

“The impact of working capital policy on risk management in the companies listed in Tehran Stock Exchange”

AUTHORS

Samaneh Rezazadeh Sefideh
Mohammad Reza Asgari

ARTICLE INFO

Samaneh Rezazadeh Sefideh and Mohammad Reza Asgari (2016). The impact of working capital policy on risk management in the companies listed in Tehran Stock Exchange. *Problems and Perspectives in Management*, 14(3-si), 364-371. doi:[10.21511/ppm.14\(3-si\).2016.09](https://doi.org/10.21511/ppm.14(3-si).2016.09)

DOI

[http://dx.doi.org/10.21511/ppm.14\(3-si\).2016.09](http://dx.doi.org/10.21511/ppm.14(3-si).2016.09)

RELEASED ON

Thursday, 15 September 2016

JOURNAL

"Problems and Perspectives in Management"

FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

© The author(s) 2022. This publication is an open access article.

Samaneh Rezazadeh Sefideh (Iran), Mohammad Reza Asgari (Iran)

The impact of working capital policy on risk management in the companies listed in Tehran Stock Exchange

Abstract

Today, the management of resources and current expenditures, working capital management is to maximize shareholder wealth as part of the task of financial management is particularly important. Administrators can choose different strategies affect the company's liquidity. I.e., in current assets can be conservative or aggressive strategy to secure and in current liabilities can be either conservative or aggressive strategy selected. Risk management is the process that tries the risk of providing investors with regard to their expected returns and put it in the right direction. It should also be noted that risk and return are two integral part of the decision making and risks should always be considered with regard to efficiency. The purpose of this study is to evaluate the impact of working capital policy on risk management companies. This study is based on analysis of literature and analytical Ali panel data (panel data) is. In this study, the financial data of 110 companies listed in Tehran Stock Exchange during the period 2007 to 2012 were reviewed (660 firm – years). To analyze the results of the study program 20 SPSS, 7 Eviews and 16 Minitab is used. The results confirm the hypotheses associated with the sub 1-1, 2-1, 3-1 and 4-1, respectively, show that Among the four criteria of profitability and working capital policy, return on assets, return on equity, return on investment and Tobin's q and there is a direct relationship. The results confirm the hypotheses associated with sub 1.2 and 2.2, respectively, indicating that the between policy and operational risk and financial risk, working capital and an inverse relationship exists.

Keywords: policy, working capital, return on assets, return on equity, Tobin's q, return on investment, operational risk, financial risk, and panel data.

JEL Classification: G30, G32.

Introduction

The world economy is changing rapidly. Consistent with increased global competition, rapid technological changes in liability management activities are heavier. One of the basic functions of management, decision making in all areas of finance Bashd.msyh there and the principle of working capital management is one of the most important issues facing managers nyst. ps exempt entity, working capital management plays an important role in the growth and survival of the business unit. The balance between current assets and current liabilities is important, because decisions about affects the other. Efficient working capital management as a component of the overall strategy of the company is to create value for shareholders should be able to choose appropriate strategies in different situations to be able to efficiently handle current assets and current liabilities.

Companies with high cash working capital may be low risk and low profitability conversely, a company with low liquidity, working capital, is facing a high risk with high efficiency. The problem is that companies need to consider both categories and proud to establish a balance between risk and return. So now, financial management in issues such as the relationship between efficiency and maximize efficiency Khtr- the risk is

located. It represents the source and use of short-term capital. According to Dewing (1941), it is, along with fixed capital, one of the "key elements" of the firm (Kim and Srinivasan, 1988).

Stress the value of individual components of working capital. For instance, holding large inventory stocks enables firms to avoid interruptions in the production process and costly stock-outs. Moreover, granting trade credit to one's clients can stimulate sales, as it enables customers to verify the quality of the product before paying for it, and as it represents an additional source of credit for them (Long et al., 1993; Petersen and Rajan, 1997).

Studies on working capital management fall into two competing views of working capital investment. Under one view, higher working capital levels allow firms to increase their sales and obtain greater discounts for early payments (Deloof, 2003) and, hence, may increase firms' value. Alternatively, higher working capital levels require financing and, consequently, firms face additional financing expenses, which increase their probability of going bankrupt (Kieschnick, LaPlante & Moussawi, 2011). Combining these positive and negative working capital effects leads to the prediction of a nonlinear relation between investment in working capital and firm value. The hypothesis in this paper is that an inverted U-shaped relation may result if both effects are sufficiently strong.

