larrain, 2005), and the influence of business indicators on the determinants of working capital management (Chiou et al., 2006). These studies have independently linked working capital to corpo-rate profitability and the business cycle. No study, to the best of our knowledge, has examined the simultaneous working capital–profitability and business cycle effects. There is therefore a substantial gap in the literature which this paper seeks to fill. Firms may have an optimal level of working cap-ital that maximizes their value. However, optimal levels may change to reflect business conditions. Consequently, we contribute to the literature by re-examining the relationship between working capital management and corporate profitability by investigating the role business cycle plays in this relationship.

According to the literature, studies about the relationship between working capital management and the performance of companies in the Tehran Stock Exchange has been done, however, no research regarding the role of business cycles on the relationship between the company's working capital and the profitability have been

performed. This study could be a step for theoretical studies about an important part of financial management i.e. the company's working capital management. According to spread of the culture of working capital management, it may solve some companies problems so this study scientifically and academically is necessary.

2. LITERATURE REVIEW

Many firms have invested significant amounts in working capital and a number of studies have examined the determinants of this investment. For example Kim et al. (1998) and Opler et al. (1999),Chiou et al. (2006) and D'Mello et al. (2008) find that the availability of external financing is a determinant of liquidity. Thus restricted access to capital markets requires firms to hold larger cash reserves. Other studies show that firms with weaker corporate governance structures hold smaller cash reserves(Harford et al., 2008). Furthermore firms with excess cash holding as well as weak shareholder rights undertake more acquisitions. However there is a higher likelihood of value-decreasing acquisitions(Harford, 1999). Kieschnick and Laplante (2012) provide evidence linking working capital management to shareholder wealth. They find that the incremental dollar invested in net operating capital is less valuable than the incremental dollar held in cash for the average firm. The findings reported in the paper further suggest that the valuation of the incremental dollar invested in net operating working is significantly influenced by a firm's future sales expectations, its debt load, its financial constraints, and its bankruptcy risk. Further the value of the incremental dollar extended in credit to one's customers has a greater effect on shareholder wealth than the incremental dollar invested in inventories for the average firm. Taken together the results indicate the significance of working capital management to the firm's residual claimants, and how financing impacts these effects. A thin thread of the literature links business cycles to working capital. In a theoretical model,Merville and Tavis (1973) posit that investment and financing decisions relating to working capital should be made in chorus as components of each impact on the optimal policies of the others. The optimal working capital policy of the firm is, therefore, made within a systems context, components of which are related spatially over time in a chance-constrained format. Uncertainty in the wider business environment directly affects the system. For example, short run demand fluctuations disrupt anticipated incoming cash flows, and the collection of receivables faces increased uncertainty. The model provides a structure enabling corporate managers to solve complex inventory and credit policies for short term financial planning. In an empirical study, Einarsson and Marquis (2001) find that the degree to which companies rely on bank financing to cover their working capital requirements in the U.S. is countercyclical; it increases as the state of the economy weakens. Furthermore, Braun and Larrain (2005) find that high working capital requirements are a key determinant of a business' dependence on external financing. They show that firms that are highly dependent on external financing are more affected by recessions, and should take more precautions in preparing for declines in the economic environment, including ensuring a secure level of working capital reserves during times of crisis. Additionally, Chiou et al.(2006) recognize the importance of the state of the economy and includes business indicators in their study of working capital determinants. They find a positive relationship between business indicator and working capital requirements. The relationship between profitability and working capital management in various markets hasalso attracted intense interest. In a comprehensive study, Shin and Soenen (1998) document a strong inverse relationship between working capital efficiency and profitability across U.S. industries. This inverse relationship is supported by Deloof (2003), Lazaridis and Tryfonidis (2006), and Garcia-Terueland Martinez-Solano (2007) for Belgian non-financial firms, Greek listed firms, and Spanish small and medium size enterprises (SME), respectively. There are, however, significant divergences in the results relating to the effect of the various components of working capital on profitability. For example, whereas Deloof (2003) find a negative and statistically significant relationship between account payable and profitability, Garcia-Teruel and Martinez-Solano (2007) find no such measurable influences in a sample of Spanish SMEs.

