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AN INVESTIGATION THE ROLE OF LIFE CYCLE ON THE RELATIONSHIP BETWEEN

NETWORKING CAPITAL POLICIES AND PERFORMANCE

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ABSTRACT

This research attempts to focus on the relationship between net working capital policies and company performance and the influence of various periods of the company's life cycle on the analysis of the type of net working capital policies. Actual data from 180 companies listed in the Tehran Stock Exchange from 2007 to 2012 have been obtained and analyzed for this purpose. Results shall reflect the influence of the life cycle on the relationship between net working capital policies and performance. The influence is presented as the fact that under general circumstances (regardless of the life cycle), there is a significant direct relationship between net working capital policies and performance.; however, when the life cycle is taken into consideration, the relationship between net working capital policies and performance in Growth companies and Stagnant companies is direct with the general circumstances discussed above and no significant relationship was found in Mature companies.

Keywords: *Net Working Capital Policies, Performance, Life Cycle.*

INTRODUCTION

One of the essential activities of managers involves decision making. Decision making is observed in all financial arenas not excluding working capital management. Working capital is an important item within company assets and plays a significant role in financial decisions. In fact, the continuity of economic activities of an entity largely depends on short term resource management; this is due to the fact that operational activities within a normal period of usually one year, depend on the appropriate identification of working capital and its management in such a way that would ensure the actualization of expected results and the long term continuity of activities. Retaining a desirable level of cash for the repayment of matured debt, taking advantage of the appropriate investment opportunities which reflect an entity's flexibility and the availability of raw materials for production in time for the company to meet customer needs indicate the significance of working capital. Any decision made at the management level at this stage intensely affects operational return and entity performance which in turn lead to the re-evaluation of the economic entity and investor wealth. This has caused many managers to spend great amounts of daily time and energy for working capital management. Managers of profit making entities need to consider internal and external factors under different circumstances in order to select the appropriate policies for working capital management within their entity. The selection of the best possible policies for current assets in a given situation increases the possibility of achieving the optimal policies for net working capital management and maximizes shareholder wealth. Thus, company managers expect to significantly impact company performance through the selection of an appropriate net working capital policies.

Accordingly, a number of researches have been carried out on the influence of net working capital policies on the going concern of entities. They have focused solely on the influence of net working capital policies on going concern indices and have not considered other factors such as the economic characteristics of entities. Economic characteristics are a function of the life cycle. Entities develop specific behavioral modules in order to overcome problems encountered in a specific period of their life cycle and issues related to transitions from one period to the other which may be related to the type of net working capital policies selection. In other words, certain economic conditions in each stage of the life

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cycle lead to the selection of specific policies by net working capital managers based on those economic conditions. Financial literature during recent years indicates that the going concern of companies depends on their recognition of net working capital policies and their appropriate management towards optimizing company performance and in order to provide the possibility of going concern in the long run. Evidence suggests that entities displaying various characteristics throughout different stages of their life cycle and on the other hand the selection of net working capital policies is a function of internal and external factors relying on risk and return. The present research attempts to study and identify the influence of various net working capital policies on company performance throughout various stages of the life cycle.

Research Literature and Theoretical Basis
The Concept of Working Capital
An entity's working capital is the total amount invested in current assets. Current assets include cash (cash and bank), tradable securities, accounts and notes receivable, inventory, pre-payments and other items of current assets. If short term liabilities such as accounts and notes payable, short term loans and payments received in advance are deducted from short term assets, the resulting amount is net working capital. Most current asset items are provided for settling short term liabilities. However, certain companies tend to settle them from either long term liabilities or equity (Jahan Khani and Parsayian, 2001).

Net Working Capital Policies
Various policies exist for net working capital, from which managers must select the most appropriate in order to efficiently manage current assets of the entity. net Working capital policies are categorized into two classes (Janah Khani and Parsayian, 2001).

The Conservative Policies
In the conservative policies,net working capital is high and liquidity reflects higher than normal amounts. The risk in the selection of this method is quite low, as high liquidity levels enable the company to repay debts at its date of maturity. Moreover, high inventory levels lower the risk of losing customers, and companies face lower bankruptcy risks; however, company productivity is low. Moreover, the conservative manager tries to minimize the amount of short-term loans in financial structure of the company and uses long-term loans which have floating interest in order to provide current assets. In some cases, instead of getting these types of loans, he uses other sources such as equity capital for financing. The company that minimizes short-term loans, greatly reduces the likelihood of risk of bankruptcy and failure at timely payment of loans. Besides, the use of long-term loans and equity rather than short-term loans increases the cost of capital and reduces the rate of return to shareholders (Al Shubiri, 2011).