Authors like Schiff and Lieber (1974), Smith (1980) and Kim and Chung (1990) suggest that working capital decisions affect firm performance. In this line,

© Samaneh Rezazadeh Sefideh, Mohammad Reza Asgari, 2016.
Samaneh Rezazadeh Sefideh, M.A., Faculty of Management and Accounting, Department of Accounting, Islamic Azad University, South Tehran Branch, Iran.
Mohammad Reza Asgari, Ph.D., Department of Business Management, Yadegar Imam Khomeini (RAH), Shahre-Ray Branch, Islamic Azad University, Iran.

Wang (2002) finds that firms from Japan and Taiwan with higher values hold a significantly lower investment in working capital than firms with lower values. Kieschnick et al. (2011) study the relation between working capital management and firm value.

The crucial part in managing working capital is maintaining liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Yet, this is not a simple task since managers must make sure that the business operation is running in an efficient and profitable manner. There is a possibility of a mismatch between current assets and current liabilities during this process. If this happens and firm's manager cannot manage it properly then it will affect firm's growth and profitability. This will further lead to financial distress and finally firms go bankrupt. Dilemma in working capital management is to achieve desired trade off between liquidity and profitability (Smith, 1980; Raheman and Nasr, 2007). Referring to theory of risk and return, investment with more risk will result to more return. However, there are also possible adverse effects of investment in working capital which may lead to a negative impact on firm value at certain working capital levels.

Firstly, keeping stock available supposes costs such as warehouse rent, insurance and security expenses, which tend to rise as the level of inventory increases (Kim & Chung, 1990). Working capital is often used to measure a firm's liquidity. Liquidity is a precondition to ensure that firms are able to meet their short-term obligations. Insufficient liquidity can lead to bankruptcy (Dunn and Cheatham, 1993). Yet, too much liquidity can be detrimental to firms' profitability (Bhattacharya, 2001). Good management of working capital, therefore, requires striking a balance between liquidity and profitability in order to maximize the value of the firm. The advantages of holding inventories and extending trade credit to customers have been outlined above. Yet, the higher the inventories and trade credit, the less money is available to the firm for profitable investment. This suggests that finding the optimal level of working capital may be a difficult task for firm managers (Deloof, 2003).

While our risk management perspective is new to the merger wave literature, there are several reasons why we might expect risk management to be relevant. First, a growing area of the finance literature recognizes that operational hedging may be accomplished via mergers (Amihud and Lev, 1981; Penas and Unal, 2004). To the extent that other forms of risk management carry non-trivial costs or possibly fail to provide complete hedging (especially over longer periods), an alternative response to increased uncertainty is to merge or acquire. Shin and Soenen (1998) and Deloof (2003) show profitability and risk-adjusted returns are

inversely related to the cash conversion cycle suggesting that aggressive working capital policy significantly improve firm performance. A firm may adopt an aggressive working capital management policy with a low level of current assets as percentage of total assets or it may also used for the financing decisions of the firm in the form of high level of current liabilities as percentage of total liabilities. Excessive levels of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to lower level of liquidity and stock outs resulting in difficulties in maintaining smooth operations (Van Horne and Wachowicz, 2004). Since financial management and improve the efficiency and profitability of the organization and improve its performance has a significant impact, Investment and financing decisions, including the most important financial decisions of a company which is a subset of working capital management. Working capital is defined as the difference between firms' current assets (which include accounts receivable, inventories, and cash) and current liabilities (which include accounts payable and short term debt).

1. Theoretical study

The investment in receivable accounts and inventories represents an important proportion of a firm's assets, while trade credit is an important source of funds for most firms. Cuñat (2007) reports that trade credit represents about 41% of the total debt and about half the short term debt in UK medium sized firms. There is substantial literature on credit policy and inventory management, but few attempts to integrate both credit policy and inventory management decisions, even though Schiff and Lieber (1974), Sartoris and Hill (1983), and Kim and Chung (1990) do show the importance of taking into account the interactions between the various working capital elements (i.e., receivable accounts, inventories and payable accounts).