3-hypotheses

Based on the concepts and theories presented as well as the observed results of the investigation, the hypothesis is formulated in the following groups:

The first group of companies that measure the profitability of the company based on the rate of return on assets (ROA) is.

- **The main hypotheses**

  1. There is a significant relationship between the cash conversion cycle and corporate profitability of the company.
  2. There is a significant relationship between conversion cycle accounts receivable and profitability of the company.
  3. There is a significant relationship between period of cycle's solvency and profitability of the company.
  4. There is a significant relationship between conversion cycle inventory and profitability of the company.

- **Sub hypotheses**
  1. There is a significant relationship between current ratio and profitability of the company.
  2. There is a significant relationship between the sales and profitability of the company.
  3. There is a significant relationship between debt ratio and profitability of the company there.

The second group of companies that measure a company's profitability based on operating net income (GOI) is.

- **The main hypotheses:**
  1. There is a significant relationship between the cash conversion cycle and profitability of the company.
  2. There is a significant relationship between conversion cycle accounts receivable and profitability of the company.
  3. There is a significant relationship between period of cycle's solvency and profitability of the company 4.There is a significant relationship between conversion cycle inventory and profitability of the company
- **Sub hypotheses**
  1. There is a significant relationship between current ratio and profitability of the company.
  2. There is a significant relationship between the sales and profitability of the company.
  3. There is a significant relationship between debt ratio and profitability of the company.

4. The variables and how to measure them

4-1.Dependent variable

In this study there are two dependent variable rate of return on assets (ROA) and net operating profit (GOI) as a measure of profitability of the company, there are independent variables include the cash conversion cycle, accounts receivable conversion cycle, cycle payment period debt conversion cycle of inventory as well as current ratio, debt ratio as control variables are the proportion of sales. It should be mentioned dependent variables; independent control models are defined here to calculate relations.

4-2.The dependent variable

• **Return on Assets (ROA):** Return on Assets the accounting standards that the management efficiency in the use of available resources to show profit.

Return on Assets related to production skills and sales company and is not affected by the company's financial structure. Because earnings in calculating the rate of return on assets, earnings objections which have been entered, the criteria are entered. Given that the net book value of assets shown in the balance sheet, so the real value of assets may be much lower or higher than their book value. Therefore, the low rate of return on assets necessity does not mean that assets should be applied elsewhere.

The ROA does not mean that the company should earn more return than buying the same assets and take action. Return on assets is calculated by the following equation and the possibility of its decomposition by DuPont analysis is as follows. (Jahankhani and Parsaeian, 2005).

$$ROA = \frac{Net\ Income}{Asset} = \frac{Net\ Income}{Sales} \times \frac{Sales}{Asset}$$

• *Operating net profit (GOI):* In accounting and finance, earnings before interest and taxes (EBIT) is a measure of profit that excludes interest and income tax expenses. Operating income minus operating revenues and operating expenses. Sometimes for a company non-operating income is zero, operating income, earnings before interest and tax synonymous with (EBIT) and operating profit is used.

Professional investor that takes into account any change in the capital structure of a company, the company's fundamental earnings potential (by earnings before interest, tax and amortization of loan costs (EBIT, EBITDA) reflected) measures the optimum ratio of debt to determine the inventory. To calculate earnings before interest and taxes, fees (such as cost of goods sold, cost of sales and administrative expenses) are subtracted from revenues. Profit is later obtained by subtracting interest and taxes from this amount.

Independent variables:

The cash conversion cycle: the cash conversion cycle, measured in working capital management is important). Gentry et al., 1990). Cash conversion cycle time to invest in inventory and accounts receivable days minus the number of days to pay suppliers can be measured. Kim et al (1998) the cash conversion cycle as the average age of inventory plus accounts receivable minus the period average collection period accounts payable, has measured.

Days of inventory conversion + days (period) receipt of accounts receivable - accounts payable days= cash conversion cycle

Cycle of debt: Brill et al (2004) payable to the purchase of material and non-payment of bill defines fast. The time period between the purchase to pay off debt and accounts payable are called. Delay in payment of accounts payable as tension arises. So the cycle of debt is equal to the average amount payable to him when the company

keeps short-term measures.

