THE EFFECT OF WORKING CAPITAL PRACTICES ON RISK MANAGEMENT: EVIDENCE FROM JORDAN

Faris Nasif ALShubiri, Amman Arab University for Graduate Studies

ABSTRACT

Working capital does not receive a great deal of attention in financial decision making. Perhaps this is because it involves investment and financing for the short term. Nevertheless, it is an important component of firm financial management. This study investigates the relationship between aggressive/conservative working capital practices and profitability as well as risk. The sample includes 59 industrial firms and 14 banks listed on the Amman Stock Exchange for the period of 2004-2008. The results indicate a negative relationship between profitability measures and working capital aggressiveness, investment and financing policy. Firms have negative returns if they follow an aggressive working capital policy. In general, there is no statistically significant relationship between the level of current assets and current liabilities on operating and financial risk in industrial firms. There is some statistically significant evidence to indicate a relationship between standard deviation of return on investments and working capital practices in banks.

JEL: E44, G11, G30, G31, G32

KEYWORDS: Banks, Degree of aggressiveness/conservativeness, Working Capital Practices, Profitability, Market Rate of Return, Tobin's q, Operating risk and Financial risk.

INTRODUCTION

Corporate finance basically deals with three decisions: capital structure decisions, capital budgeting decisions, and working capital management decisions. Among these, working capital management is a very important component of corporate finance since it affects the profitability and liquidity of a company. It deals with current assets and current liabilities. Working capital management is recognized as an important concern of the financial manager for many reasons. For one thing, a typical manufacturing firm's current assets account for over half of its total assets. For a distribution company, they account for even more. The maintenance of excessive levels of current assets can easily result in a substandard return on a firm's investment. However, firms with inadequate levels of current assets may incur shortages and have difficulties in smoothly maintaining day-to-day operations. Efficient working capital management involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet short term obligations on one hand and avoids excessive investment in these assets on the other hand (Eljelly, 2004).

The corporate finance literature has traditionally focused on the study of long-term financial decisions, particularly investments, capital structure, dividends and company valuation decisions. However, short-term assets and liabilities are important components of total assets and need to be carefully analyzed. Management of these short-term assets and liabilities warrants careful investigation since working capital management plays an important role for the firm's profitability, risk and value. The optimal level of working capital is determined to a large extent by the methods adopted for the management of current assets and liabilities. It requires continuous monitoring to maintain proper level in various components of working capital.

Working capital is current assets (cash, receivables, inventory, etc.) minus current liabilities (debt obligations due within one year). Working capital may also be viewed as the amount of a business's

current assets provided (financed) by long-term debt and/or equity .Net operating working capital relates to free cash flow and in turn market value of equity. A positive working capital requirement, or conservative working capital policy, indicates a need for additional capital which firms can finance internally, reducing free cash flow, or externally, generally via commercial paper or lines of credit. Thus, conservative working capital policy implies costs of either lost opportunities or explicit financing costs. A negative working capital gap means that the firm's net operating working capital provides financing for long-term assets, implying an aggressive strategy.

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. Thus, firms with high liquidity of working capital may have low risk then low profitability. Conversely, a firm that has low liquidity of working capital, facing high risk results to high profitability. The issue here is in managing working capital, firm must take into consideration all the items in both accounts and try to balance the risk and return

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).

This paper investigates the potential relationship of aggressive/conservative policies with the accounting and market measures of profitability as well as the risk factor of 59 industrial companies and for 14 banks listed at Amman Stock Exchange for the period of 2004-2008 .The main objective of working capital management is to maintain an optimal balance between each of the working capital components. Business success heavily depends on the ability of financial executives to effectively manage receivables, inventory, and payables (Filbeck and Krueger, 2005). The purpose of this study is hopefully to contribute towards a crucial element in financial management which working capital management. It is almost untouched in Jordanian or very little research has been done in this area. Working capital management practices and its effects on risk management is focused in this study. Specific objectives are to examine the effect of working capital practices on risk management over a 5 years period, to establish a relationship between the two policies (investment and financing policy) of the industrial firms and banks. Firms can reduce their financing costs and/or increase the funds available for expansion projects by minimizing the amount of investment tied up in current assets. Most of the financial managers' time and effort are allocated in bringing non-optimal levels of current assets and liabilities back toward optimal levels (Lamberson, 1995). An optimal level of working capital would be the one in which a balance is achieved between risk and efficiency.

The remainder of this paper is organized as follows. Section 2 briefly discusses the relevant literature .Data selection, research methodology, and empirical models are described in Section 3 .Section 4 provides analysis and interpretations of the empirical findings and section 5 concludes the paper.

LITERATURE REVIEW

There are basically two theories of working capital, which includes the conservative approach, the aggressive approach and the moderate approach (Nwankwo, 2005). These theories are examined below with their implications.

The Conservative Approach**:** In this approach permanent capital is being used to finance all permanent assets requirements and also to meet some or all of the seasonal demands. In view of conservative approach to working capital management, a company will keep a large quantity of current assets in relations to the total assets of the company. The implication of this approach is that it yields a lower expected profitability resulting in a lower risk. This type of policy will also increase the company's net working capital situation but the firm will be short of funds to be used in other productive sectors. This option means that the company's finance is going to be relatively high cost (that is sacrificing low cost finance) but low risk; this will make the company's profit to be low but does not run the risk of being faced with liquidity problem as a result of withdrawal of its source of finance. The conservative method is where a company predominantly finance all its permanent current assets and most of its fluctuation current assets using long-term source of finance and it is only a small proportion of its fluctuating current assets that is financed using short-term source of finance

The Aggressive Approach**:** In this approach, the company finances all of its fixed assets with long term capital but part of its permanent current assets with short-term credit (Van Horne, 1980). Under this policy, the company holds relatively small portion of its total assets in form of current assets. The implication of the aggressive approach is that it yields higher profitability resulting in a higher risk and lower working capital. A company that uses more short-term source of finance and less long-term source of finance will incur less cost but with a corresponding high risk. This has the effect of increasing its profitability but with a potential risk of facing liquidity problem should such short-term source of finance be withdrawn or renewed on unfavorable terms

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).

