

## Working Capital Management Policies of Listed Companies in the Tehran Stock Exchange

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**Abstract:** The present study examines the working capital procedures of companies listed in Tehran Stock Exchange (TSE). The population consisted of all manufacturing companies listed on the TSE at the end of year 2013. The standard survey questionnaires were mailed to all sample firms. Testing hypotheses, Chi-square test is used. The results of the research have compared with similar results of previous studies on USA, Canadian and Australian companies. We find that most of Iranian companies use unofficial working capital policies in compare to these countries. Moreover, the results also showed that Iranian companies are more risk-averse for managing working capital and is associated with more conservative policies. In addition, Iranian companies have no scheduled programming to use the Just in Time (JIT) techniques to manage their inventories.

**Key words:** Working capital, working capital management, comparative study, Tehran stock exchange, Iran

### INTRODUCTION

Companies' financing generally include three types of decisions: capital structure, capital budgeting and working capital management decisions. In the meantime, management of working capital is one of the very important because it affects the profitability and liquidity of the company (Mathuva, 2010). The main objective of any company is to maximize profit. Also, maintenance of sufficient liquidity is one of the most important goals of the company. The problem is that increasing profits at the expense of liquidity can create many problems for companies. Therefore, the company's strategy must be in line with balance between these two important objectives. If a company ignores profits, the company cannot survive for long periods. If it does not care of liquidity, the company may face bankruptcy with the problem of inability to pay its short-term obligations (Dong and Su, 2010). However, working capital management is an important part of the company's financial decisions that affects the company's value (Zaryavati *et al.*, 2010). Several studies have showed that financial managers can create value for shareholders by managing working capital efficiently (Hailu and Venkateswarlu, 2016; Ghodrati and Ghanbari, 2014; Gill *et al.*, 2010; Leonidas *et al.*, 2015; Mansoori and Muhammad, 2012).

Managing working capital efficiently, researchers sought to determine the most important factors that are associated with working capital management. These factors are divided into two groups. The first group is composed of internal factors related to firm-specific characters that fall under the management's control and can be changed by different and appropriate decisions. The second group includes the external factors which

affect working capital management and emerge from the economic conditions. These variables are not under the managers' control and might have important effects on working capital (Gill *et al.*, 2010; Mansoori and Muhammad, 2012; Zariyawati *et al.*, 2010).

Similarly, the analyses of working capital practices of Iranian companies are worth investigating. However, working capital procedures of Iranian companies and compare it with developed countries must be investigated to gain a comprehensive understanding of the of working capital management. This research enriches the existing literature by investigating the working capital policies of Iranian firms. In particular, these studies identifies the important procedures of working capital decisions, as well as the managers' working capital strategies and compare it with previous similar studies that have done in USA, Canadian and Australian firms (Belt and Smith, 1991, 1992). Furthermore, this study provides theoretical guidelines for regulators and policy makers in dynamic business situations. As a theoretical contribution to the existing literature, this study formulates a cross-country comparison of working capital procedures.

### MATERIALS AND METHODS

Following the survey of Belt and Smith (1991, 1992), the primary research question of this paper is: What are the working capital practices of Iranian firms? To answer this question the survey instrument used was the Belt and Smith (1991) questionnaire. The survey instrument is organized into three parts: working capital policy, managing overall working capital and managing individual components of working capital. The survey samples include financial managers of all companies listed on the

Tehran Stock Exchange in 2013. Sampling was carried out by excluding service, banking, insurance, investment and financial intermediation companies due to the different nature of these companies. Final sample is consisted of 168 manufacturing companies listed in Tehran Stock Exchange at the end of 2013. The standard questionnaire designed by Belts and Smith (1991) was used to collect information. Its validity was confirmed by some of the professors (Belts and Smith, 1991, 1992). The questionnaire reliability was 0.89 using cronbach's alpha showing good reliability measurement tools. A total of 168 questionnaires were distributed and 109 questionnaires were returned. Excluding incomplete questionnaires (about 20 questionnaires), the number of 89 questionnaires were analyzed. Also, to analyze the data and test hypotheses, Chi-square test was applied. Finally, the result of the study is compared with similar previous studies have done in Australia and USA (Belts and Smith, 1991, 1992).

**RESULTS AND DISCUSSION**

After collecting the questionnaires in the first step, each firm was categorized into one of four mutually exclusive groups according to size (larger and smaller) and profitability (higher and lower). In this study, in

accordance with Belts and Smith (1991), Return on Equity ratio (ROE) was used as a measure of profitability and net sales were considered as the size of the company. Firms with a ROE of more than 25% categorized as firms with higher profitability and firms with ROE less than 25% were considered as firms with lower profitability. Also, companies with net sales of more than 400 billion Riyals were considered as larger companies and companies with net sales of 400 billion Riyals as smaller companies.