365 * (cost of goods sold) / Accounts Payable Accounts Payable = days delay

conversion cycle accounts receivable: Accounts receivable mainly from the oven and the credit K ply or services arise. Gentry et al (1990) argue that "accounts receivable reflects the cash flow is delayed. This must be financed by the company ". Original decision concerning the accounts receivable, the amount and terms of credit to customers. Please credit the customer based on the customer's choice of credit, financial capacity, financial stability, security and economic conditions is obtained. Term corporate credit and debt collection policy is partly to economic conditions) such as recession and inflation (it depends Therefore, accounts receivable conversion cycle is the average time the company keeps its accounts receivable with the measures.

365 * (Buy) / accounts receivable = accounts receivable collection days.

Conversion cycle inventory: Mathur (2003) Inventory includes raw materials (crude), consumption of stores and spare parts (in process, and finished goods) knows. The average time to inventory your company maintains measures,

365 * (cost of goods sold) / Inventory = days inventory conversion

4-3.Control variables:

- **Current ratio**: the ratio of current assets to current liabilities
- **Debt ratio**: is the ratio of total debt to total assets
- **The proportion of sales**: total sales is the natural logarithm

5. The Community and sample

in this study, the companies listed in Tehran Stock Exchange as of their population. Among these companies, the companies that meet the following conditions were selected. Finally, 117 companies were selected.

1. The company shall be accepted before 2010.
2. The company may continue to operate until the end of 2014.
3. The Company's fiscal year shall not be changed during the period studied.
4. Data about the company is available.
5. Banks, insurance companies and investment will not be considered.

6.Methods

Since this study were to investigate the effect of minimum cash flows of earnings, accruals, and accruals Non-Current current market value, Methodology for the study, correlation and multiple regressions to test the relationship between these variables regression ordinary least squares (OLS) and to determine the accuracy of the values and importance of each independent variable. Also the t test to determine the significance of each variable, and the F statistic to determine the significance of regression and of an R^2 to determine the performance and the explanation of the dependent variable was analyzed by the independent variable selection.

Following regression models were used to test the hypothesis:

The hypothesis model

$$(Profitability_{it} = \alpha_0 + \alpha_1 (CCC)\, i, t + \alpha_2 (AR) i, t + \alpha_3 (AP)\, i, t + \alpha_4 (INV) i, t + \alpha_5 (CR)_{i,t} + \alpha_6 (DEBT)_{i,t} + \alpha_7 (SALES)_{i,t} + \varepsilon_{i,t}$$

DISCRIPTION	SYMBOL	ROW
Profit company i in period t (dependent variable)	(Profitability) i, t	**1**
Cash conversion cycle company i in period t (independent variable)	(CCC) i, t	**2**
Accounts receivable conversion cycle company i in period t (independent variable)	(AR)i, t	**3**
Cycle of debt the company i in period t (independent variable)	(AP) i, t	**4**
Now i conversion cycle inventory in period t (independent variable)	(INV)i, t	**5**
Current Ratio firm i in period t (control variable)	$(CR)_{i,}$,t	**6**
Company debt ratio i in period t (control variable)	$(DEBT)_{i,t}$	**7**
the sale of the company i at time t (control variable)	$(SALES)_{i,t}$	**8**

7. The method of data collection and spatial and temporal territory

The required data through observation and review of documents including financial statements of companies were collected. In this study, to develop research literature library method is used to test hypotheses of the Company's financial statement information contained in the Rahavard Novin software, Tadbir Pardaz software, stock organization library and stock sites such as www.rdis.ir and www.irbourse.com were used.

Also the research on companies listed in Tehran Stock Exchange has been done and the time period in question, from the beginning of 2008 until the end of 2014.

8. The method of data analysis

In this study, according to the type of data and methods of analysis, the method of "aggregate data" is used in all statistical techniques EXCEL and SPSS software using the normal set of variables and remaining regression in SPSS of Kolmogorov-Smirnov test was used, so that if the possibility of statistics for more than 5% is a variable, that variable distribution of normal and non-normal otherwise.