The Aggressive Policies
In this approach, working capital managers tend to minimize cash and tradable securities and to decrease investments in inventory. The risk in this approach is quite high and there is a high possibility of not being able to repay debt to lose one's customers; however company productivity increases due to the need for providing fixed assets and the high turnaround rate of current assets in operation. In this approach, the manager seeks to maximize the level of short-term loans and finance his current assets from these loans. If a company is to maximize its short-term loans, the risk that the company cannot repay them on time will increase and when the market is facing a shortage of money and credit, it is not easily feasible to borrow short-term loans and its costs would escalate (Al Shubiri, 2011).

Company's Life Cycle
he life cycle theory of companies assumes that just like all living creatures that are born, grow and eventually die, every company goes through a life cycle or life curve (Adizes, I., 1989). The life cycle,

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describes each entity based on its controllability and flexibility. Companies are quite flexible, yet uncontrollable in their youth (development period).

Relationships change as the company ages; control increases and flexibility is lessened. Ultimately, controllability minimizes when the entity becomes senile (decline period). The controllability and flexibility of an entity indicates the simultaneous characteristics of youth and senility. This condition is identified as the maturity (puberty) stage. The life cycle of companies and organizations are divided into various stages in economy and management. The literature of these sciences offers models with various stages within their life cycle. Companies follow specific policies and procedures according to the stage they are in and within the framework of these models. The policies are somehow reflected in accounting information. Researchers in accounting fields have studied the influence of a company's life cycle on accounting information (Aharony et al, 2006). They have determined the following four stages for describing a company's life cycle:

The Stage of Birth or Entry
Assets (company size) are usually at a reduced level at this stage and cash flows from operations and profitability are quite low; companies require high liquidity for financing or realizing growth opportunities. The dividend ratio in these companies is usually zero or a maximum of 10% and the return or adjusted return from investments is occasionally insignificant compared to the weighted rate of financing.

The Stage of Growth
At this stage, company size is larger and sales levels and revenues rise as compared to the entry stage. Financial resources are mostly invested in productive assets and the company displays higher flexibility in liquidity indices. The dividend ratio fluctuates from 10% to 50%. Return from investments or the adjusted return is usually above the weighted rate of financing.

The Stage of Maturity
In this stage, companies experience a constant and balanced level of sales and cash is usually provided by internal resources. Asset levels in these companies are relatively higher than in companies in the maturity stage and the dividend ratio in these companies usually fluctuates from 50% to 100%. Due to high levels of liquidity and a decrease in dependency on outstanding policies, returns from investments or adjusted returns are usually equal to or higher than financing rates.

The Stage of Decline or Stillness
In this stage there are very few if any growth opportunities in which case the possibilities are null. Liquidity profitability indices and the repayment of debts follow a descending trend and the company faces intense competition, while financing expenses rise such that in most cases returns from investments or adjusted returns fall below the financing rates.

The Relationship between Net Working Capital Policies and Performance
Economic growth and development, an increase in the number of corporations and the separation of management and ownership have turned agency problems into one of the most significant challenges of investors. Agency problems arise from the fact that investors are usually either not inclined or incapable of managing the company and thus delegate the responsibility to managers. If both the managers and investors aim to increase personal profit, and performance control would require certain expenses, then the message conveyed would be that the agent may not be striving to provide returns to investors and to increase his/her wealth (Amir Aslani, 2005). Thus the recognition and utilization of factors influencing the company's performance may be the most important obligation of the investors for evaluating the agent (management) and accordingly the going concern of the economic entity.

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The going concern of economic entities depends to a large extent on short term resource and uses management; since operational activities within normal annual periods rely on net working capital and its optimal management directed towards meeting expected results and providing the possibility of long term going concern. Thus net working capital is considered one of the most important items of assets and Liabilities in an institution or economic entity with a significant role in financial decisions. The ever increasing importance of net working capital in going concern of economic entities has led to the consideration of various policies for net working capital management. Profit making entities can apply various net working capital policies to influence the liquidity level of the company. Each policies contains its own level of risk and return. Profit making entity managers select a policies based on prevailing conditions in the company and according to their own personality and characteristics from among aggressive (risky) or conservative (risk averse) policies in order to increase return, liquidity, debt settlement ability and ultimately to promote performance and going concern of the entity (Rahnamaye Roodposhti & Kiyayi, 2009).

Minimizing investments and maximizing short-term debt in net working capital (aggressive policies) may positively influence company performance. Evidence from studies performed by Jose et al (1996), Sheen & Soenen (1998) and Deloof (2003) among other researchers promote the fact that aggressive policies with lower levels of inventories yet high turnover along with lower levels of receivable collection expenses using aggressive credit policies, promotes performance. It should be noted, however, that aggressive net working capital policies, increase the risk of insolvency (Belt, 1979).

