



MEASURING THE PROFITABILITY OF ARAB EAST INVESTMENT THROUGH WORKING CAPITAL MANAGEMENT

Prof. Basman Omar Al-Dalaeen
Professor, Al-Hussein Bin Talal University, Jordan

ABSTRACT

The present research has been undertaken to examine the impact of working capital management on the profitability of Arab East Investment. The period of the study is ten financial years from 2009 to 2018. Return on assets (ROA), return on equity (ROE), and return on capital employed (ROCE) have been used as the proxy variables of profitability. Current ratio, quick ratio, debtors turnover ratio, and inventory turnover ratio have been used as independent proxy variables for the working capital management. Multiple linear regression has been used as the statistical tool to investigate the impact of various independent variables on ROA, ROE, and ROCE. The findings show that there is a significant impact of working capital management on the profitability of Arab East Investment.

Keywords: working capital, current ratio, quick ratio, ROA, ROE.

INTRODUCTION

Working capital is the difference between two current assets and current liabilities. It is described as the capital available to meet the day-to-day operations. It is important because of it affects the firm's profitability (Saleem & Rehman, 2011). Working capital management is one of the most important functions of corporate management. It is central to the growth and survival of any business. The importance of working capital management in a business enterprise cannot be underplayed. Working capital is as inevitable in business as blood is in human body. It is important for creating wealth for shareholders (Tandel, 2015). The working capital management contributes to ensure that a firm is capable enough to continue

its day to day operations and it has sufficient ability to satisfy both short-term debt obligations and upcoming operational expenses (Madhavi, 2014). It helps in designing a framework to smooth the financial constraints of business so as make effective use of its resources. When working capital is managed improperly, allocating more than enough of it will render management non-efficient and reduce the benefits of short-term investments. However, if working capital is too low, the company may miss a lot of profitable investment opportunities or suffer short-term liquidity (Kolapo, Oke, and Ajayi, 2015).

Working capital management is considered to be a vital issue in a firm's overall financial management since it contributes in creating firms' value. Working capital approved the company's ability to continue its activities without endangering liquidity. It is very difficult for the management to estimate working capital properly because the amount of working capital varies across firms and over the periods depending upon the nature of the business, nature of raw material used, process technology used, nature of finished goods, degree of competition in the market, scale of operation, credit policy etc. The need for maintaining adequate working capital is imperative. The going concern ability of an organization is greatly anchored on the continued solvency of that organization (Karaduman, Akbas, Caliskan, & Durer, 2011)

Arab East Investment Company

Arab East Investment Company was established in the year 1996. It engages in the development and investment of real estate properties in the Hashemite Kingdom of Jordan. It is a Public Shareholding Company listed under the symbol (AEIV) in the Amman Stock Exchange (ASE)

with a capital of 4.5 million JD. The main objective of the company is investing in real-estate sector in Jordan. AEIV has grown more than 10 times its initial capital to reach 47 million JD as a paid up capital. AEIV is considered as one of the major land owners in Jordan, with a land portfolio of approximately 3000 Dunums (3,000,000) square meter. Due to the large areas of land in its portfolio and the variety of locations it owns; AEIV established many subsidiaries each of them own a unique area of land and location. Besides, it also provides training and consulting services, as well as invests in stocks and bonds.

LITERATURE REVIEW

Nejad et.al (2013) revealed significant inverse relationship between cash conversion cycle and its components, including the collection period, inventory turnover period and accounts payable turnover period, and profitability of the firms. **Hoque, Mia, and Anwar (2015)** in the research entitled, “*Working Capital Management and Profitability: A Study on Cement Industry in Bangladesh*” analyzed the profitability and working capital position of selected cement industries in Bangladesh. The study was based on secondary data. The authors used ratio analysis to show the profitability position & working capital position. Regression Analysis was used to show the impact of working capital management on profitability. Correlation matrix shows that there exists positive correlation between working capital efficiency and profitability ratios. Regression analysis results indicated that independent variables (CCC, ICP, DSO & CR) were statistically significant for explaining the variation of dependent variables (NPM & ROA) as well as coefficient of the regression equation shown that there exist negative β coefficient between dependent & independent variables of the model. Among the independent variables, negative β coefficient of DSO with dependent variables (NPM & ROA) is statistically significant at 5% level which means that if DSO decreases then NPM & ROA increases and when DSO increases then NPM & ROA decreases. Nonetheless, the profitability position and working capital management of the selected cement industries was not satisfactory and hence reduction in day sales outstanding (DSO) for improving their profitability position has been recommended by the author. **AI-**