9. Statistical results hypotheses

test hypotheses

The first group hypotheses: that companies measure the profitability of the company based on the rate of return on assets (ROA) is.

test model overview

To test the independence of the errors of each of the Durbin-Watson test is used. As can be seen in Table 4-4 of the Durbin - Watson obtained is 1.520, so the hypothesis of independence between 1.5 and 2.5 errors will be accepted. Also, as can be seen from Table 4-4 that correlation coefficient is 0.542, which indicates that correlation between the independent variables and the dependent variable. The standard coefficient of determination is 0.542. So almost 54% change in the dependent variable due to changes in the independent variables model.

Table 4-4: Results of the review model

Durbin-Watson	Significant Of F	F Test	Adjusted Coefficient Of Determination	Coefficient Of Determination
1.52	0.00	106.250	0.542	0.74

On the other hand there to test the linear relationship between independent and dependent variables F Fisher parametric test and ANOVA analysis used in this study. As can be seen in Table 4-4 F less than 5% significance level (zero). Therefore, according to this table assumes a linear relationship between the dependent and independent variables and a linear relationship is confirmed in the research model.

Test Analysis Model details

Table 4-5: The results of the first partial factors hypotheses

Variables	T test	Coefficient	Significant
constant	0.788	3.328	0.02
Cash conversion cycle	0.003	0.467	0.641
Cycle period for payment of corporate debt	0.001	1.964	0.05
Conversion cycle accounts receivable Company	0.002	-1.474	0.141
Conversion cycle inventory	0.0049	0.175	0.861
company current ratio	0.049	1.614	0.107
Company debt ratio	-3.810	-17.905	0.0
Company sales ratio	0.106	4.685	0.0

- **Main hypotheses**

The first major hypothesis: the cash conversion cycle and profitability of the company there is a significant relationship.

As the table (4-4) can be seen, the company's cash conversion cycle and variable rate of return on assets as a measure of profitability There is a positive relationship but given that the level of significance (P-value = 0.641> = 0.05) after the cash conversion cycle no significant effect on the efficiency of Company assets. So there is no relationship between the cash conversion cycle at 95% and return on assets as a measure of profitability of the Company and cannot be confirmed. So the first premise of the study is rejected. The expected cash conversion cycle has no effect on the rate of return on assets.

The second major hypothesis: The conversion cycle accounts receivable and profitability of the company there is a significant relationship.

As the table (4-4) can be seen, the variable conversion cycle accounts receivable Company and the rate of return on assets as a measure of profitability There is a positive relationship but given that the level of significance (P-value = 0.141> 0.05) after conversion cycle accounts receivable Company assets no significant effect on returns. So there is no relationship between conversion cycle accounts receivable at 95% and return on assets as a measure of profitability of the Company and cannot be confirmed. So the second hypothesis of the study is rejected. The conversion cycle accounts receivable are expected to have an impact on the rate of return on assets.

The third main hypothesis: the pay period cycle, there is a significant relationship between corporate debt and profitability of the company.

According to Table 4.5 As you can see, the estimated coefficient for variable pay period cycle of debt equal to 0.001 which the column is significant that the estimated coefficient on 95% confidence level significant (a significant factor equal to 0.05 is less than 5%) so the cycle at 95% solvency rate of return on assets as a measure

of profitability, the company has a significant positive impact. The third hypothesis of the study is confirmed. This is expected to increase the pay period cycle of debt, increased rate of return on assets. Or in other words increase the company's performance.

The main fourth hypothesis conversion cycle inventory between the company and the profitability of the company there is a significant relationship.

Also, as the table (4-4) see that the variable conversion cycle inventory between now and the rate of return on assets as a measure of profitability There is a positive relationship, but due to the significant level (P-value = 0.861> 0.05) after conversion cycle inventory and yield significant relationship between company assets there. So there is no relationship between the 95% conversion cycle inventory and rate of return on assets as a measure of the profitability of the company and cannot be confirmed. The fourth premise of the study is rejected. The expected conversion cycle inventory does not affect the rate of return on assets.

- **sub-hypotheses**

First hypothesis: the current ratio and profitability of the company there is a significant relationship.