While the performance levels of small businesses have traditionally been attributed to general managerial factors such as manufacturing, marketing and operations, working capital management may have a consequent impact on small business survival and growth (Kargar and Blumenthal, 1994). The management of working capital is important to the financial health of businesses of all sizes.

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. The important increase of the operational risk is due to organizational,

infrastructure, business environment or improvement changes. These changes were materialized in: the development of the technology.

Molina and Preve (2008) show that, compared to firms in competitive industries, firms in concentrated industries tighten credit policy to a greater extent when facing financial distress. Distressed firms have limited financial slack and cash generating ability, and the strain of financial distress may cause firms to reduce investment in operating working capital by collecting on receivables, tightening credit terms, liquidating existing inventory, and by stretching credit terms granted by suppliers. Molina and Preve (2008), show that financially distressed firms have significantly reduced levels of trade credit relative to their non-distressed counterparts. We expect the working capital requirement to correlate inversely with financial distress.

Afza and Nazir (2007) the study found significant differences among their working capital investment and financing policies across different industries. Moreover, rank order correlation confirmed that these significant differences were remarkably stable over the period of six years of study. Finally, ordinary least regression analysis found a negative relationship between the profitability measures of firms and degree of aggressiveness of working capital investment and financing policies. In the Pakistani context, Rehman (2006) He concluded that there is a strong negative relationship between above working capital ratios and profitability of firms. Furthermore, managers can create a positive value for the shareholders by reducing the cash conversion cycle up to an optimal level.

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), suggest 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) he 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.

Weinraub and Visscher (1998).The authors have concluded that the industries had distinctive and significantly different working capital management policies. Moreover, the relative nature of the working capital management policies exhibited remarkable stability over the ten-year study period. The study also showed a high and significant negative correlation between industry asset and liability policies and found that when relatively aggressive working capital asset policies are followed they are balanced by relatively conservative working capital financial policies Shin and Soenen (1998) concluded that reducing the level of current assets to a reasonable extent increases firms' profitability Pandey and Parera (1997) they found that most companies in Sri Lanka have informal working capital policy and company size has an influence on the overall working capital policy (formal or informal) and approach (conservative, moderate or aggressive). Moreover, company profitability has an influence on the methods of working capital planning and control. Jose , (1996) examined the relationship between aggressive working capital management and profitability of US firms using Cash Conversion Cycle (CCC) as a measure of working capital management where a shorter CCC represents the aggressiveness of working capital management. The results indicated a significant negative relationship between the cash conversion cycle and

profitability indicating that more aggressive working capital management is associated with higher profitability.

However, Lamberson (1995) who studied how small firms respond to changes in economic activities by changing their working capital positions and level of current assets and liabilities. Current ratio, current assets to total assets ratio and inventory to total assets ratio were used as measure of working capital while index of annual average coincident economic indicator was used as a measure of economic activity. Contrary to the expectations, the study found that there is very small relationship between charges in economic conditions and changes in working capital. Soenen (1993) investigated the relationship between the net trade cycle as a measure of working capital and return on investment in U.S firms. The results of chi-square test indicated a negative relationship between the length of net trade cycle and return on assets. Furthermore, this inverse relationship between net trade cycle and return on assets was found different across industries depending on the type of industry. A significance relationship for about half of industries studied indicated that results might vary from industry to industry .Carpenter & Johnson (1983) provided empirical evidence that there is no linear relationship between the level of current assets and revenue systematic risk of US firms; however, some indications of a possible non-linear relationship were found which were not highly statistically significant.

DATA AND METHODOLOGY

This study will show the impact of working capital practices on industrial firms' and banks on risk management. Since the study is based on financial data, the main source of data was financial statements, such as income statements, balance sheets, of listed 59 firms and 14 banks listed in Amman Stock Exchange for the period from 2004 to 2008. The reason for restricting the number of sample was that the latest data for the study was available for these years.

The study was used aggressive investment policy and aggressive investment policy as measuring variables of working capital management. Aggressive Investment Policy (AIP) results in minimal level of investment in current assets versus fixed assets. In contrast, a conservative investment policy places a greater proportion of capital in liquid assets with the opportunity cost of lesser profitability. In order to measure the degree of aggressiveness, following ratio will be used

AIP = Total Current Assets (TCA)/ Total Assets (TA)

Where: a lower ratio means a relatively aggressive policy

Aggressive Financing Policy (AFP) utilizes higher levels of current liabilities and less long-term debt. In contrast, a conservative financing policy uses more long-term debt and capital. The degree of aggressiveness of a financing policy adopted by a firm will be measured by:

AFP = Total Current Liabilities (TCL)/ Total Assets (TA)

Where: a higher ratio means a relatively aggressive policy.

The impact of working capital policies on the profitability will be analyzed through frequently used profitability measures i.e. Return on Assets (ROA) and Return on Equity (ROE) as well as market measure and Tobin's q by running cross-sectional regressions. The regression models and hypotheses to be estimated are:

$$ROA_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon_{it} \quad (1)$$

H0-1: There is no statistical significant effect between working capital policies and return on assets of Jordanian industrial companies and commercial banks.

$$ROE_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon_{it} \quad (2)$$

H0-2: There is no statistical significant effect between working capital policies and return on equity of Jordanian industrial companies and commercial banks.

$$Tobin's\ q_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon_{it} \quad (3)$$

H0-3: There is no statistical significant effect between working capital policies and Tobin's (Q) of Jordanian industrial companies and commercial banks

$$ROI_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon_{it} \quad (4)$$

H0-4: There is no statistical significant effect between working capital policies and return on investment of Jordanian industrial companies and commercial banks

$$ROC_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon_{it} \quad (5)$$

H0-5: There is no statistical significant effect between working capital policies and return on capital of Jordanian industrial companies and commercial banks.
Where:

ROA_{it} = Return on Assets of Firm / bank i for time period t
ROE_{it} = Return on Equity of Firm / bank i for time period t
ROC_{it} = Return on Assets of Firm / bank i for time period t
ROI_{it} = Return on Assets of Firm / bank i for time period t
$Tobin's\ q_i$ = Value of q of Firm / bank i for time period t
TCA/TA_{it} = Total current assets to total assets ratio of firm / bank i for time period t
TCL/TA_{it} = Total current liabilities to total assets ratio of firm / bank i for time period t
α = Intercept
ε = Error term of the model