Dalayeen (2017) examined the impact of working capital management on the profitability of three real estate companies namely Jordan Decapolis Properties, Al-Tajamouat for Touristic Projects Co Plc, Real Estate Development of Jordan. The author used ROCE as the dependent proxy variable for profitability whereas CR, ITR & DTR were used as independent proxy variable for working capital. The findings highlighted that (a) inventory turnover was very low in companies under study (b) debtor's turnover ratio was significant in Jordan Decapolis Properties (c) current ratio has insignificant relationship with the profitability of selected companies (d) debtors' turnover ratio was positively related with the profitability and has significant impact in Jordan Decapolis Properties (e) current ratio has significant impact on profitability in Al-Tajamouat. **Khan (2017)** in the study entitled, “*Effect of Working Capital Management On Firm's Profitability- A Comparative Study Of UltraTech Cement And India Cements*” examined the impact of working capital management on the profitability of UltraTech Cement and India Cements. The period of the study was five years from 2012-13 to 2015-17. Multiple linear regression was used for data analysis. The independent proxy variables for working capital are taken as current ratio (CR), inventory turnover ratio (ITR), and debtors turnover ratio (DTR) whereas ratio of ROCE (return on capital employed) was taken as dependent proxy variable for profitability. In UltraTech Cement, the value of R square was 0.897 and regression coefficients of all variables were statistically significant. On the contrary, the value of R square was 0.337 and regression coefficients of all variables were statistically insignificant in India Cements. The conclusion of the research was that there is a significant impact of working capital management on the profitability of UltraTech Cement but insignificant impact of working capital management on the profitability in India Cements.

RESEARCH GAP

A number of researches have been conducted in this field but not a single research is available on Arab East Investment in relation to working capital management. Besides, majority of the researches have taken ROA as the measure of

profitability. But, this study has taken ROA, ROE, and ROCE as the proxy variables of profitability for evaluating the effect of working capital management on the profitability of Arab East Investment.

OBJECTIVE OF THE STUDY

The objective of the Study is to examine the impact of working capital management on the profitability of Arab East Investment.

HYPOTHESES OF THE STUDY

H_{01} : There is no significant impact of working capital management on return on assets (ROA).

H_{a1} : There is no significant impact of working capital management on return on assets (ROA).

H_{02} : There is no significant impact of working capital management on return on equity (ROE).

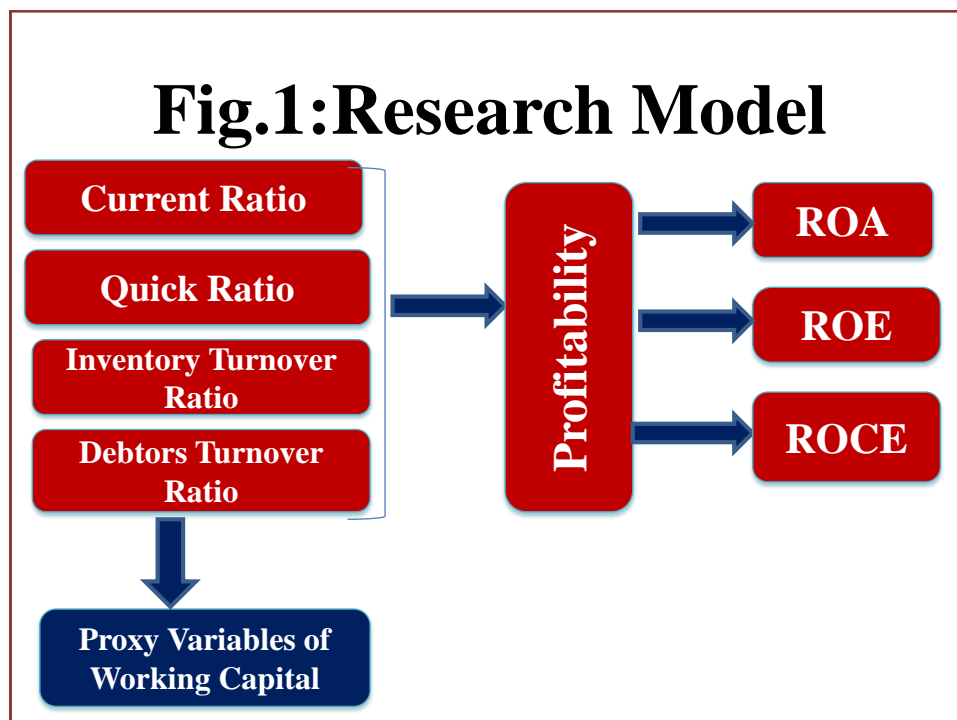
H_{a2} : There is a significant impact of working capital management on return on equity (ROE).