Lewellen, McConnel, and Scott (1980) demonstrate that under perfect financial markets, trade credit decisions do not serve to increase firm value. However, capital markets are not perfect and, consequently, several papers demonstrate the influence of trade credit and inventories on firm value (see, for instance, Bao & Bao, 2004; Emery, 1984). The idea that working capital management affects firm value also seems to enjoy wide acceptance, although the empirical evidence on the valuation effects of investment in working capital is scarce. The need for maintaining an adequate working capital can hardly be questioned. Just as circulation of blood is very necessary in the human body to maintain life, the flow of funds is very necessary to maintain business. If it becomes weak, the business can hardly prosper and survive. Working capital starvation is generally credited as a major cause

if not the major cause of small business failure in many developed and developing countries (Rafuse, 1996). The success of a firm depends, ultimately, on its ability to generate cash receipts in excess of disbursements. The cash flow problems of many small businesses are exacerbated by poor financial management and in particular the lack of planning cash requirements (Jarvis et al., 1996).

Working capital is defined as the difference between firms' current assets (which include accounts receivable, inventories, and cash) and current liabilities (which include accounts payable and short term debt). It represents the source and use of short-term capital. According to Dewing (1941), it is, along with fixed capital, one of the "key elements" of the firm. Kim and Srinivasan (1988) stress the value of individual components of working capital. For instance, holding large inventory stocks enables firms to avoid interruptions in the production process and costly stock-outs. Moreover, granting trade credit to one's clients can stimulate sales, as it enables customers to verify the quality of the product before paying for it, and as it represents an additional source of credit for them (Long et al., 1993; Petersen and Rajan, 1997).

Working capital is often used to measure a firm's liquidity. Liquidity is a precondition to ensure that firms are able to meet their short-term obligations. Insufficient liquidity can lead to bankruptcy (Dunn and Cheatham, 1993). Yet, too much liquidity can be detrimental to firms' profitability (Bhattacharya, 2001). Good management of working capital, therefore, requires striking a balance between liquidity and profitability in order to maximize the value of the firm. The advantages of holding inventories and extending trade credit to customers have been outlined above. Yet, the higher the inventories and trade credit, the less money is available to the firm for profitable investment. This suggests that finding the optimal level of working capital may be a difficult task for firm managers (Deloof, 2003).

A firm can be very profitable, but if this is not translated into cash from operations within the same operating cycle, the firm would need to borrow to support its continued working capital needs. Thus, the two objectives of profitability and liquidity must be synchronized and one should not impinge on the other for long. Investments in current assets are inevitable to ensure delivery of goods or services to the ultimate customers and a proper management of same should give the desired impact on either profitability or liquidity. The separation was made in order to cover all the possible operational risks and to concentrate on the most significant causes of the severity of loss met day by day. Thus, the operational risk can be interpreted as a vulnerability of the financial institution that can be reduced or eliminated through an increased control.

Working capital management is particularly important in the Chinese context, where firms have limited access to long-term capital markets. Such firms, therefore, need to rely on internally generated funds, short-term bank loans, and trade credit to finance their activities. For these firms, working capital may be used as an additional source of finance. In line with this argument, it has been shown that effective working capital management has played a particularly important role in alleviating the effects of the recent financial crisis in China (KPMG China, 2011). In addition, Hale and Long (2011a, 2011b) argue that the spectacular growth characterizing Chinese private firms in recent years is due, among other things, to their ability to manage their working capital in general, and their accounts receivable in particular, more efficiently than other firms. The four indicators of working capital management efficiency Filbeck and Krueger (2005) highlighted the importance of efficient working capital management by analyzing the working capital management policies of 32 non-financial industries in USA.

According to their findings significant differences exist between industries in working capital practices over time. Moreover, these working capital practices, themselves, change significantly within industries over time. Teruel and Solano (2005) suggested that managers can create value by reducing their firm's number of day's accounts receivable and inventories. Similarly, shortening the cash conversion cycle also improves the firm's profitability. The recent work of Howorth and Westhead (2003) suggests that small companies tend to focus on some areas of working capital management where they can expect to improve marginal returns. Later on, Deloof (2003) analyzed a sample of large Belgian firms during the period 1992-1996 and the results confirmed that Belgian firms can improve their profitability by reducing the number of days accounts receivable are outstanding and reducing inventories. Sathyamoorthi (2002) observed that more emphasis is given to investment in fixed assets both in management area and research. However, effective management working capital has been receiving little attention and yielding more significant results.