The impact of the working capital assets management and financing polices on the relative risk will be measured by applying regression models for the risk of the company and its working capital management policies over the period of 2004-2008. The regression equations and hypothesis are:

H0: There is no statistical significant effect between working capital practices and risk management of Jordanian industrial companies and commercial banks

$$SD_{Sales} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (6)$$
$$SD_{ROA} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (7)$$
$$SD_{ROE} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (8)$$
$$SD_{ROC} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (9)$$

$$SD_{ROI} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (10)$$

$$SD_q = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon \quad (11)$$

Where: SD_i = Standard Deviation representing risk of Firm i

EMPIRICAL RESULTS

First I provide information about the regression analysis of working capital policies (aggressive and conservative policy) and ROA, ROE, Tobin's Q, ROI, ROC as dependent variables of industrial companies listed in Amman Stock Exchange. Metrics are reported over five periods from 2004 to 2008 (see Table 1). This table indicates β - Coefficient, (R^2), t-test values, F-values and significance of each policy. This table shows the regression estimates of the all previous equations discussions form 1-5.

The results of regression model 1: $ROA_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon$ have been reported in table 1, where the dependent variable return on assets having the same independent variable of working capital investment policy and working capital financing policy. TCA/TA and TCL/TA ratios have been regressed against ROA values and the six regression models indicating the impact of working capital policies on the profitability of industrial firms in Jordan. The model t-test, F-values and the SPSS statistics indicates overall best fit of the model. The t-statistics of both TCA/TA and TCL/TA are statistically significant 3.227***, 2.433**, 1.860* and 1.700* indicate on investment policy and -2.093** and -1.129* on financing policy and F-values are 14.155***,5.553*** on significance at the 1, 5, and 10 percent levels respectively except for the year 2006 and 2007.

The positive coefficient of TCA/TA shows a negative relationship between the degree of investment policy aggressiveness and return on assets. As the TCA/TA increases, degree of aggressiveness decreases, and return on assets goes up. Therefore, there is negative relationship between the relative degree of aggressiveness of working capital investment policies and return on assets. The negative value of β coefficient for TCL/TA also points out the same negative relationship between the aggressiveness of working capital financing policy and return on assets. Higher the TCL/TA ratio, more aggressive the financing policy, that yields negative return on assets.

The results of regression model 2: $ROE_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon$ have been reported in Table 1, where the dependant variable is return on equity having the same independent variable of working capital investment policy and working capital financing policy. As the degree of aggressiveness of working capital policy tends to increase, the returns are likely to decrease. Though, the results are statistically highly impressive which is apparent from the high level of significance of b coefficients and t-values , however, they predict a negative relationship between the degree of aggressiveness of working capital policy and accounting measures of returns. The second part of table 1 in each cell is the t- statistic of both TCA/TA and TCL/TA are statistically significant 3.262***, 2.199**, 2.078**, 2.590** and 2.109** indicate on investment policy and -2.656** on financing policy and F-values are 16.155***, 5.463*** and 4.371** on significance at the 1, 5, and 10 percent levels respectively except for the year 2008.

To further validate the above-mentioned results, the impact of working capital investment and working capital financing policy has also been examined on the market returns. Tobin's q has been used as a measure of market returns and, for each year from 2004 to 2008. A q value of greater than 1 indicated the greater perceived value given by investor to the firm.

The results of equation 3: Tobin's $q_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon$ have been presented in cell three of Table 1, which the highlighting that the market returns on Tobin's q are decreasing as the firms are following the aggressive investment policy by keeping low level of current assets in the firm. This similarity in market and accounting returns confirms the notion that investors do not believe in the aggressive approach of working capital management, hence, they don't give any additional value to the firms in Amman Stock Exchange .However, there are some dissimilarities are found in the relationship of financing policy and Tobin's q. In the year 2005, 2006 and 2007 the relationship between working capital financing policy and Tobin's q is positive, indicating that the higher the degree of aggressiveness of working capital financing policy, the greater the investor's value given to the firm. The cell three of table 1 in each cell is the t- statistic 2.520* and 1.761 indicate on investment policy and F-values are 3.040**, on significance at the 5, and 10 percent levels respectively except for the years 2005.2006 and 2007.

The results of regression model 4 : $ROI_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon$ have been reported in Table 1, where the dependant variable is return on investment having the same independent variable of working capital investment policy and working capital financing policy. As the degree of aggressiveness of working capital policy tends to increase, the returns are likely to decrease. Though, the results are statistically highly impressive which is apparent from the high level of significance of b coefficients and t-values , however, they predict a negative relationship between the degree of aggressiveness of working capital policy and accounting measures of returns. The cell fourth of table 1 in fourth cell is the t- statistic 2.426**, 1.705*and 2.169*, indicate on investment policy and -3.602**,-3.334**,-1.204* and -2.150* on financing policy and F-values are -3.484***, -2.7658*,-2.419**and -2.541* on significance at the 1, 5, and 10 percent levels respectively.

Finally , The results of regression model 5: $ROC_{it} = \alpha + \beta_1 (TCA/TA_{it}) + \beta_2 (TCL/TA_{it}) + \varepsilon$ have been reported in Table 1, where the dependant variable is return on capital having the same independent variable of working capital investment policy and working capital financing policy. As the degree of aggressiveness of working capital policy tends to increase, the returns are likely to decrease. The cell fifth of table 1 in each cell is the t- statistic -3.421**, 2.672**, -1.837 and -2.258*, indicate on investment policy and -3.189**,--2.142* and -2.241* on financing policy and F-values are -2.224***, -3.693***and -4.051** on significance at the 1, 5, and 10 percent levels respectively except the year 2004 and 2006.

Second, Table 2 provide information about the regression analysis of working capital policies (aggressive and conservative policy) and ROA, ROE, Tobin's Q, ROI, ROC as dependent variables of commercial banks listed in Amman Stock Exchange . Metrics are reported over five periods from 2004 to 2008 .This table indicates β - Coefficient, (R^2), t-test values and F-values and significance of each policy. This table shows the regression estimates of the all previous equations discussions form 1-5.