Table 1 shows the frequency of each of the companies responding to the questionnaire indicated working capital. As seen in Table 1, the response rate to the questionnaire for Iranian companies are more than American and Australian companies (Belt and Smith, 1991)

Table 2 shows the number of Iranian companies has formal procedures to manage working capital and also Iranian companies which has unofficial procedures for working capital management.

Table 3 shows that the type of procedure for the management of working capital is dependent on the circumstances in most Iranian companies.

The results of the overall study of working capital management are shown in Table 4 and 5. As shown in Table 4, inventory-based view (according to the balance sheet) is still dominant in Iran's working capital management. In addition as shown in Table 5, Iranian

Table 1: Response rates to the questionnaire

Profitability (return on equity)	Larger firms (Based on sales of 400 billion riyals) (%)		Smaller firms (Based on lower sales of 400 billion riyals) (%)		Total (%)
Firms with higher profitability	29.42	= 69	26.42	= 62	55.84 = 65
Firms with lower profitability	18.42	= 43	16.42	= 38	34.84 = 19
Total	47.84	= 56	42.84	= 50	89.168 = 53

Table 2: Working capital management

Procedures	Sample (%)	Size of the company (%)		Profitability (%)	
		Large	Small	More	Less
Official procedures	14.6	17.00	11.90	18.20	11.7
Unofficial procedures	61.8	65.90	57.10	63.60	58.8
No procedure	23.6	17.10	31.00	18.20	29.5
Number of answer sheets	89.0	47.00	42.00	55.00	34.0
Chi-square statistic		0.26		1.14	
Significance level		(0.97)		(0.43)	

Table 3: working capital management procedures

Procedures	Sample (%)	Size (%)		Profitability (%)		Working capital procedure (%)	
		Large	Small	More	Less	Official	Unofficial
Risk-averse	39.3	34.00	42.50	36.30	43.1	38.40	38.20
Risk taker	30.4	6.30	2.40	50.40	2.9	7.70	3.60
Depending on the existing circumstances	50.6	49.00	51.00	49.10	53.0	46.10	40.00
Changeable over time	6.7	10.70	4.10	2.90	3.0	8.70	2.18
Chi-square statistic significance		1.17*		1.54*		2.32*	

\*Non-significant

Table 4: Ranking criteria used in monitoring working capital of companies

Scale	No. of answer sheets	Percentage assigned to each rank						Averagerank
		1	2	3	4	5	6	
Current ratio	60	53.3	25.0	21.7				1.68
Working capital (% of assets)	44	22.7	56.8	20.5				1.98
Working capital percent	70	47.1	35.7	17.2				1.70
Other	14	71.4	14.3	14.3				1.43

Table 5: Ranking the importance of working capital measures of enterprises

Working capital measures	No. of answer sheets	Percentage assigned to each rank						Average rank
		1	2	3	4	5	6	
Accelerating collection of accounts receivable	81	55.5	35.8	6.2	2.5			1.55
minimizing investments in inventory	77	42.8	38.9	13.1	5.2			1.80
Minimizing bank balances	70	14.3	15.7	35.7	34.3			2.90
Gradual payment of accounts payable	45	6.70	13.3	33.3	46.7			3.20
Others	2	100						1.00

Table 6: Ranking techniques used in extending credits

Technique	No. of answer sheets	Percentage assigned to each rank						Average rank
		1	2	3	4	5	6	
C4 credits principles	49	61.2	20.00	18.8				1.57
Analysis of successive (sequential) credits	35	28.6	25.70	34.2	11.5			2.28
Credits rating	30	33.3	43.30	23.4				1.90
others	14	71.4	14.30	14.3				1.43

Table 7: Methods used to decide on the filling warehouses Company

Methods	Sample	Size		Profitability		Working capital procedure	
		Small	Large	Less	More	Official	Unofficial
Case decision	28.1	30.9	25.5	32.3	23.6	23	27.3
Industry guidelines	3.4	2.4	4.2	2.9	3.6	7.7	1.8
Price equilibrium models	9	9.5	8.5	8.8	9.1	7.7	9.1
Computer systems	52.4	4.52	59.6	52.9	60	53.8	58.2
Others	4.8	8.40	2.2	3.1	3.7	7.8	3.6
Chi-square statistic			1.27		0.06	0.13	
Significance level			0.26*		0.75*	0.78*	