As the table (4-4) can be seen, the variable current ratio and return on assets as a measure of profitability There is a positive relationship but given that the level of significance (P-value = 0/107> 0 / 05) is. The company's current ratio of assets yields no significant effect. So there is no relationship between current ratio at 95% and return on assets as a measure of profitability of the Company and cannot be confirmed. So the first assumption secondary research to be rejected. The current ratio is expected to have no effect on the rate of return on assets.

The second hypothesis: the ratio of sales and profitability there is a significant relationship.

According to Table 4.5 As you can see, the estimated coefficient for variable sales ratio equal to 0.106 and the estimated coefficient column at a confidence level of 95% is significant (the significance of this factor equal to 0.0 is less than 5%) so 95% of sales on the rate of return on assets as a measure of profitability, the company has a significant impact. The second assumption is confirmed secondary research. This is expected to increase sales, increase the rate of return on assets.

The third sub-hypothesis: the relationship between debt ratio and significant profitability.

According to Table 4.5 As you can see, the estimated coefficient for variable debt ratio equal to -3.810 and the estimated coefficient is significant at 95% (significantly this factor equal to 0.0 is less than 5%) so the rate of return on assets at 95% debt ratio as a measure of profitability, the company has a significant negative impact. The third assumption is confirmed secondary research. The debt ratio is expected to increase the rate of return on assets is reduced. In other words, the company reduced performance.

Therefore, according to the research results of the regression model is as follows:

$$\textbf{Profitability}_{it} = \alpha_{0+} \textbf{ /001AP}_{i,t} \textbf{ – 3/810DEBT}_{i,t} \textbf{ + /106SALES}_{i,t} + \acute{\varepsilon}_{i,t}$$

Group two assumptions: that companies measure a company's profitability based on operating net profit (GOI) is.

As can be seen in Table 4-6 of the camera 1.687 Watson obtained is between 1.5 and 2.5, so the hypothesis of independence errors will be accepted. Also, as can be seen from Table 4-6 that obtained correlation coefficient 0.807, which is the dependent variable showed significant correlation. The determination coefficients obtained standard 0.807 is.

Table 4-6: Results of the review model

Durbin-Watson	Significant Of F	F Test	Adjusted Coefficient Of Determination	Coefficient Of Determination
1.687	0.00	368.064	0.807	0.898

On the other hand there to test the linear relationship between independent and dependent variables F Fisher parametric test and ANOVA analysis used in this study. As can be seen in Table 4-6 F less than 5% significance level (zero). Therefore, according to this table assumes a linear relationship between the dependent and independent variables and a linear relationship is confirmed in the research model.

Test Analysis Model details

Table 4-7: The results of the second partial factors hypotheses

Variables	T test	Coefficient	Significant
constant	-35.616	-7.898	0.00
Cash conversion cycle	7.259	0.002	0.00
Cycle period for payment of corporate debt	-0.031	0.003	0.165
Conversion cycle accounts receivable Company	7.266	0.002	0.00
Conversion cycle inventory	7.480	0.002	0.00
company current ratio	-5.126	-0.195	0.00
Company debt ratio	-15.438	-2.153	0.00
Company sales ratio	45.310	0.672	0.00

- **Main assumptions**

The first major hypothesis: the cash conversion cycle and profitability of the company there is a significant relationship.

As you can see from the table 4-7 the coefficient estimated for the variable cash conversion cycle equal to 0.002 and significant column show that the estimated coefficient is significant at 95% confidence level. (Significance of this factor equal to 0.00 is less than 5%) so the cash conversion cycle at 95% on the gross operating profit as a measure of profitability of the company Positive and significant impact. So the first premise of the study is confirmed. This is expected to increase the cash conversion cycle, operating profit increased rate, or in other words increase the company's performance.

The second major hypothesis: The conversion cycle accounts receivable and profitability of the company there is a significant relationship.

According to Table 4.7 As you can see, the estimated coefficient for variable conversion cycle accounts receivable equal to 0.002 and significant column show that the estimated coefficient is significant at 95% level. (Significance of this factor equal to 000/0 is less than 5%) So at 95% conversion cycle accounts receivable on interest rates as a measure of operational profitability of the company Positive and significant impact. So the second hypothesis of the study is confirmed. This is expected to increase conversion cycle accounts receivable, operating profit increased rate, or in other words increase the company's performance.