H_{03} : There is no significant impact of working capital management on return on capital employed (ROCE).

H_{a3} : There is a significant impact of working capital management on return on capital employed (ROCE).

RESEARCH METHODOLOGY

The study is based on secondary data and therefore annual reports of Arab East Investment were approached and calculations were made out of it. The period of the study taken in this research is ten years which ranges from financial year 2009 to 2018. The study used multiple linear regression to examine the impact of various proxy variables of working capital on ROA, ROE, and ROCE. Figure 1 highlights the research model of the study. The independent proxy variables for working capital are taken as current ratio (CR), quick ratio, inventory turnover ratio (ITR), and debtors turnover ratio (DTR). However, ratio of return on assets (ROA), ratio of ROE (return on equity), and return on capital employed (ROCE) are taken as dependent proxy variables for profitability



Source: Designed by the researcher

HYPOTHESES TESTING

H_{01} : There is no significant impact of working capital management on return on assets (ROA).

H_{a1} : There is a significant impact of working capital management on return on assets (ROA).

Table 1: Multiple Regression Analysis
[Dependent Variable: Return on Assets]

Model 1	Variables	Regression Coefficient	T Value	P Value
X ₁	Current Ratio	0.554	11.521	0.000
X ₂	Quick Ratio	0.629	2.698	0.003
X ₃	Inventory Turnover Ratio	0.337	-4.577	0.008
X ₄	Debtors Turnover Ratio	0.228	26.685	0.006
	R	0.856		
	R Square	0.732		
	Adjusted R Square	0.726		
	Standard Error	52.254		
	ANOVA (Model Fitness)	F Value: 62.967; P Value: 0.005*		

Source: Output of SPSS_20

* Significant at 5% level

Multiple linear regression analysis has been used to measure the impact of working capital management (independent variable) on ROA. Table 1 shows the results of multiple regression. The value of adjusted R square is 0.726 which means 72.6 percent variation in ROA is explained by various independent variables and rest of the variation ($1-R^2$) is an unexplained variation due to other variables. ANOVA shows the model fitness. The value of F is 62.967 and P value is 0.005 which means that all the

variables exactly fulfilled the criteria of model accuracy. Besides, the value of unstandardized beta coefficient on the variable current ratio is 0.554 which means that one unit change in current ratio brings 0.554 units change in ROA. All regression coefficients are statistically significant at 95 percent confidence interval. Therefore, the null hypothesis stands rejected and it can be said that there is a significant impact of working capital management on return on assets (ROA).

H₀₂: There is no significant impact of working capital management on return on equity (ROE).

H_{a2}: There is a significant impact of working capital management on return on equity (ROE).

Table 2: Multiple Regression Analysis
[Dependent Variable: Return on Equity]

Model 2	Variables	Regression Coefficient	T Value	P Value
X ₁	Current Ratio	0.601	-2.551	0.001
X ₂	Quick Ratio	0.599	19.525	0.000
X ₃	Inventory Turnover Ratio	0.507	1.705	0.000
X ₄	Debtors Turnover Ratio	0.413	4.448	0.002
	R	0.901		
	R Square	0.811		
	Adjusted R Square	0.804		
	Standard Error	67.852		
	ANOVA (Model Fitness)	F Value: 29.544; P Value: 0.000*		

Source: Output of SPSS_20

* Significant at 5% level

Multiple linear regression analysis has been used to measure the impact of working capital management on ROE. Table 2 shows the results of multiple regression. The value of adjusted R square is 0.804 which means 80.4 percent

variation in ROE is explained by various independent variables and rest of the variation ($1-R^2$) is an unexplained variation due to other variables. ANOVA shows the model fitness. The value of F is 29.544 and P value is 0.000

($P < 0.05$). It means that all the variables exactly fulfilled the criteria of model accuracy. Besides, the value of unstandardized beta coefficient on the variable quick ratio is 0.599 which means that one unit change in quick ratio brings 0.599 units change in ROE. All regression coefficients

are statistically significant at 95 percent confidence interval. Therefore, the null hypothesis stands rejected and it can be said that there is a significant impact of working capital management on return on equity (ROE).