The four indicators of working capital management efficiency outlined above focus, however, only on some of the components of working capital (e.g., inventories, accounts receivable, and accounts payable). In addition, they do not take into account the fact that working capital can be used to buffer fixed capital investment from temporary changes in the availability of finance (Fazzari and Petersen, 1993). In particular, when a negative cash flow shock hits them, firms can draw down their stock of working

capital, and, then, replenish it after a positive cash flow shock. In this way, their fixed capital investment, which is characterized by high adjustment costs, can be insulated from cash flow fluctuations. Considering that many Chinese firms are financially constrained, active working capital management may, therefore, be particularly important for them and can be a mechanism through which these firms cope with financing constraints. In the sections that follow, we test whether this is the case.

2. Assumptions

Based on the theoretical and research conducted assumptions research provided below:

The main hypothesis 1:

The policy of working capital and profitability exists is.

Sub-hypothesis 1:

H_1 : The policy of working capital and asset efficiency is a significant relationship exists.

H_2 : The policy of working capital and return on equity exists is.

H_3 : Working capital policies and there in a significant relationship between Tobin's q.

H_4 : The policy of working capital and capital efficiency is a significant relationship exists.

The main hypothesis 2:

The policy of working capital and there is a significant relationship between the relative risk.

Sub-hypothesis 2:

H_5 : Working capital and operational risk policies, there is a significant relationship between them.

H_6 : Working capital and financial risk, there is a significant relationship between politics.

3. Methods

This survey and the purpose the research is correlational. Well the quasi-experimental research design, because of the historical data used. the population of this study, all of the companies listed in Tehran Stock Exchange during the period from 2008 to 2013 and the sample includes companies that by the end of 2007 are listed in Tehran Stock Exchange, financial period to the end of March, the research during the financial year have not changed and data required for this study is available. Restriction on the intended number 110 corporations (all years) was selected as the ultimate example. Information and data necessary to carry out research through official websites Tehran Stock Exchange including site development Research and Islamic Studies (Rdis),

company Information Exchange, new Software outcomes collection and preliminary analysis was required in an Excel spreadsheet. The final analysis using the software Eviews 7 and was SPSS 20 and Minitab 16. To test the hypothesized model for panel data regression and statistical methods used.

Secondary research in order to test hypotheses one through six of model 1 to 6 will be used as follows. In this model, if coefficients (coefficients of the independent variables) significant at the 95%, respectively, from first to sixth sub-hypotheses of the study will be approved and adjusted variables are estimated as follows:

Model of research hypotheses:

Model 1:

$$ROA_{i,t} = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

Model 2:

$$ROE_{i,t} = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

Model 3:

$$Tobin's\ s_{i,t} = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

Model 4:

$$ROC_{i,t} = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

Model 5:

$$SD_{Sales} = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

Model 6:

$$SD_{ROA}, SD_{ROE}, SD_{ROC}, SD_q = \alpha_0 + \beta_1(TCA/TA)_{i,t} + \beta_2(TCL/TA)_{i,t} + \varepsilon_{i,t}$$

In the above example:

i – represents the company (of the cross), and t – represents years;

$ROA_{i,t}$ = return on assets of firm/bank i for time period t ;

$ROE_{i,t}$ = return on equity of firm/bank i for time period t ;

$ROC_{i,t}$ = return on assets of firm/bank i for time period t ;

$ROI_{i,t}$ = return on assets of firm/bank i for time period t ;

Tobin's $s_{q,t}$ = value of q of firm/bank i for time period t ;

$TCA/TA_{i,t}$ = total current assets to total assets ratio of firm/bank i for time period t ;

$TCL/TA_{i,t}$ = total current liabilities to total assets ratio of firm/bank i for time period t ;

α = intercept;

$\varepsilon_{i,t}$ = random error of firm i in year t .

4. Descriptive statistics for variables

In descriptive statistics, data analysis using index of dispersion parameters such as mean and median, and standard deviation, skewness and elongation done. The relationship between the mean, median, and the main central index data show, so that if the data on a regular basis row axis, the mean value is exactly the balance point or center of distribution. Standard deviation of the distribution parameters and the distribution of the data shows. Skewness of the parameters determining

the deviation from symmetry and asymmetry index databases. If the community has a symmetric distribution, the skewness coefficient is equal to zero, if the skew to the left, the skewness coefficient is negative and if you have a skew to the right, the coefficient of skewness is positive. Stretching towards the normal distribution is the distribution of the index. Summary descriptive statistics of the variables after the screening model and outlier removal software 20 SPSS is presented in Table 1.