The results of regression model 1. TCA/TA and TCL/TA ratios have been regressed against ROA values and the six regression models indicating the impact of working capital policies on the profitability of commercial banks in Jordan. The model t-test and F-values and the SPSS statistics indicates overall best fit of the model. The t-statistics of both TCA/TA and TCL/TA are statistically significant -3.007**, indicate on investment policy and -9.301***,-3.437*** and -5.089*** on financing policy and F-values are 11.888***,-40.921***and 5.863** on significance at the 1, 5, percent levels respectively except the year 2004.

Table 1: Regression Analysis of Working Capital Policies and (ROA, ROE, Tobin's Q, ROI, ROC of Industrial Companies Listed in ASE)

	Year	Investment Policy		Financing Policy		Investment Policy+ Financing Policy	
		B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)	t- value(sig)
ROA	2004	.307(.094)	2.433**	-.267(.171)	-2.093**	..597 -.571 (.336)	14.15***
	2005	.239(.234)	1.860*	-.052(.005)	-.392	.262 -.114 (.067)	2.019
	2006	.198(.004)	1.525	.116(.320)	.885	.187 .094 (.048)	1.406
	2007	.195(.011)	1.498	.039(.007)	.295	.212 -.045 (.040)	1.154
	2008	.220 (.048)	1.700*	.060 (.004)	.454	230 -.027 (.049)	1.439
	04-08	.185 (.043)	3.227***	-.008 (.124)	-1.129*	.196 -.049 (.037)	5.553***
ROE	2004	.269(.072)	2.109**	-.332(.110)	-2.656**	.591 -.632 (.369)	16.357***
	2005	.324(.324)	2.590**	-.090(.001)	-.681	.367 -.178 (.135)	4.371**
	2006	.265(.112)	2.078**	.062(.012)	.472	.262 .030 (.071)	2,151
	2007	.280(.320)	2.199**	.077(.001)	.580	.296 -.040 (.080)	2.420
	2008	.187 (.085)	1.434	.099 (.010)	.750	.174 .033 (.036)	1.038
	04-08	.187(.035)	3.262***	.009 (.000)	.146	.194 -.033 (.036)	5.463***
T-Q	2004	.069(.112)	2. 520*	-.024(.001)	-.184	.109 -.080 (.009)	0.268.
	2005	.095(.001)	.723	.166(.003)	1.271	.059 .152 (.031)	.891
	2006	-.074(.009)	-.564	.164(.023)	1.152	-.096 .175 (.036)	3.040**
	2007	-.114(.001)	-.866	-.052(.001)	-.393	-.111 -.008 (.013	.370
	2008	.227 (.052)	1.761*	.006(.000)	.046	.262 -.093 (.059	1.756
	04-08	.006 (.000)	.110	.-.017 (.000)	-.297	.011 -.020 (.000)	.060
ROI	2004	.056 (.313)	2.426*	-.080 (.146)	-3.602**	.131 .146 (.019)	-2.541*
	2005	.044 (.002)	.329	.157 (.125)	-1.204*	.086 -.176 (.232)	-2.919**
	2006	.044 (.002)	.330	.004(.000)	.034	-.044 -.001(.002)	.053
	2007	.083(.007)	.633	-.033 (.001)	-.248	.114 -.078 (.012)	.343
	2008	.220 (.049)	1.705*	.044(.222)	-3.334**	.238 -.046 (.550)	-3.484***
	04-08	.068 (.115)	2.169*	-.009 (.000)	-2.150*	.073 -.024 (.115)	-2.765**
ROC	2004	.017 (.000)	-.129	-.056 (.003)	-.427	.016 -.064 (.003)	.095
	2005	.034 (.211)	-2.258*	-.016 (.112)	-2.124*	-.040 .026 (.232)	-4.051**
	2006	-.168 (.028)	-1.283	.108 (.012)	1.823	-.184 .131 (.045)	-1.318
	2007	-.185 (.134)	-3.421**	-.095 (.009)	-.721	-.264 .199 (.068)	2.033
	2008	.089 (.238)	2.672**	-.025 (.231)	-3.189**	.092 -.010 (.118)	-2.224***
	04-08	-.107 (.011)	-1.837*	-.014 (.114)	-2.241*	-.109 .009 (.311)	-3.693

****, ** and * indicate Significant at the 1, 5, 10 percent level respectively*

The result of regression model 2 .The second cell of table 2 is the t- statistic 1.791*, indicate on financing policy on significance at the 10 percent level the year 2004, and no significant in other years of two policies. Tobin's q has been used as a measure of market returns and, for each year from 2004 to 2008. A q value of greater than 1 indicated the greater perceived value given by investor to the firm. The results of model 3 have been presented in cell three of Table 2, which the highlighting that the market returns on Tobin's q are decreasing as the firms are following the aggressive investment policy by keeping low level of current assets in the firm. This similarity in market and accounting returns confirms the notion that investors do not believe in the aggressive approach of working capital management, hence, they don't give any additional value to the firms in Amman Stock Exchange However, the cell three of table 1 in each cell is the t- statistic significant -3.445***, indicate on investment policy and -5.022*** on financing policy and F-values are 16.561***and 5.488** on significance at the 5, 10 percent levels respectively except the year 2005, 2007 and 2008.

The results of regression model 4 have been reported in Table 2, as the degree of aggressiveness of working capital policy tends to increase, the returns are likely to decrease. Though, the results are statistically highly impressive which is apparent from the high level of significance of β coefficients and t-values , however, they predict a negative relationship between the degree of aggressiveness of working capital policy and accounting measures of returns. The cell fourth of table 2 is the t- statistic significant -7.359***, -11.423*** and -5.302*** indicate on investment policy and -6.672***, 12.314***and -2.215 on financing policy and F-values are 27.186***, 18.036***, 82.300*** and 13.987*** on significance at

the 1, 5 percent levels respectively except the year 2005. Finally, the results of regression model 5. The cell fifth of table 2 is the t- statistic only at 1.804* at 10 percent level for year 2004

Table 2: Regression Analysis of Working Capital Policies (ROA, ROE, ROI, ROC of Commercial Banks Listed in ASE)