H₀₃: There is no significant impact of working capital management on return on capital employed (ROCE).

H_{a3}: There is a significant impact of working capital management on return on capital employed (ROCE).

Table 3: Multiple Regression Analysis
[Dependent Variable: Return on Capital Employed]

Model 3	Variables	Regression Coefficient	T Value	P Value
X ₁	Current Ratio	0.552	5.504	0.000
X ₂	Quick Ratio	0.404	-3.037	0.000
X ₃	Inventory Turnover Ratio	0.362	13.524	0.001
X ₄	Debtors Turnover Ratio	0.399	6.681	0.000
	R		0.785	
	R Square		0.616	
	Adjusted R Square		0.609	
	Standard Error		49.685	
	ANOVA (Model Fitness)		F Value: 72.277; P Value: 0.001*	

Source: Output of SPSS_20

* Significant at 5% level

Multiple linear regression analysis has been used to measure the impact of working capital management on ROCE. Table 3 shows the results of multiple regression. The value of adjusted R square is 0.609 which means 60.9 percent variation in ROCE is explained by various independent variables and rest of the variation ($1 - R^2$) is an unexplained variation due to other variables. ANOVA shows the model fitness. The value of F is 72.277 and P value is 0.001 ($P < 0.05$). It means that all the variables exactly fulfilled the criteria of model accuracy. Besides, the value of unstandardized beta coefficient on the variable quick ratio is 0.599 which means that one unit change in quick ratio brings 0.599 units change in ROCE. The values of regression coefficients on ITR and DTR are 0.362 and 0.399. All regression coefficients are statistically significant at 95 percent confidence interval. Therefore, the null hypothesis stands rejected and it can be said that there is a significant impact of working capital management on return on capital employed (ROCE).

CONCLUDING REMARKS

Working capital is as inevitable in business and its management is central to the growth and survival of business. It approved the company's ability to continue its activities without endangering liquidity. The working capital management helps in designing a framework to smooth the financial constraints of business so as to make effective use of its resources. The current study is based on secondary data and therefore annual reports of Arab East Investment Company were approached and calculations were made out of it. The period of the study is ten years from 2009 to 2018. The study used multiple linear regression to examine the impact of various proxy variables of working capital on ROA, ROE, and ROCE. The independent proxy variables for working capital are taken as current ratio (CR), quick ratio, inventory turnover ratio (ITR), and debtors turnover ratio (DTR). However, ratio of return on assets (ROA), ratio of ROE (return on equity), and return on capital employed (ROCE) are taken as dependent proxy

variables for profitability.

The findings highlighted that 72.6 percent variation in ROA is explained by independent variables and rest of the variation ($1-R^2$) is an unexplained variation. All regression coefficients are statistically significant and hence there is a significant impact of working capital management on return on assets (ROA). Furthermore, 80.4 percent variation in ROE is explained by various independent variables and rest of the variation ($1-R^2$) is an unexplained variation. Besides, all regression coefficients are

statistically significant and it can be said that there is a significant impact of working capital management on return on equity (ROE). Nevertheless, on the dependent variable ROCE, 60.9 percent variation is explained by various independent variables and the rest of the variation ($1-R^2$) is an unexplained variation. Besides, the values of all regression coefficients are statistically significant and it can be said that there is a significant impact of working capital management on return on capital employed (ROCE) in Arab East Investment company.

Table 4: Summary of Hypothesis Testing

No	Hypothesis	Results
1	There is no significant impact of working capital management on return on assets (ROA).	Rejected
2	There is no significant impact of working capital management on return on equity (ROE).	Rejected
3	There is no significant impact of working capital management on return on capital employed (ROCE).	Rejected

SCOPE OF FURTHER RESEARCH

There are various research issues which have not been addressed in this study and need further investigation. The present study is restricted to Arab East investment Company alone. Hence, studies can be undertaken in other companies and a comparative study across companies can also be attempted. Besides, other measures of working capital can also be considered other than the measures like current ratio, liquidity ratio, inventory turnover ratio, and debtors turnover ratio used in this study.