On the other hand, heavy investments and minimizing short-term debt in net working capital (conservative policies) may lead to promotion of performance, as for instance, retention of high levels of inventory, decreases probable expenses relating to delay in the production process and damages due to the shortage of products, as well as financing expenses and protects the company against price fluctuations (Garcia et al, 2007).

Overall it can thus be concluded that according to financial literature, a significant relationship exists between net working capital policies and company performance and that companies must balance risk and return as the essence of all financial decisions in order to select a net working capital policies that leaves the most positive impression on performance.

The Role of the Life Cycle in Net Working Capital Policies and Performance
In economy and management theories, company and institution life cycles are divided into several stages. According to the life cycle theory, companies display various behavioral patterns throughout different stages of their life cycle, in other words financial and economic characteristics of a company are influenced by the stage at which the company is going through. Results of past researches indicate that the reaction and response of capital markets to accounting information in various stages of their life cycle display significant differences (Anthony, J.H & Ramesh, 1992). Overall, companies follow specific policies and procedures based on the stage they are in. these are reflected within the financial information of a company and may have significant relationships with selecting the appropriate policies. In other words, specific economic conditions in each stage of the life cycle may enable managers to select a net working capital policies that is a function of that same condition. Thus, in financial literature, the life cycle is expected to influence the level and type of relationship between net working capital policies and company performance.

Research Background
According to investigations performed, it appears that no domestic or foreign research has been carried out with a full focus on the role of life cycles in net working capital policies and company performance. This makes it impossible to compare results obtained from the present research with other similar studies—whether in the foreign or domestic contexts. Hence, only researches have been mentioned here, that involve some of the aspects covered by the present study and that are closely related to the subject.

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Mian Sajid Nazir and Talat Afza, have studied the influence of aggressive working capital policies on the profitability of Pakistani companies from 1998 to 2005. In this research, the asset return ratio and the Tobin's Q ratio have been selected as criteria for evaluating profitability in companies. Results indicated that managers that have selected the conservative policy in managing working capital policies and financing procedures, have witnessed higher profitability as compared to managers that have adopted a more aggressive approach to liabilities.

Al-Shubiri (2011) studied the relationship between conservative and aggressive working capital policies and profitability as well as the financial and operational risk in 59 companies in different industries and 14 banks from 2004 to 2008 in Jordan. Findings indicated a significant negative relationship between aggressive policies and entity profitability as well as the fact that companies with a negative rate of return have followed the aggressive strategy. Moreover, results illustrated that no significant relationship exists between the ratio of current assets to liabilities and the operational and financial leverage in entities.

Hassanpour (2009) researched the influence of working capital Strategies on stock return. In this research, certain financial ratios were applied to determine a number of working capital Strategies and 62 companies from 9 industries throughout 20 quarterly periods were screened. Results from tests performed on the hypotheses indicated a significant difference between return averages in various Strategies and that the aggressive strategy holds the highest return among other Strategies in all industries.

Rahnamye Roodposhti and Kiyayi (2009) studies the relationship between return, liquidity and debt repayment ability solvency of the entity, and the working capital Strategies in 39 companies listed in the stock exchange market in the medical and chemical industries. Findings reflected a weak relationship between return and working capital Strategies which is not statistically significant. They justified that interfering variables that were not within the scope of control of the management had been influencing profitability and return. Among the most prominent interference variables are specific industry traits, government enforced policies, capital market inefficiencies and a number of other variables. Thus even if management, succeeds in using methods to reduce debt expenses and bank interests, the presence of these factors diminish the influence of any action made on final deductions based on profitability ratios. Moreover, no significant relationship was found between liquidity and solvency and the working capital strategy adopted; thus it was concluded that companies have not been able to exert authority on current assets and liabilities.

Hassani and Tavoosi (2012) have researched the influence of working capital policies on profitability risk. The criteria applied to measure profitability risk has displayed a deviation from the average return on assets, return on equity, investment return and return on capital. Companies studied in this research involve 274 companies listed in the Tehran Stock Exchange throughout a 6 year period from 2006 to 2011. Results from testing the hypotheses indicate that a significant relationship is present among working capital policies and risk profitability criteria such that at the investment policy level, the relationship is inverse while at the financing level it is direct; the more conservative the working capital strategy, the lower will the profit risk be and the higher the level of aggressiveness, the higher shall profitability risk be. The sample has been categorized into six different industries including automobiles, basis metals, food products, nonmetal mineral products, chemical products and other such industries, which have been separately studied. Results from testing the hypotheses across the industry indicates that a significant relationship exists among and profitability risk criteria, such that at the investment policy, the relationship is inverse and at the financing policy level it is direct and the more conservative the working capital strategy, the lower the profitability risk and the higher the aggressive policy, the higher shall profitability risk be. Results from testing the hypotheses in each industry, approves findings mentioned previously.