Table 1. Statistics

		ROA _{it}	ROE _{it}	Tobin's _{it}	ROC _{it}	SDsales	SDRRRQ	(TCA/TA) _{it}	(TCL/TA) _{it}
N	Valid	660	660	660	660	660	660	660	660
	Missing	0	0	0	0	0	0	0	0
Mean		.940568	1.303059	.145822	.118827	.746527	.627069	.625647	.550956
Std. Deviation		.5604879	.7488603	.1775101	.1238557	.0480807	.3059243	.2122735	.2276964
Skewness		-1.967	-3.329	.877	.371	.425	-1.959	-.596	1.810
Std. Error of Skewness		.095	.095	.095	.095	.095	.095	.095	.095
Kurtosis		4.714	12.074	.926	2.559	.516	5.610	-.416	13.614
Std. Error of Kurtosis		.190	.190	.190	.190	.190	.190	.190	.190
Minimum		-.5151	-.6461	-.4040	-.3400	.6215	-.9034	.0713	.0763
Maximum		1.7999	2.5984	.9191	.6309	.9010	1.1393	.9732	2.6592

5. Correlation between variables

In this section, using the Pearson correlation coefficient to assess the relationship between variables and the correlations between them are paid. Matrix of correlations between variables in Table 2 are presented. Based on the results of the Pearson statistic, return on assets and a significant positive correlation with equity returns, Tobin's *q*, return on investment and financial risk and operational risk policies and

financing Hmbstky significantly negative (conservative – bold) working capital of their shows.

Return on equity was also positively correlated with Tobin's *q*, capital efficiency and financial risk and positively correlated with the policy of financing (Conservative – bold) is the capital. Tobin's *q*, is also positively correlated with the returns of capital, financial risk and operational risk policies and financing Hmbstky significantly negative (conservative – bold) capital of their shows.

Table 2. Correlations

		ROA _{it}	ROE _{it}	Tobin's _{it}	ROC _{it}	SDsales	SDRRRQ	(TCA/TA) _{it}	(TCL/TA) _{it}
ROA _{it}	Pearson's correlation	1	.389**	.165**	.505**	-.078'	.771**	-.061	-.380**
	Sig. (2-tailed)		.000	.000	.000	.046	.000	.117	.000
	N	660	660	660	660	660	660	660	660
ROE _{it}	Pearson's correlation	.389**	1	.199**	.420**	.038	.862**	.016	-.167**
	Sig. (2-tailed)	.000		.000	.000	.327	.000	.677	.000
	N	660	660	660	660	660	660	660	660
Tobin's _{it}	Pearson's correlation	.165**	.199**	1	.345**	-.082'	.377**	.005	-.094'
	Sig. (2-tailed)	.000	.000		.000	.034	.000	.889	.016
	N	660	660	660	660	660	660	660	660
ROC _{it}	Pearson's correlation	.505**	.420**	.345**	1	-.006	.639**	-.126**	-.659**
	Sig. (2-tailed)	.000	.000	.000		.876	.000	.001	.000
	N	660	660	660	660	660	660	660	660
SDsales	Pearson's correlation	-.078'	.038	-.082'	-.006	1	-.025	.034	.181**
	Sig. (2-tailed)	.046	.327	.034	.876		.527	.381	.000
	N	660	660	660	660	660	660	660	660
SDRRRQ	Pearson's correlation	.771**	.862**	.377**	.639**	-.025	1	-.030	-.356**
	Sig. (2-tailed)	.000	.000	.000	.000	.527		.442	.000
	N	660	660	660	660	660	660	660	660
(TCA/TA) _{it}	Pearson's correlation	-.061	.016	.005	-.126**	.034	-.030	1	.423**
	Sig. (2-tailed)	.117	.677	.889	.001	.381	.442		.000
	N	660	660	660	660	660	660	660	660

Table 2 (cont.). Correlations

		ROA _{it}	ROE _{it}	Tobin's _{it}	ROC _{it}	SDsales	SDRRRQ	(TCA/TA) _{it}	(TCL/TA) _{it}
(TCL/TA) _{it}	Pearson's correlation	-.380**	-.167**	-.094*	-.659**	.181**	-.356**	.423**	1
	Sig. (2-tailed)	.000	.000	.016	.000	.000	.000	.000	
	N	660	660	660	660	660	660	660	660
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Return on investment has a positive and significant correlation with Hmbstky negative and significant financial risk and investment policies (Conservative – bold) and working capital financing policy (conservative - bold) is the capital. Operational risks associated with this variable is positive and significant correlation with the policy of financing (Conservative – bold) capital of their shows.