	Year	Investment Policy		Financing Policy		Investment Policy+ Financing Policy	
		B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)	t- value(sig)
ROA	2004	.403(.162)	1.525	.215(.046)	.761	.379 .059 (.165)	1.809
	2005	-.117(.014)	-.408	-.827(.683)	-5.089***	.019 -.830 (684)	11.8882***
	2006	.063(.004)	.219	-.240(.058)	-.857	.361 .045 (.125)	.786
	2007	-.090(.008)	-.313	-.937(.878)	-9.301***	-.058 -.935 (.882)	40.921***
	2008	-.656(.430)	-3.007**	.704(.496)	-3.437***	-.989 .284 (.516)	5.863**
	04-08	-.016(.000)	-.133	-.061(.004)	-.507	.000 -.061 (.004)	.127
ROE	2004	.397(158)	1.499	.459(.211)	1.791*	.251 .356 (.263)	1.965
	2005	.026(.001)	.089	-.089(.008)	-.310	.136 -.096 (010)	.053
	2006	.110(.012)	.385	.263(.069)	-.946	.007 -.238 (.058)	.337
	2007	-.131(.017)	-.456	-.249(.062)	-.891	-.122 -.145 (.077)	.458
	2008	.265(.070)	.953	.321(.103)	1.175	-.688 .986 (.134)	.853
	04-08	.114(.013)	.947	-.037(.001)	-.309	.133 -.072 (.018)	.607
T-Q	2004	-.092(.008)	-.319	-.823(.678)	-5.022***	.296 -.945 (.751)	16.561***
	2005	.390(.152)	1.468	.413(.170)	1.569	.332 .358 (.277)	2.110
	2006	-.705(.497)	-3.445***	.120(.014)	.418	-.716 -.048 (.499)	5.488**
	2007	.417(.174)	1.590	.285(.081)	1.030	.408 .271 (.247)	1.806
	2008	.151(.023)	.528	.047(.002)	.164	1.598 -1.498 (.170)	1.128
	04-08	.002(.000)	.020	.006(.000)	.050	.001 .006 (.000)	.001
ROI	2004	-.172(.029)	-.604	-.539(.290)	-2.215**	.060 -.563 (.293)	2.281
	2005	.022(.000)	.074	-.551(.303)	-2.286	.115 -.570 (.316)	2.544
	2006	-.905(.819)	-7.359***	.101(.010)	.351	-.932 -.118 (.832)	27.186***
	2007	-.040(.002)	-.137	-.875(.766)	-6.672***	-.010 -.875 (.766)	18.038***
	2008	-.957(.916)	-11.423***	-.963(.927)	-12.314***	-.403 -.573 (.937)	82.300***
	04-08	-.541(.292)	-5.302***	-.095(.009)	-.790	-.553 .047 (.295)	13.987***
ROC	2004	.144(.021)	.503	.462(.213)	1.804*	-.055 .485 (.216)	1.514
	2005	.391(.153)	1.471	.315(.099)	1.150	.115 -.570 (.316)	2.544
	2006	.365(.133)	1.356	-.014(.000)	-.049	.382 .076 (.138)	.883
	2007	.202(.041)	.714	-.072(.005)	-.250	.205 -.079 (047)	.271
	2008	.189(.036)	.666	.168(.028)	.589	.407 -.226 (.039)	.223
	04-08	.087(.007)	.716	.126(.016)	1.050	.058 .111 (.019)	.651

****, ** and * indicate Significant at the 1, 5, 10 percent level respectively*

Third , table 3 provide information about the regression analysis of working capital policies and risk (SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_{q}, SD_{ROI}, SD_{ROC},) of industrial companies listed in Amman Stock Exchange . Metrics are reported over five periods from 2004 to 2008 .This table indicates β - Coefficient, (R^2), t-test values and F-values and significance of each policy. This table shows the regression estimates of the all previous equations discussions form 6-11.

The theory of Van-Horne and Wachowicz (2004), impact of working capital policies on risk of the firms have been investigated by the ordinary least square regressions for equations 6-11. The risk is measured by the standard deviation of sales and different return measures as operating and financial risk respectively. The standard deviation has been estimated over the five years from 2004 to 2008 and then six regressions have been run for working capital investment and working capital financing policy and result are reported in Table 3. The positive β coefficients of SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_{ROI}, SD_{ROC} and $SD_{Tobin's\ q}$ indicate negative relationship between the risk measurements and the working capital investment policy. On the other hand, similar relationship has been found for the working capital financing policy. The increased variation in sales and profitability is attributed to increasing the level of current assets and decreasing the level of current liabilities in the firm.

The results of regression model 6 : $SD_{Sales'} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in Table 3, where the dependant variable is standard deviation of sales having the same independent variable of working capital investment policy and working capital financing policy and the results indicate no significant effect.

The results of regression model 7 : $SD_{ROA} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in cell two at table 3, where the dependant variable is standard deviation of return on assets having the same independent variable of working capital investment policy and working capital financing policy and the results indicate t- statistic significant -2.679 indicate on investment policy and 4.462*** on financing policy and F-values are 4.623**, and 3.129* on significance at the 1, 5,10 percent levels respectively except the year 2005 and 2007.

The results of regression model 8: $SD_{ROE} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in third cell at table 3, and the results indicate t- statistic significant -3.067*** indicate on investment policy and 3.625*** and 2.150** on financing policy and F-values are 16.881**, and 5.186*** on significance at the 1, 5 percent levels respectively except the year 2006 and 2007 and 2008.

The results of regression model 9 : $SD_q = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in fourth cell at table 3, and the results indicate t- statistic significant -2.199** indicate on financing policy and F-values are 2.948*, on significance at the 5,10 percent levels respectively only on total years .The results of regression model (10) : $SD_{ROI} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in fifth cell at table 3, and the results indicate t- statistic significant -3.446*** indicate on investment policy and F-values are 5.906***, on significance at the 1 percent levels only on the year 2008. The results of regression model (11): $SD_{ROC} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ has been reported in sixth cell at table 3, and the results indicate no significant effect. In general, there is no statistically significant relationship between the level of current assets and current liabilities and operating and financial risk of Amman industrial firms.