Table 8: Status of Just in Time techniques (JIT)

Status	Sample	Size		Profitability		Working capital procedure	
		Large	Small	More	Less	Official	Unofficial
No plan to use	67.4	63.8	71.4	63.6	70.6	61.5	67.3
Using considerably	11.24	14.9	9.5	12.7	8.8	15.4	9.1
Using dubious results	15.76	12.7	16.6	12.7	17.6	7.7	18.2
Using optimal results	5.6	8.6	2.5	11.00	3.00	15.4	5.4
Chi-square statistic		4.21		76.10		1.04	
Significance level		0.122*		-0.33*		43.0*	

Table 9: Company's policies regarding cash discount offered by suppliers of goods

Status	Sample	Size		Profitability		Working capital procedure	
		Large	Small	More	Less	Official	Unofficial
We always use	7.51	53.20	47.6	52.700	47.0	53.8	47.0
We sometimes use	42.7	42.50	42.8	41.800	44.1	38.5	45.4
After the discount period, we do payments	5.6	2.10	8.5	1.800	8.8	-	9.0
We do not cash discount	-	-	-	-	-	-	-
Number of answer sheets	89.0	47.00	42.0	55.000	34.0	13.00	55.0
Chi-square statistic		0.45		21.000		32.00	
Significance level		0.57*		0.172*		0.69*	

\* Non-significant

Table 10: Initial use of short-term bank loans management

Status	Sample	Size		Profitability		Working capital procedure	
		Large	Small	More	Less	Official	Unofficial
Constant and regular use	56.2	57.4	54.7	58.2	55.9	61.5	56.4
Periodic use	10.1	10.6	9.5	9	11.7	7.7	10.9
Seasonal use (quarterly)	13.5	12.7	14.3	12.7	14.7	15.4	12.7
Using only if needed	20.2	19.3	21.5	20.1	17.7	15.4	20
Chi-square statistic		0.56		2.38		1.35	
Significance level		0.56*		0.214*		0.40*	

\* Non-significant

companies realize the accelerating collection of accounts receivable as the most crucial measure of working capital management.

The results of the management of accounts receivable are shown in Table 6. Accounts Receivable Management. The table shows that, Iranian companies use simple and traditional techniques for extending credits.

The results of inventory management are shown in Table 7 and 8. Table 7 shows that Iranian companies have more computer systems than other methods in inventory management. Table 8 shows that most of Iranian companies do not have any plan to use Just in Time (JIT) techniques to manage inventories and this is more intense in the Iranian companies.

As shown in Table 9, Iranian companies get more cash discount than US companies.

Table 10 shows that most of Iranian companies use short-term bank loans constantly and regularly. The Iranian companies use short-term bank loans more than US companies but less than Australian companies.

### CONCLUSION

This study investigates working capital strategies of Iranian firms. The results showed that the response rates to the questionnaire for Iranian companies are more than American and Australian companies. It can be due to the interval between research, high number of the sample companies as well as much volume of research in these countries, managers are tired of responding to questionnaires (Belt and Smith, 1991).

It also showed that most of Iranian companies use formal procedures much less than the research carried out by the Belt and Smith (1991) in America as well as Kori *et al* (1999) in Australia. On the other hand, most of the Iranian companies have unofficial procedures for working capital management.

The results indicate that in most Iranian companies, the type of procedure for the management of working capital is dependent on the existing circumstances and these findings are consistent with Belt and Smith (1991), as well Kori and coauthors. The results also suggest that

risk aversion of Iranian companies is more than Canadian and Australian companies but less than US companies. To sum up, it can be said that most of Iranian companies have risk averse and more conservative policies.

The results of the investigating accounts receivable management show that Iranian and Australian companies use simple and traditional techniques for extending credit, while US companies tend to employ new complex methods.

Also the results suggest that most of US companies have used Just in Time techniques (JIT), while most of the Iranian companies as Australian companies do not have any plans to use JIT to manage inventories.

In the process of doing scientific research, there are situations beyond the control of the researcher. More limitations of this study refers to the disadvantages of the questionnaire. Responder does not respond to all the questions correctly, or before returning the questionnaire to analysts, they would keep it for a long time.

Other disadvantages of questionnaires include: the lack of direct supervision of researchers, problem incomprehending the questions, the intervening variables that cannot be controlled by the researchers and the low percentage of returning. This not only limits the sample, but also affects the results, lowers the generalization of the results. It is recommended that while using the questionnaire on the other samples, company size and its profitability, the effect of other factors, such as financial leverage, growth, inflation and other economic variables to be controlled.

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