Financial risk has a significant negative correlation with the policy of financing (Conservative – bold) is the capital. In connection with the investment policy (conservative – bold) in working capital as well, this variable was positively correlated with the policy of financing (Conservative – bold) capital of their shows.

6. The results of hypothesis testing

6.1. 1-2 sub-hypothesis test results of research.

The purpose of this study was to examine the relationship between politics hypothesis testing sub 1-1 working capital and return on assets of the company.

In order to determine whether a given model is estimated using panel data would be effective or not, the Chow test or in order to specify which method bound F (fixed and random effects of) estimate to be more suitable (diagnosis fixed or random variation of the cross), the Hausman test is used. The results of these tests are presented in Table 3.

Table 3. Chow and Hausman test results for the model (1.3)

Count	Statistics	Degrees of freedom	P-Value	Count	Count	Test
F	5132/29	(548/109)	0000/0	660	F	Chow
x ²	1651/63	2	0000/0	660	x ²	Hausman

According to the results of the Chow test and p-value (0/0003) test, the hypothesis was rejected at 95%, indicating that the method may be used panel data. Also according to the results of the Hausman test and P-Value (0/0000), which is less than 0/05, hypothesis testing and hypothesis rejected at 95% will be accepted. The model is estimated using fixed effects.

To check the validity of the model and the assumptions of the classical regression is necessary to assess the absence of multicollinearity between the independent variables in the model, tests remained normal with the consistency variance lack of independence remnant and the stipulates error (linearity model) is also recommended. To test the normality of error terms can be used for various tests. One of these tests is to test Jarkev- of these tests have been used in this study. Jarkev- test results indicate that the residues of the estimation model for investigation in 95% of the normal distribution, so that the probability of the test (0/7822) is larger than 0/05. One of the assumptions of the classical regression residual variance is consistency. If the variances are estimated non linear unbiased minimum variance will not. In this study, we test for homogeneity of variance was used to cut Pagan. Due to the

importance of this test, which is smaller than 0/05 (0/0000), the null hypothesis is rejected and we can say that there is consistency variance variance anisotropy model is problematic. In this study, to address the problem of estimating the generalized least squares estimation method (GLS) is used. According to the preliminary results of the model estimation Watson statistic is equal to 1/51 camera, and since that is between 5.1 and 5.2 can be concluded that the residuals are independent of each other. In addition, to test whether the model has a linear relationship with the desired model study of the relationship between linear and non-linear explanation is correct or not coded test is applied. Due to the level of the encoded test (0/2145) is larger than 0/05, so the null hypothesis of this test is to verify that the linear model and the model error is not specified. Table 4 summarizes the results of these tests are presented.

Table 4. Test results of the statistical assumptions of the model (1.4)

Jarque-Bera		Breusch-Pagan		Durbin-Watson	Ramsey	
x ²	p-value	F	p-value	D	F	p-value
9179/1	7822/0	2093/25	0000/0	51/1	0873/20	2145/0

According to the results of Chow and Hausman tests and test results of the statistical assumptions of the classical regression model (1.1) and applied research using panel data, fixed effects are estimated. The results are presented in Table 5. Shdh estimate the model using 7 Eviews software.

Table 5. 1-1 subhypotheses research results using fixed effects

Dependent variable: Return on Assets Views: 630 years - the company				
Variable	Factor	Statistics t	p-value	Relation
Fixed component	0/9255	32/5692	0/000	Positive
Investment policies (Conservative – bold) in working capital	0/1253	2/7516	0/0061	Positive
Financing policy (conservative – bold) in working capital	0/1151	2/8473	0/0046	Positive
0/9047	Determining factor model			
46/8823 (0000/0)	Statistics F (p-value)			

In considering the significance of the model is that the probability of F statistics is smaller than 0/05 (0/0000), with a significant 95% of the model is confirmed. Determining factor model also suggests that the return on assets by 47/90% of the variables in the model is identified.