Fourth, table 4 provide information about the regression analysis of working capital policies and risk (SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_q, SD_{ROI}, SD_{ROC},) of commercial banks listed in Amman Stock Exchange . Metrics are reported over five periods from 2004 to 2008 .This table indicates β - Coefficient, (R^2), t-test values and F-values and significance of each policy. This table shows the regression estimates of the all previous equations discussions form 6-11. The standard deviation has been estimated over the five years from 2004 to 2008 and then six regressions have been run for working capital investment and working capital financing policy and result are reported in Table 4.

The positive β coefficients of SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_{ROI}, SD_{ROC} and $SD_{Tobin's\ q}$ indicate negative relationship between the risk measurements and the working capital investment policy. On the other hand, similar relationship has been found for the working capital financing policy. The increased variation in sales and profitability is attributed to increasing the level of current assets and decreasing the level of current liabilities in the firm. The results of regression model (6): $SD_{Sales'} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ has been reported in Table 4, and the results indicate no significant effect. The results of regression model 7 : $SD_{ROA} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in cell two at table 4, where the dependant variable is standard deviation of return on assets having the same independent variable of working capital investment policy and working capital financing policy and the

results indicate t- statistic significant -3.539*** indicate on investment policy and -4.291*** on financing policy and F-values are 8.439***, on significance at the 1 percent level only on year 2008.

Table 3: Regression Analysis of Working Capital Policies and Risk (SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_{q}, SD_{ROI}, SD_{ROC},) of Industrial Companies Listed in ASE

	Year	Investment Policy		Financing Policy		Investment Policy+ Financing Policy	
		B-Coefficient ((R^2)	t- value(sig)	B-Coefficient (R^2)	t- value(sig)	B-Coefficient (R^2)	t- value(sig)
SD Sales	2004	-.043(.003)	-.325	-.081(.011)	-.614	-.002 -.080 (.007)	.185
	2005	.017(.004)	.125	-.120(.023)	-.910	.048 -.131 (.016)	.628
	2006	-.019(.000)	-.140	.025(.004)	.187	-.022 .027 (.001)	.031
	2007	-.007(.000)	-.051	-.138(.002)	-1.050	.056 -.160 (.022)	.620
	2008	.040 (.002)	.299	-.081(.007)	-.615	.082 -.112 (.012)	.350
	04-08	-.062(.004)	-1.069	-.084(.007)	-1.435	-.047 -.074 (.009)	1.335
SD ROA	2004	-.117(.002)	-.890	.509(.234)	4.462**	-.288 .337 (.098)	3.031
	2005	-.147(.011)	-1.120	-.029(.098)	-.219	-.148 .006 (.022)	3.129(*
	2006	-.120(.012)	-.913	.006(.006)	.048	-.123 .021 (.015)	.422
	2007	-.047(.036)	-.354	.045(.012)	.341	-.077 .075 (.007)	.197
	2008	-.089 (.008)	-.671	-.119 (.014)	-.903	-.051 -.100 (.016)	.465
	04-08	-.155(.024)	-2.679***	-.113(.013)	-1.954	-.137 -.084 (.031)	.4.623**
SD ROE	2004	-.154(.011)	-1.176	.433(.336)	3.625***	-.505 .690 (.376)	16.881***
	2005	-.090(.003)	-.679	.274(.243)	2.150**	-.165 .313 (.101)	.618
	2006	-.165(.005)	-1.266	.160(.111)	1.222	-.188 .183 (.060)	1.795
	2007	-.150(.003)	-1.146	.058(.223)	.439	-.205 .139 (.039)	1.132
	2008	-.160 (.026)	-1.227	-.152 (.023)	-1.159	.174 .033 (.036)	1.083
	04-08	-.176(.031)	-3.067***	.-.093(.009)	-1.595	-.164 -.058 (.034)	5.186***
SD q	2004	-.058(.012)	-.436	-.007(.001)	-.054	-.073 .030 (.004)	.112
	2005	-.044(.003)	-.330	.055(.005)	.416	-.060 .069 (.006)	.182
	2006	.119(.078)	.905	-.215(.056)	-1.166	.148 -.234 (.068)	2.039
	2007	.072(.009)	.547	.034(.002)	.258	.070 .007 (.005)	.148
	2008	.214(.046)	1.653	.003 (.000)	.024	.248 -.091 (.053)	1.560
	04-08	-.085(.007)	-1.469	-.127(.016)	-.2.199**	-.061 -.114 (.020)	2.948*
SD ROI	2004	.005(.000)	.041	-.080 (.006)	-.602	.066 -.120 (.011)	.301
	2005	-.071(.005)	.539	.-140(.020)	-1.067	-.040 -.130 (.021)	.603
	2006	-.203 (.041)	-1.564	.096(.009)	.727	-.218 .123 (.056)	1.660
	2007	.092(.008)	.698	-.091(.008)	-.691	.152 -.151 (.028)	.800
	2008	-.415 (.172)	-3.446***	-.118 (.014)	-.895	-.433 .046 (.174)	5.906***
	04-08	-.093(.009)	-1.602	-.005(.000)	-.084	-.097 .016 (.009)	1.313
SD ROC	2004	.053(.003)	.402	.039(.002)	.297	.045 .017 (.003)	.085
	2005	.061(.004)	.458	.078 (.006)	.590	.045 .067 (.008)	.224
	2006	-.210(.044)	-1.618	.057(.003)	.428	-.220 .084 (.051)	1.499
	2007	.076 (.006)	.576	.128 (.016)	.972	.030 .116 (..017)	.486
	2008	.040 (.002)	.304	-.061(.004)	-.459	.074 -.089 (.008)	.235
	04-08	-.003(.000)	-.056	-.048(.002)	-.831	.007 -.050 (.002)	.352

****, ** and * indicate Significant at the 1, 5, 10 percent level respectively*

The results of regression model 8: $SD_{ROE} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ has been reported in third cell at table 4, and the results indicate t- statistic significant 1.890* indicate on financing policy and F-values are 6.634**, on significance at the 5, 10 percent levels respectively only on years 2004 and 2008.The results of regression model 9 : $SD_q = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported. in fourth cell at table 4, and the results indicate t- statistic significant -5.259*** indicate on financing policy and F-values are 14.266***and 5.768***, on significance at the 1 percent level only on years 2004 and 2006 The results of regression model 10 : $SD_{ROI} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ have been reported in fifth cell at table 4.