The third major hypothesis: the pay period cycle, there is a significant relationship between corporate debt and profitability of the company.

Also, as the table (4-4) is observed, the variable pay period cycle of indebtedness and interest rates as a measure of operational profitability, there is a positive relationship.

However, given that the level of significance (P-value = 0.165> 0/05) after a cycle of debt had no significant effect on the efficiency of Company assets. So there is no relationship between the 95% conversion cycle inventory and operating profit rate as a measure of the profitability of the company and cannot be confirmed. The third hypothesis of the study is rejected. The operating profit rate is expected to have no impact on operating profit rate.

The main fourth hypothesis conversion cycle inventory between the company and the profitability of the company there is a significant relationship

according to Table 4-7 as seen in the coefficient estimates for the company's variable conversion cycle inventory equal to 0.001 and according to significant column show that the estimated coefficient is significant at 95%.(Significance of this factor equal to 000/0 is less than 5%) at 95% conversion cycle inventory so the company's operating profit rate as a measure of profitability of the company Positive and significant impact there for the fourth hypothesis of the study is confirmed. The company is expected to increase conversion cycle inventory, operating profit increased rate. Or in other words increase the company's performance.

- **sub-hypotheses**

First hypothesis: the current ratio and profitability of the company there is a significant relationship.

According to Table 4.5 As you can see, the estimated coefficient for variable current ratio equal to -0.195 and according to significant show that the estimated coefficient is significant at 95%.(Significance of this factor equal to 0.00 is less than 5%), so the current ratio at 95% on the gross operating profit as a measure of profitability and significant influence of the company. So the first assumption is confirmed secondary research. This is expected to increase the proportion of sales; operating profit reduced rates or, in other words reduces the company's performance.

The second hypothesis: the ratio of sales and profitability there is a significant relationship

According to Table 4.5 As you can see, the estimated coefficient for variable sales ratio equal to 0.672 and according to significant column show that the estimated coefficient is significant at 95% (significance of this factor equal to 0.00 is less than 5%). So at 95% the rate of operating profit to sales ratio as a measure of profitability of the company has positive and significant impact. The second assumption is confirmed secondary research. This is expected to increase the proportion of sales, operating profit increased rate, or in other words increase the company's performance.

The third sub-hypothesis: the relationship between debt ratio and significant profitability.

According to Table 4.5 As you can see, the estimated coefficient for variable debt ratio equal to -2.153 and according to significant column show that significant that the estimated coefficient is significant at 95% (significance of this factor equal to 000/0 is less than 5%).So negative significance at 95% ratio of debt to operating profit rate as a measure of profitability, the company has a significant negative impact. So the first assumption is confirmed secondary research. The debt ratio is expected to increase rates reduced operating profit in other words decreases performance.

Therefore, the regression model research results are as follows:

Profitabilityit = α0+ /002 CCC i, t + /002ARi, t + /001INVi, t -/195CRi,t-2/153DEBTi,t + /673SALESi,t +ɛi,t

10.suggestions based on research findings

The results of this research suggest the test groups are presented below:

1. Managers pay more attention to working capital management. Thus, if the volume of activities is not high, do not have high working capital requirements and must reduce it. Because the reduction of financial working capital two interests: first the currency of the reduction of inventory and accounts receivable will be free, to help cash flow in the period. Second, the move towards zero working capital permanently increases profitability.
2. Contrary to the general perception that the delay in receipt of receivable account in order to improve performance and profitability are negative step, based on the results of this study if the companies time to get your accounts receivable appropriate sensitivity with respect to their optimal credit to a maximum can lead to increased Buy long-term corporate credit and increase the liquidity and profitability of the company that it should be company managers and policy makers.
3. Based on the findings of this study also have their time to a minimum payment of accounts payable optimization can bring to companies of appropriate credit facilities and policies creditors, suppliers and their suppliers. And this also increases the liquidity and profitability in the long run the company.

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