A significant factor in the evaluation of the results presented in Table 5, since the probability of t-statistic for the coefficient of the variable investment policy (conservative – bold) and working capital financing policy, (Conservative – bold) in working capital under is 05/0 (0/0061 and 0/0046), As a result there is a significant relationship between politics and efficiency of working capital assets will be approved at the 95 percent confidence level. The secondary hypothesis was accepted by 95% of R 1-1 can be said that the policy of working capital and asset returns are correlated. The positive coefficient of this variable (0/1253 and 0/1151) suggests a direct relationship between the policy of working capital and return on assets is So that 1 unit increase in investment policies (Conservative – bold) and working capital financing policy (conservative – bold) in working capital, return on assets also reat 0/1253 and 0/1151 unit increases. Thus, according to the analysis made in connection with the sub-hypothesis 1.1 research. It can be concluded that the policy of working capital and asset returns and there is a direct relationship.

6.2. 2-1 sub-hypothesis test results of research. Thus, according to the analysis made in connection with the sub-hypothesis 2.1 research. It can be concluded that the policy of working capital and return on equity and there is a direct relationship.

References

1. Amihud, Y., Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers, *Bell Journal of Economics*, 12, pp. 605-617.

6.3. 3-1 sub-hypothesis test results of research. Thus, according to the analysis made in connection with the sub-hypothesis 3.1 research. It can be concluded that the policy of working capital and Tobin’s q and there is a direct relationship.

6.4. 4-1 sub-hypothesis test results of research. Thus, according to the analysis made in connection with sub-4.1 research hypothesis can be concluded that the policy of working capital and capital returns and there is a direct relationship.

6.5. 1-2 sub-hypothesis test results of research. Thus, according to the analysis made in connection with the hypothesis of this study can be concluded that the incidental 1-2 working capital and operational risk policies and significant inverse relationship exists.

6.6. 2-2 sub-hypothesis test results of research. Thus, according to the analysis made in connection with sub-2.2 research hypothesis can be concluded that the policy of working capital and financial risk and there is a reverse relationship.

Conclusion

Summary descriptive statistics for variables in this study, it was shown. Continue to provide inferential statistics were used and research was presented in the form of statistical models and assumptions. The chow test was used to test the models to determine whether the method should be used panel or mixed and then Hausman test for random effects or fixed effects panel method was used. Finally fit the classical regression model assumptions and the results of the research model as developed. The purpose of this study was to evaluate the impact of working capital policy on risk management companies. This study is based on analysis of literature and analytical Ali panel data (panel data) is. In this study, the financial data of 110 companies listed in Tehran Stock Exchange during the period 2007 to 2012 were reviewed (660 firm – years). To analyze the results of the study program 20 SPSS, 7 Eviews and 16 Minitab is used. The results confirm the hypotheses associated with the sub 1-1, 2-1, 3-1 and 4-1, respectively, show that Among the four criteria of profitability and working capital policy, return on assets, return on equity, return on investment and Tobin’s q and there is a direct relationship. The results confirm the hypotheses associated with sub 1.2 and 2.2, respectively, indicating that the between policy and operational risk and financial risk, working capital and an inverse relationship exists.