Table 4: Regression Analysis of Working Capital Policies and Risk (Standard Deviation of Sales (SD_{Sales}, SD_{ROA}, SD_{ROE}, SD_{q}, SDROI, SD_{ROC},) of Commercial Banks Listed in ASE

	Year	Investment Policy		Financing Policy		Investment Policy+ Financing Policy			
		B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)	t- value(sig)	B- Coefficient (R^2)			t- value(sig)
SD Sales	2004	..313(.098)	1.142	.255(.065)	.913	.251	.152	(.117)	.731
	2005	.221(.049)	.785	.244(.059)	.870	.186	.213	(.093)	.565
	2006	.197(.039)	.695	.119(.014)	.414	.238	.174	(.067)	.398
	2007	.223(.050)	.792	.089(.008)	.309	.220	.081	(.056)	.327
	2008	.148(.022)	.520	.138(.019)	.483	.225	-.079	(.022)	.126
	04-08	.129(.017)	1.075	.141(.020)	1.173	.100	.115	(.029)	1.004
SD ROA	2004	.265(.070)	.951	.156(.024)	.549	.241	.057	(.073)	.432
	2005	-.122(.015)	-.426	-.778(.605)	-4.291***	.006	-.779	(.605)	8.439***
	2006	.017(.000)	.059	-.245(.060)	-.875	-.043	-.255	(.062)	.362
	2007	-.064(.004)	-.224	-.875(.765)	39.162	-.034	-.874	(.767)	18.067***
	2008	-.715(.511)	-3.539***	-.672(.452)	-3.144	-.989	.284	(.516)	5.683**
	04-08	-.030(.001)	-.245	-.079(.006)	-.656	-.010	-.077	(.006)	.215
SD ROE	2004	.171(.029)	.603	.479(.229)	1.890*	.251	.356	(.263)	1.965
	2005	-.016(.955)	-.057	.017(.000)	.060	.041	-.096	(.010)	.053
	2006	.0139(.000)	.044	-.352(.124)	-1.304	-.074	-.370	(.129)	.816
	2007	-.104(.011)	-.361	-.224(.050)	-.797	-.096	-.221	(.059)	.348
	2008	.254(.065)	.911	.424(.180)	1.621	-2.363	2.708	(.547)	6.634**
	04-08	.090(.008)	.741	-.026(.001)	-.212	.133	-.072	(.018)	.607
SD q	2004	-.201(.040)	.710	-.835(.697)	-5.259***	.171	-.905	(.722)	14.266***
	2005	.304(.092)	1.106	.466(.217)	1.824	.234	.428	(.270)	2.038
	2006	-.709(.503)	-3.487	.076(.006)	.266	-.732	-.095	(.512)	5.768**
	2007	.444(.198)	1.719	.340(.116)	1.254	.433	.325	(.303)	2.395
	2008	.062(.004)	.217	.049(.002)	.171	.226	-.169	(.006)	.032
	04-08	-.031(.001)	-.256	.014(.000)	.113	-.037	.023	(.001)	.049
SD ROI	2004	-.236(.056)	-.842	-.561(.315)	-2.348**	.060	-.563	(.293)	2.281
	2005	.014(.000)	.048	-.523(.274)	-2.127*	.115	-.570	(.316)	2.544
	2006	-.903(.816)	-7.289***	.103(.011)	.359	-.930	-.115	(.828)	26.523***
	2007	-.017(.000)	-.060	-.832(.693)	-5.205***	.011	-.833	(.693)	12.422***
	2008	-.966(.933)	-12.937***	-.948(.899)	-10.319***	-.755	-.218	(.936)	80.734***
	04-08	-.542(.293)	-5.313***	-.097(.009)	-.802	-.553	.046	(.295)	10.039***
SD ROC	2004	.057(.003)	.197	.429(.184)	1.647	-.055	.485	(.216)	1.514
	2005	.372(.138)	1.388	.355(.112)	1.233	.326	.282	(.216)	1.513
	2006	.351(.123)	1.298	-0.40(.002)	-.139	.361	.045	(.125)	.786
	2007	.240(.057)	.855	-.046(.002)	-.159	.242	-.054	(.060)	.354
	2008	.170(.029)	.597	.187(.035)	.659	-.167	.349	(.037)	.210
	04-08	.081(.007)	.672	.131(.017)	1.092	.051	.118	(.020)	.671

****, ** and * indicate Significant at the 1, 5, 10 percent level respectively*

The results indicate t- statistic significant -7.289***, -12.937*** and -5.313*** indicate on investment policy and -5.205***and -10.319*** on financing policy. F-values are 26.523***, 12.422***, 80734*** and 10.039*** on significance at the 1 percent levels only on the year 2008. The results of regression model 11: $SD_{ROC} = \alpha + \beta_1 (TCA/TA_i) + \beta_2 (TCL/TA_i) + \varepsilon$ has been reported in sixth cell at table 4, and the results indicate no significant effect. In general, there is some statistically significant relationship between the level of current assets and current liabilities and operating and financial risk of Jordanian commercial banks especially between standard deviation of return on investment as dependent variable and working capital policies

CONCLUSION

Working capital management is the management of the net of current assets and current liabilities with the objective of reaching the right balance between profitability and liquidity. To discuss the different approaches to financing working capital, it is important to identify that ordinarily, company may use

short-term sources of finance to finance its short-term activities, such as working capital activities and long-term source of finance for its capital investments in non-current assets The choice of which source of finance a company uses to finance its working capital and other activities depend on several factors such as: availability of fund, the length of time such funds may be required for, the purpose for which the funds is required, the size of the company, the rate of interest but for the discussion of the financing of the working capital, the two main factors that needs to be considered are the risk of the finance used and the cost of finance; either by financing working capital using short or long-term source of finance. The risk and cost factors are inversely related, in that if a company goes for a low risk source of finance, it is related to a high cost source of finance and vice versa. Based on risk, short-term source of finance is assumed to be more risky than a long-term source of finance.