Research Objectives and Hypotheses
The overall objective of the present research is to study the role that the life cycle plays in the relationship between net working capital policies and performance of companies listed in the Tehran Stock Exchange

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and to determine the most influential net working capital policy at different stages of the life cycle. Accordingly, the following research hypotheses have been formulated:

1- A significant relationship is present among net working capital policies and company performance.
2- A significant relationship exists between net working capital policies and company performance in various periods of the life cycle.

RESEARCH METHODOLOGY

The present research is identified as an applicable study from the objective based approach, quantitative from the process viewpoint, deductive from the rational approach and descriptive from the methodology approach; as variable relationships are concerned, according to the research objective, the research is also considered correlative regression based study of the ex post facto type.

Research Population and Sample

The population includes all companies listed in the Tehran Stock Exchange throughout an 6 year period starting from early 2007 until late 2012, with the following criteria:

- Having been active in the exchange market from early 2007 to 2012.
- Not have undergone any changes in their fiscal years from 2007 to 2012 (When a company changes its fiscal year, amounts reflected in the financial statements would no longer reflect the events within the year and would results in non-homogeneity within the statistical population and non-eligibility for use in prediction purposes.
- Financial information of the companies should be available and the sample should not include investment companies and intermediaries (these companies have characteristics different from other companies' due to the nature of their activities).
- For comparison purposes among averages in the industry, the presence of at least two companies in each industry is compulsory.

A total of 180 companies were selected, based on conditions set above, from among 520 companies listed in the Tehran Stock Exchange at the end of 2012 (approximately 35 percent) from 18 different industries throughout an 6 year period (1080 observations per year).

Research Variables

Determining the Type of Net Working Capital Policies

The independent variables of this study are net working capital policies. Net working capital policy specifies liquidity risk and returns. There are two different policies considered in net working capital and they are conservative policy and courageous policy (Rudposhti and Kiaei, 2009).

Net working capital policies are compared with the industry average as the net working capital to total assets ratio, then, if the ratio is lower than the industry average, the policy is courageous and it is given a value of zero, and if it is higher than the industry average, the policy is conservative and it is given a value of one. Thus the type of net working capital policies in companies are specified and its relationship with corporate performance will be measured in the form of imaginary variables with nominal values (0 and 1).

Net working capital policies:

Conservative = (current assets / total assets) > Industry average
Courageous = (current assets / total assets) < Industry average

A conservative company management tries to bring the net working capital to assets ratio to an amount that is higher than the industry average. But a company management that adopts a courageous policy seeks to bring this ratio to an amount that is lower than the industry average. The classification method of the net working capital policies is shown in the following image.
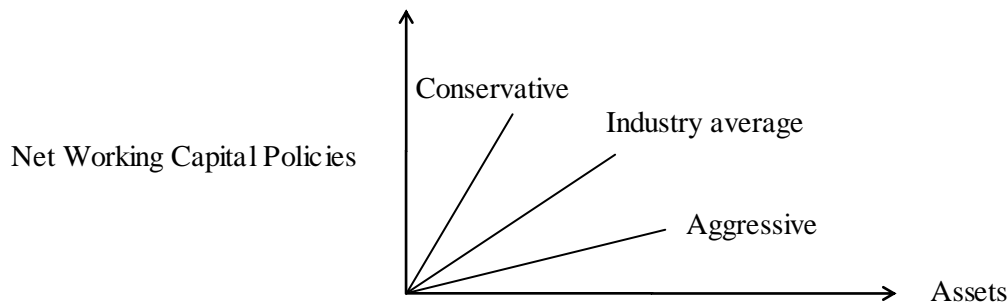
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Figure 1: Classification of working capital policies

Conservative managers tend to direct the net working capital to Assets ratio of the company to levels higher than the industry average. However managers adopting an aggressive policies, tend to decrease the ratio to amounts lower than the industry average.