2. Bao, B.H., & Bao, D.H. (2004). Change in inventory and firm valuation, *Review of Quantitative Finance and Accounting*, 22, pp. 53-71.
3. Bhattacharya, H. (2001). *Working Capital Management: Strategies and Techniques*. New Delhi: Prentice Hall.
4. Cuñat, V. (2007). Trade credit: Suppliers as debt collectors and insurance providers, *Review of Financial Studies*, 20, pp. 491-527.
5. Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30, pp. 573-587.
6. Dewing, A.S. (1941). *The Financial Policy of Corporations*. 4th ed. New York: The Ronald Press Company.
7. Dunn, P., Cheatham, L. (1993). Fundamentals of small business financial management for start-up, survival, growth, and changing economic circumstances, *Managerial Finance*, 19, pp. 1-13.
8. Eljelly, A.M.A. (2004). Liquidity-Profitability Tradeoff: An Empirical Investigation in an Emerging Market, *International Journal of Commerce and Management*, 14 (2), pp. 48-61.
9. Emery, G. (1984). A pure financial explanation for trade credit, *Journal of Financial and Quantitative Analysis*, 19, pp. 271-285.
10. Fazzari, S.M., Hubbard, R.G. & Petersen, B.C. (1988). Financing constraints and corporate investment, *Brookings Papers on Economic Activity*, 1, pp. 141-195.
11. Filbeck, G. and Krueger, T. (2005). Industry Related Differences in Working Capital Management, *Mid-American Journal of Business*, 20 (2), pp. 11-18.
12. Hale, G., Long, C. (2011a). What are the sources of financing of the Chinese firms? In: Cheung, Y.-W., Kakkas, V., Ma, G. (Eds.), *The Evolving Role of Asia in Global Finance*. Emerald Group Publishing Limited.
13. Hale, G., Long, C., 2011b. If you try, you'll get by: Chinese private firms' efficiency gains from overcoming financial constraints. Working paper, Federal Reserve Bank of San Francisco.
14. Howorth, C. and Westhead, P. (2003). The Focus of Working Capital Management in UK Small Firms, *Management Accounting Research*, 14 (2), pp. 94-111.
15. Jarvis, R., Kitching, J., Curran, J. and Lightfoot, G. (1996). The Financial Management of Small Firms: An Alternative Perspective, *ACCA Research Report*, No. 49.
16. Kieschnick, R., LaPlante, M. & Moussawi, R. (2011). *Working capital management and shareholder wealth*. USA: Social Science Electronic Publishing.
17. Kim, Y.H. & Chung, K.H. (1990). An integrated evaluation of investment in inventory and credit: A cash flow approach, *Journal of Business Finance & Accounting*, 17, pp. 381-390.
18. Kim, Y., Srinivasan, V. (1988). *Advances in Working Capital Management*. Greenwich, Connecticut: JAI Press.
19. KPMG China. (2011). *Cash Matters*. Cash and Working Capital Management in China.
20. Lazaridis, I., Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens stock exchange, *Journal of Financial Management and Analysis*, 19, pp. 26-35.
21. Lewellen, W., McConnell, J. & Scott, J. (1980). Capital market influences on trade credit policies, *Journal of Financial Research*, 3, pp. 105-113.
22. Long, M., Malitz, I., Ravid, S.A. (1993). Trade credit, quality guarantees, and product marketability, *Financial Management*, 22, pp. 117-127.
23. Penas, M.F., Unal, H. (2004). Gains in bank mergers: evidence from the bond markets, *Journal of Financial Economics*, 74, pp. 149-179.
24. Petersen, M., Rajan, R. (1997). Trade credit: theories and evidence, *Review of Financial Studies*, 10, pp. 661-691.
25. Rafuse, M.E. (1996). Working Capital Management: An Urgent Need to Refocus, *Journal of Management Decision*, 34 (2), pp. 59-63.
26. Raheman, A. & Nasr, M. (2007). Working Capital Management and Profitability – Case of Pakistani firms, *International Review of Business Research Papers*, 3 (1), pp. 279-300.
27. Sartoris, W. & Hill, N. (1983). Cash and working capital management, *Journal of Finance*, 38, pp. 349-360.
28. Sathamoorthi, C.R. (2002). The Management of Working Capital in Selected Co-operatives in Botswana, *Finance India Dehli*, 16 (3), pp. 1015-1034.
29. Schiff, M. & Lieber, Z. (1974). A model for the integration of credit and inventory management, *Journal of Finance*, 29, pp. 133-140.
30. Shin, H.H. and Soenen, L. (1998). Efficiency of Working Capital and Corporate Profitability, *Financial Practice and Education*, 8, pp. 37-45.
31. Smith, K. (1980). Profitability versus liquidity tradeoffs in working capital management.
32. Teruel, P.J.G. and Solan, P.M. (2005). Effects of Working Capital Management on SME Profitability. Working Papers Series. Dept. Organización de Empresas y Finanzas, Facultad de Economía y Empresa, Universidad de Murcia, Campus Espinardo, Spain.
33. Van-Horne, J.C. and Wachowicz, J.M. (2004). *Fundamentals of Financial Management*. 12th edition. New York: Prentice Hall Publishers.
34. Wang, Y.J. (2002). Liquidity management, operating performance, and corporate value: Evidence from Japan and Taiwan, *Journal of Multinational Financial Management*, 12, pp. 159-169.