In general, current assets are considered as one of the important component of total assets of a firm. A firm may be able to reduce the investment in fixed assets by renting or leasing plant and machinery, whereas, the same policy cannot be followed for the components of working capital. The high level of current assets may reduce the risk of liquidity associated with the opportunity cost of funds that may have been invested in long-term assets. Efficient working capital is really a prerequisite to growth and existence of corporate enterprises because it dictates the level of production, inventory and sales

This study investigated the relative relationship between the aggressive/conservative working capital policies for 59 industrial companies and 14 banks listed at Amman Stock Exchange for a period of 2004-2008. The impact of aggressive/conservative working capital investment and financing policies has been examined through cross-sectional regression models between working capital policies and profitability as well as risk of the firms and banks.

The result indicates a negative relationship between the profitability measures of firms and banks and degree of aggressiveness of working capital investment and financing policies. The firms yield negative returns if they follow an aggressive working capital policy. The results moreover, also confirmed the findings of Carpenter and Johnson (1983) that there is no significant relationship between the aggressiveness\conservativeness of working capital policies of firms and their operating and financial risk, but there are some statistically significant relationship between the level of current assets and current liabilities and operating and financial risk of Jordanian commercial banks especially between standard deviation of return on investment as dependent variable and working capital policies. Moreover, theoretical discussion on risk and working capital management has also been tested on empirical basis in an emerging market of Jordan. Although the results of current study are in contradiction to some earlier studies on the issue, yet, this phenomenon may be attributed to the inconsistent and volatile economic conditions of Jordan.

When any company manages its working capital well, it has every leverage opportunity to continue in business indefinitely both in profitability and in liquidity. Based on this research work, the researcher has proffered the following recommendations: The financial manager should have knowledge of the sources of working capital funds as well as investment opportunities where idle funds may be temporarily invested. The current assets at all times should be sufficiently in excess of current liabilities to constitute buffer for maturing obligations within the ordinary operating cycle of a business. The management decisions concerning working capital should not be left to the financial manager alone. Other departmental heads should partake for optimality to be attained easily. The decision on how to optimize and finance current assets should be highly considered with care. Finally, the owners and investors should to be careful to analysis of accounting data of financial statements to gain access to the financial status of firms to try to make a proper assessment and improve the overall performance as well as risk of the firms

REFERENCES

Afza T and MS Nazir, (2007)." Working Capital Management Policies of Firms: Empirical Evidence from Pakistan." Presented at 9th South Asian Management Forum (SAMF) on February 24-25, North South University, Dhaka, Bangladesh

Carpenter MD and KH Johnson, (1983). "The Association between Working Capital Policy and Operating Risk". The Financial Review 18(3): 106-106.

Deloof M (2003). "Does Working Capital Management Affect Profitability of Belgian Firms?" Journal of Business, Finance and Accounting 30(3&4): 573-587.

Eljelly AMA (2004). Liquidity-Profitability Tradeoff: An Empirical Investigation in an Emerging Market. International Journal of Commerce and Management 14(2): 48-61.

Filbeck G and T Krueger (2005)."Industry Related Differences in Working Capital Management". Mid-American Journal of Business 20(2): 11-18.

Howorth C and P Westhead (2003). The Focus of Working Capital Management in UK Small Firms. Management Accounting Research 14(2): 94-111

Jose ,(1996). Corporate Returns and Cash Conversion Cycle. Journal of Economics and Finance 20(1): 33-46.

Jarvis, R., Kitching, J., Curran, J. and Lightfoot, G. (1996)., "The Financial Management of Small Firms: An Alternative Perspective", ACCA Research Report No. 49

Kargar, J. and Blumenthal, R. A. 1994 . "Leverage Impact of Working Capital in Small Businesses", TMA Journal, Vol.14, No.6, pp.46-53

Lamberson M (1995). "Changes in Working Capital of Small Firms in Relation to Changes in Economic Activity." Mid-American Journal of Business 10(2): 45-50.

Molina, C. and L. Preve, (2008), "Trade Receivables Policy of Distressed Firms and its Effect on the Cost of Financial Distress," Financial Management, Forthcoming

Nwankwo, O. (2005). Dimensions of Financial Management (p. 451). Enugu: Jones Communication and Publishers

Pandey IM and KLW Parera (1997). Determinants of Effective Working Capital Management - A Discriminate Analysis Approach." IIMA Working Paper # 1349. Research and Publication Department Indian Institute of Management Ahmedabad India.

Rafuse, M. E. 1996. "Working Capital Management: An Urgent Need to Refocus", Journal of Management Decision, Vol. 34 No 2, pp. 59-63

Raheman, A. & Nasr, M.. (2007). Working Capital Management and Profitability – Case of Pakistani firms. International Review of Business Research Papers, 3(1), 279-300

Rehman A (2006)." Working Capital Management and Profitability: Case of Pakistani Firms" (Unpublished Dissertation). Pakistan: COMSATS Institute of Information Technology Islamabad

Shin HH and L Soenen (1998). "Efficiency of Working Capital and Corporate Profitability". Financial Practice and Education 8: 37-45.

Smith K (1980). Profitability versus Liquidity Tradeoffs in Working Capital Management, in Readings on the Management of Working Capital. New York: St. Paul, West Publishing Company

Soenen LA (1993). Cash Conversion Cycle & Corporate Profitability. Journal of Cash Management 13(4): 53-58

Sathamoorthi CR (2002). The Management of Working Capital in Selected Co-operatives in Botswana. Finance India Dehli 16(3): 1015-1034.

Teruel PJG and PM Solan (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

Van-Horne JC and JM Wachowicz (2004). "Fundamentals of Financial Management" (12th Edition). New York: Prentice Hall Publishers

Van Hone (1980). Financial Management (8th ed.) (p. 737). New York: Dryden Press

Weinraub HJ and S Visscher (1996). "Industry Practice Relating To Aggressive Conservative Working Capital Policies." Journal of Financial and Strategic Decision 11(2): 11-18.

ACKNOWLEDGMENT

The author wish to thank the anonymous reviewers for their excellent comments, resulting in a significant improvement in the quality of this paper.

BIOGRAPHY

Dr. Faris Nasif AL-Shubiri is an Assistant Professor of Finance at Amman Arab University for Graduate Studies, He can be contacted at: College of Business, Department of Finance and Banking , Amman-Jordan , P.O. box : 230094 Code : 11123, Email: fa_shub@yahoo.com , Tel NO: 00962-777726523.