Separation of Companies According to Life Cycle Stages
In the present research, to separate companies according to stages of growth, maturity and decline based on the methodology offered by Park, Y. and Chen, K. (2006), the following has been offered:
1) First, a value for each of the variables relating to sales growth, capital expenditure, dividend ratio and company age is calculated for every year-company that has been presented.
2) Year-company is distinguished according to the four variables and using the statistical quintile is divided into five categories, based on which a grade of 1 to 5 is given to each.
3) Next, for each year-company, a combined score is calculated, which is identified according to one of the conditions below and placed in the development, maturity or decline stage:
   • Total score between 16 and 20 is identified as being in the development stage.
   • Total score between 9 and 15 is identified as being in the maturity stage.
   • Total score of 4 and 8 is identified as being in the decline stage.
   • For purposes of this research, companies have to have had a continuous presence in the Tehran Stock Exchange and newly introduced companies who have been active in the public stock exchange arena for less than a year. Thus life cycles only contain the three stages of development, maturity and decline and the stage of entry has been ignored (Dehdar, 2007).
Operative Definitions of these Variables are provided below:

Sales Growth = [1- (Current year revenue from sales / previous year revenue from sales)] * 100
Dividends = (Dividends per Share / Income per Share) * 100
Capital expenditure = Cash outflows from investment activities.
Company Age = Difference between year t and the year of company founding

Table 1 : Descriptive Statistics

Quintile	Age	Sales Growth	Capital expenditure	Dividends
First	5	1	1	5
Second	4	2	2	4
Third	3	3	3	3
Fourth	2	4	4	3
Fifth	1	5	5	3

Performance Measurement
Many different criteria are used for measuring performance of the entity, yet it appears that the index of Tobin's Q is a much more appropriate criterion for evaluating the performance of companies. The index was introduced by Mr. James Tobin (1969) and offers a desirable criterion for measuring performance

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according to the hypotheses relating to agency problems. There are a number of methods for calculating the Tobin's Q index. Since the calculation of a current replacement cost is not possible in Iran, for purposes of this research, the market to book value of assets has been used to calculate the Tobin's Q index. The higher the value for this ratio, the higher the value of the company shall be in the stock market. The operational definition for the Tobin's Q index is as follows:

Tobin's Q = MV / BV

Where, MV is the market value of the company (market value of equity plus book value of liabilities) and BV is the book value of assets. The market value of equity is calculated by multiplying the number of company stock by stock price. The ratio illustrates the consumption of assets as well as company performance. More desirable performance as perceived by investors increases demand for its stock which in turn results in an increase in stock price and value and vice \versa; non-desirable company performance as perceived by investors results in a drop in Tobin's Q index (Mahdavi and Midary, 2005).

In order to accurately study the role that the life cycle plays in the relationships between net working capital policies and company performance, the influence of company size and financial leverage have been monitored to perform a more accurate test on the research hypotheses.

Statistical Analysis Methodology
The process of testing the hypotheses in this research has been carried out in three stages: First, sample companies have been separated into those having adopted a conservative (risk averse) policies and those with an aggressive (risk prone) net working capital policies.

This is based on the comparison of the net working capital index to Assets of each company to industry averages. Subsequently, companies where the net working capital index to Assets are higher than the industry averages, are classified as risk averse while those with lower than industry average net working capital indices to Assets were considered risk prone. In the second phase, the life cycle of sample companies was divided into the growth, maturity and decline stages based on segregating variables such as company age, sales growth, capital costs and dividends according to the Park and Chen model (2006). In the last stage, scattered observances were eliminated and using the regression model was offered as follows based on panel and sectional data, followed by tests that were performed on research hypotheses.

$$\textit{Tobin's } Q_{i,t} = \beta_0 + \beta_1 \textit{NWC Policies }_{i,t} + \beta_2 LEV_{i,t} + \beta_3 SG_{i,t} + \beta_4 SIZE_{i,t} + \varepsilon_{i,t}$$

Tobin's Q: ratio of market to book value (Tobin's Q index)
NWC of Policies: net working capital policies
The dummy variable holds a value of 1 for companies adopting a conservative net working capital policies, and a value of zero for those adopting an aggressive one.
LEV: financial leverage; High levels of debts indicate high interest rates which may influence company performance (Al-Shubairi-2011). The ratio of total liabilities to total assets has been used to control the effects of this variable.
SG: sales growth;
SIZE: company size; One of the structural and internal factors within companies, that influence their performance, is company size, meaning that larger companies benefit from product variety, hold a higher portion of shares of the market, have managed to economize sales and reduce the variety in commercial activities and have promoted their performance (Al-Shubairi, 2011). The natural logarithm of assets has been used to control these influences.