REFERENCES

- Al-Dalayeen, B. (2017). Working Capital Management and Profitability of Real Estate Industry in Jordan-An Empirical Study. *Journal of Applied Finance & Banking*, Vol.7, Issue 2, 49-57. Retrieved from http://www.scienpress.com/Upload/JAFB/Vol%207_2_3.pdf
- Annual Reports of ITC Limited, 2007-08, 2008-09, 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17.
- Bankapure, D.G. (2012). Working Capital Management in Hotel Industries in Pune. *Unpublished Doctoral Thesis*, Research Centre, Vaikunth Mehta National Institute of Co-Operative Management, The University Of Pune, Pune, Maharashtra, India.
- Deloof, M. (2003). Does Working Capital Management Affect Profitability of Belgian Firms? *Journal of Business, Finance and Accounting*, 30(3/4), 573-587. Retrieved from <http://dx.doi.org/10.1111/1468-5957.00008>
- Hoque, M.A., Mia, M.A. and Anwar, M.R. (2015). Working Capital Management and Profitability: A Study on Cement Industry in Bangladesh. *International Journal of Information Technology and Business Management*, Vol. 36, No.1, 82-96.
- Karaduman, H. A., Akbas, H. E., Caliskan, A. O., & Durer, S. (2011). The Relationship Between Working Capital Management And Profitability: Evidence From An Emerging Market. *International Research Journal of Finance and Economics*, 62, 61-67.
- Khan, M.Y. and Jain, P.K. (2014). *Financial Management*, 10th Edition, Tata McGraw Hill Publishing Company, New Delhi.

8. Khan, A. (2017). Effect of Working Capital Management on Firm's Profitability-A Comparative Study of UltraTech Cement and India Cements. *Worldwide Journal Multidisciplinary Research and Development*, Vol. 3, Issue 12, 449-453. Retrieved from https://wwjmr.com/upload/effect-of-working-capital-management-on-firms-profitability--a-comparative-study-of-ultratech-cement-and-india-cements_1515410978.pdf
9. K. Madhavi. (2014). Working Capital Management of Paper Mills. *International Journal of Research in Business Management*, Vol.2, Issu.3, pp.63.72. Retrieved from [http://www.Impactjournals.us/download.php?fname=2-78-1394617190-7.%20Manage Working % 20 Capital %20 Management%20of%20Paper%20Mills-K%20Madhavi.pdf](http://www.Impactjournals.us/download.php?fname=2-78-1394617190-7.%20Manage%20Working%20Capital%20Management%20of%20Paper%20Mills-K%20Madhavi.pdf)
10. Kolapo, F.T., Oke, M.O. and Ajayi, L.B. (2015). Effect of Working Capital Management on Corporate Performance: Cross-Sectional Evidence from Nigeria, *IOSR Journal of Business and Management (IOSR-JBM)*, Vol. 17, Issue 2.Ver. III, 93-103. Retrieved from <http://iosrjournals.org/iosr-jbm/papers/Vol17-issue2/Version3/J0172393103.pdf>
11. Mathuva, D. M. (2009). The Influence of Working Capital Management Components on Corporate Profitability: A survey on Kanyan Listed Firms. *Research Journal of Business Management*, Vol. 3, 1-11. Retrieved from <http://docsdrive.com/pdfs/academicjournals/rjbm/2010/1-11.pdf>
12. Maheshwari, M. (2014). Measuring Efficiency and Performance of Selected Indian Steel Companies in the Context of Working Capital Management. *Pacific Business Review International*, Vol. 6, Issue 11, 18-23.
13. Nejad et.al. (2013) Effect of Working Capital Management on the Profitability of Listed Companies in Tehran Stock Exchange. *Ac. J. Acco. Eco. Res.* Vol. 2, Issue 4, 121-130.
14. Saleem, Q. & Rehman, R. (2011). Impacts of Liquidity Ratios on Profitability (Case of Oil and Gas Companies of Pakistan). *Interdisciplinary Journal of Research in Business*, 1(7), 95-98.
15. Tandel, S.G. (2015). A Study of Working Capital Management In Indian Iron & Steel Industry. *Unpublished Doctoral Thesis*, Faculty of Commerce, Saurashtra University, Rajkot, Gujarat, India.
16. Vijayakumar, A. & Karunaiathal, A. (2014). Impact of Corporate Leverage on Profitability: Evidence from Indian Paper Industry. *Indian Journal of Applied Research*, 4(11), 136-141.