Research Findings
Descriptive Statistics
Table (2) illustrates a summary of the concentrated and scattered data and variable distribution indices based on sample companies at the growth, maturity and decline state, whether risk prone or risk averse, subsequent to screening and the omission of scattered data. As can be observed, a vast deviation is present

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in the descriptive parameters of these variables among growing, mature and declining companies. The growth of sales, capital costs and performance follow a descending pattern from growth to decline stages. Growing companies observe the highest growth in sales, capital costs and performance and the lowest levels of dividend ratios while in declining companies, sales and capital costs are at their lowest and dividend ratios are high. On the other hand, risk prone companies or those with an aggressive net working capital policies display the highest performance levels alongside low current asset to sales indices, while the risk averse or conservative companies are lowest in performance and highest in the current asset to sales index. In general, the descriptive analysis of variables, fulfill our expectations of financial characteristics of various levels of the life cycle.

Table 2 : Descriptive Statistics

Variable	Observances	Mean	Median	Standard Diviation	Skewness	Kurtosis
Performance	All Sample Companies	1.4212	1.165	1.0221	4.523	25.142
	Developing Companies	1.7010	1.417	1.2352	4.023	31.125
	Mature Companies	1.4720	1.281	1.0712	5.241	25.177
	Static Companies	1.2452	1.142	0.6612	3.142	8.017
	Risk prone Companies	1.5120	1.423	1.4231	4.253	14.142
	Risk Averse Companies	1.6011	1.380	0.7122	3.452	10.332
Sales Growth	All Sample Companies	19.12	16.23	27.150	4.006	70.144
	Developing Companies	47.02	36.00	25.187	2.853	9.423
	Mature Companies	17.14	14.00	36.714	7.147	79.11
	Static Companies	-10.14	-8.00	18.445	-0.937	0.679
	Risk prone Companies	14.07	10.00	32.785	6.229	97.11
	Risk Averse Companies	25.10	15.00	26.550	1.250	8.940
Capital Expenditure	All Sample Companies	121327	1946	564948	11.129	121.08
	Developing Companies	314086	8334	605379	6.145	33.026
	Mature Companies	112083	1302	572479	12.840	113.73
	Static Companies	1991	1207	1019	1.943	3.841
	Risk prone Companies	140261	1537	814046	8.470	76.013
	Risk Averse Companies	81204	1098	574017	14.401	191.02
Dividends	All Sample Companies	53.426	61.06	48.1204	4.893	53.714
	Developing Companies	48.076	54.24	35.1471	0.054	-0.049
	Mature Companies	54.480	62.07	49.1470	4.327	54.927
	Static Companies	79.149	74.45	48.3271	3.473	8.428
	Risk prone Companies	56.472	62.75	50.1269	4.887	54.140
	Risk Averse Companies	58.011	65.74	47.8526	4.472	50.099
Age	All Sample Companies	35	37	10	-0.450	0.039
	Developing Companies	23	25	11	-0.069	-0.892
	Mature Companies	36	38	11	-0.372	0.205
	Static Companies	48	47	9	0.129	3.795
	Risk prone Companies	34	37	12	-0.789	0.408
	Risk Averse Companies	35	36	11	-0.963	-0.089

The first hypothesis tests

The first hypothesis of the research, suggests that a significant relationship exists between net working capital policies and company performance. To test this hypothesis, the relationship between variables in general and regardless of the influence of the life cycle (no segregation based on time periods of the life cycle were made), were studied. For purposes of determining an appropriate approximation method, the

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Chow test was first performed in order to select the model for fixed effects or merged data (common effects). The results of which indicate the preference of the fixed effects model. Ultimately, the Hausman test was performed to select between the fixed and the random effects model, results of which indicate the application of the fixed effects method. Moreover, in order to resolve all non-homogeneity of variances, the EGLS method was utilized. In this method, the homogeneity of variances among remainders is minimized through reducing total weight of remaining squares that represent mean weight. Since the assumption questioned here was the independency among model remainders, auto regressive process (auto explanatory) was used; at the same time the auto regressive variable 1 (AR1) was added to the regression model in order to solve the auto-regression problem. The non-linearity of independent variables and model adequacy has also been approved.

Table 3 : Results from Testing the First Hypothesis

Descriptive Variables	Coefficients	Estimation Error	t	Probability
C	5.290	0.376	14.054	0.000
Net Working Capital Policies	0.017	0.032	2.945	0.004
Leverage	0.124	0.044	19.701	0.000
Sales Growth	0.000	0.000	6.146	0.000
Size	0.017	0.038	17.445	0.000
AR 1	0.413	0.015	26.152	0.000
Durbin - Watson	**F**	**F Probability**	**R^2**	**R^2 Adjusted**
1.824	35.180	0.000	0.794	0.775

Results from the diagram above indicate that the Durbin-Watson model is placed in the 1.5 to 2.5 range which is in itself indicative of serial non-autocorrelation. The F parameter is higher than the critical value and the probability level calculated is less than 0.05 which represents a linear relationship between descriptive and dependent variables. The adjusted determinant coefficient value indicates that approximately 77 percent of performance mutability and change can be explained through the regression model presented above. The t- parameter of net working capital policies is not between -1.96 to +1.96. In other words, the probability calculated is Less than 0.05 which indicates that the relationship with the dependent variable is significant at the 95% certainty level. Results from the regression model illustrate that net working capital policies in general (regardless of the influence of life cycle) Has a direct affect on company performance and thus the hypothesis is accepted.

The second hypothesis test
 The second hypothesis in the present research states that a significant relationship is present between net working capital policies and company performance in various stages. The number of companies or time periods in the growth, maturity and decline stages of the research is not equal. Thus application of the regression model based on the panel data is impossible. Thus, the cross sectional regression model was applied separately for growing, mature and static companies.
Results of tests have been presented in Table 6. The Brush-Godfrey test was used for testing the absence of autocorrelation and the white test performed for testing the absence of non-homogeneity, throughout various life cycle stages. Test results indicate the presence of both autocorrelation among remainders and non-homogeneity of variance. Thus, methods applied were selected in order to resolve problems arising in the model goodness of fit. Among statistical methods that were suggested and tested for this purpose, the auto explanatory and standard error regression process was approved (Newey, W.K and West, K.D., 1987). It should e noted that this method simultaneously considers the effects of both auto correlation and non-homogeneity, which may have undesirable effects on conclusions drawn from estimates or observances. The non-linearity that exists among independent variables is also approved through the parameters of variance increase and model adequacy.

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Results indicate that the Durbin-Watson for all three stages is between 1.5 and 2.5, which indicates the absence of serial auto-correlation. In the growth, maturity and decline stages the p-values for the F is lower than 0.05, indicating a linear relationship among descriptive and dependent variables. The values for adjusted determining coefficients are equal to 15 percent in the growth stage, 38 percent in the maturity stage while at the decline stage; approximately 13 percent of performance mutability may be explained using the regression model above. According to findings of the regression model, it could be accepted that net working capital policies Has a direct affect on company performance in the growth and decline stage. Considering the fact that NWC policies introduced a value of one for conservative policies and zero for aggressive policies, it could be claimed that for conservative policies positively and aggressive policies negatively influence performance. Thus, with the findings mentioned, the research hypothesis cannot be rejected in the 95% certainty level and has to be approved.

Table 4: Results from Testing the Second Hypothesis

Stage of Life Cycle	Variables	Coefficients	Estimation Error	t	Prob	Durbin-Watson	F Prob	R^2
Growth N =284	C	4.022	1.080	6.120	0.000			
	NWC Policies	0.047	0.207	4.141	0.000			
	Leverage	-0.144	0.280	-1.524	0.151	1.880	0.000	0.156
	Sales Growth	0.005	0.003	0.715	0.436			
	Size	-0.021	0.012	-4.922	0.000			
	AR 1	0.051	0.032	9.519	0.000			
Maturity N =691	C	4.141	0.291	8.019	0.000			
	NWC Policies	0.017	0.057	-1.085	0.315			
	Leverage	-0.079	0.034	-0.375	0.699	2.021	0.000	0.381
	Sales Growth	0.040	0.004	0.693	0.547			
	Size	-0.031	0.019	-4.274	0.000			
	AR 1	0.035	0.057	8.501	0.000			
Decline N =105	C	4.032	0.425	2.043	0.042			
	NWC Policies	0.020	0.094	4.107	0.000	1.791	0.000	0.138
	Leverage	-0.048	0.081	-0.071	0.968			
	Sales Growth	0.022	0.014	0.139	0.785			
	Size	-0.017	0.076	-4.896	0.000			
	AR 1	0.047	0.037	9.704	0.000			

CONCLUSIONS

The main objective of this research was to study the role of the life cycle concerning relationship between net working capital policies and performance. The research involves an 6 year time period from 2007 to 2012, including 1080 year-firm observation. According to the research hypothesis, study results indicate that regardless of the life cycle factor, performance varies among companies with different net working capital policies. Companies with an conservative net working capital policies have observed more desirable performance levels as compared to the risk Compliant ones. Concerning the relationship between net working capital policies and performance, companies in the growth stage (growing

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companies), and companies in the decline stage(Static companies),are directly related with all companies and those in the maturity stage (mature companies) No significant relationship was found. Results obtained in the growth stage and decline stage conform to evidence collected from various studies Nazeer and Talaat Afza (2009) and Al-Shubairi (2011) and contrary to others such as (Jose et al, 1996), (Shane and Suennen, 1996), (Dolph, 2003). It could thus be concluded that the life cycle factor plays an important role in the relationship between net working capital policies and company performance.

This research indicates much like other researches that companies display different economic characteristics in various stages of the life cycle. Thus, it is suggested that these characteristics be taken into consideration in commercial analysis and various technical or foundational tools. Moreover, it could be claimed that various stages of the life cycle can definitely determine various economic characteristics of the entity that are forming or may form in the future. Clearly, senior managers of business entities have to make appropriate decisions in managerial policies within each stage.

Practical recommendations derived from the research findings
According to the research hypothesis, study results indicate that regardless of the life cycle factor, performance varies among companies with different net working capital policies. Companies with an conservative net working capital policies have observed more desirable performance levels as compared to the risk Compliant ones; however as no relationship exists between net working capital policies and performance, it could be claimed that generally, desirable performance of risk prone companies compared to risk averse ones (regardless of the life cycle role) is not related to the adoption of the type of net working capital policies.

REFERENCES
Adizes, I. (1989). Corporate Life Cycle: How and Why Corporations Grow and Die and What to Do About It. Englewood Cliffs, NJ.
Aharony, J.H. & Falk, N. Yehoda. (2006). Corporate Life Cycle and the Value Relevance of Cash Flow versus Accrual Financial Information. School of Economics and Management Bolzano, Italy, Working Paper
Anthony, J.H and Ramesh, (1992). Association Between Accounting Performance Measures and stock Prices: A Test of the Life Cycle Hypothesis, Journal of Accounting and Economics,15.
Aslani-Hami, Amir. (2005). The Economic Role of Auditing in Open and Monitored Markets. The Accounting Standard Board Management of the Audit Organization, Publication no. 159.
Belt, B (1979). Working Capital Policy and Liquidity in the Small Business, Journal of Small Business Management, 43-51.
Dehdar, Farhad. (2007). Design and Determination of Superior Valuation Models Based on Accounting Earnings and Cash Flows in the Company's Life Cycle Process, A Thesis of Doctorate in Accounting, Tarbiyat Modarress University.
Deloof, M. (2003). Does Working Capital Management Affect Profitability of Belgian Firms?, Journal of Business, Finance and Accounting, pp. 573-587.
Faris Nasif, ALShubiri. (2011). The Effect of Working Capital Practices on Risk Management: Evidence from Jordan, Global Journal of Business Research, Volume 5, Number 1.
Garcia, J, P, Martinez, T, Martinez, P. (2007). Effects Working Capital Management on SME Profitability, Journal of Management Finance, Vol.3, No.2, pp.164-177.
Hassani, Mohammad and Tavoosi, Arezoo. (2012). A Study on the Influence of Working Capital Policies on Profit Risk, A Thesis of Master of Arts in Accounting, Islamic Azad University, North Tehran Branch.
Hassanpour, Shiva (2009). A Study on the Influence of Working Capital Policies on Stock Return, Financial Accounting Seasonal, First Year, No. 1.
Jose M. L., C. Lancaster, and J. L. Stevens (1996). Corporate Returns and Cash Conversion Cycles, Journal of Economics and Finance, pp. 33-46.

Research Article

Mahdavi, Abolghassem and Meydary, Ahmad. (2005). Ownership Structure and Efficiency of Companies Active in the Tehran Stock Exchange, the Economic Research Journal, No. 71.

Mian, Sajid Nazir. and TalatAfza, M. (2009). Impact of Aggressive Working Capital Management Policy on Firms' Profitability, The IUP Journal of Applied Finance . Vol. 15, No. 8, pp. 19-30.

Newey, W.K and West, K.D.A (1987). simple Positive –Definite Heteroscedasticity and Autocorrelation–Consistent Covariance Matrix Econometrica, pp.703-708.

Park, Yonpae. and Kung, Chen. (2006). The Effect of Accounting Conservatism and Life Cycle Stages On Firm Valuation. Journal of Applied Business Research, Vol. 22, pp.75-92.

Rahnamay Roodposhti, Fereydoon. and Kiyayi, Ali. (2009). A Study on the Determination of Working Capital Policies in Companies Listed in the Tehran Stock Exchange, The Accounting Knowledge and Research Journal, No. 13.

Raymond P. Nono, Translated by Ali Jahanbakhshi and Ali Parsayian (2001). Financial Management, Samt Publications, First and Second Volume.

Shin, H,H. & Soenen, L. (1998). Efficiency of Working Capital and Corporate Profitability, Financial Practice and Education.

Tobin, James. (1969). A General Equilibrium Approach to Monetary Theory. Journal of Money, Credit, and Banking, pp.15-29.