Tracing The Impact of Cash Conversion Cycle on Firm's Profitability Applied Study on Egyptian Stock Market

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Abstract

The paper is aiming at assessing the effect of cash conversion cycle on firm profitability. Three components are used to measure cash conversion cycle (CCC); average collection period (ACP), average inventory period (AIP) and average payable period (APP). Henceforth, cash conversion cycle and its determinants are taken as independent variables. The dependent variable is profitability being measured by return on asset (ROA) and return on equity (ROE). For the period 2016-2020, data was collected from companies listed on the EGX, regression models are used to test the Hypothesis with a sample of seven firms from various industries. The paper's results are consistent to those of (Telly & Ansori, 2019), and (Rizky & Mayasari, 2018) showed that, the average collection period and average inventory period have an inverse association with the firm's profitability (ROA), with the exception of the average payable period.

Keywords: Cash Conversion Cycle - Profitability - Return on Asset - Return on Equity.

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Introduction

The growing in business world today, and rivalry between companies, in particular between similar companies, will be stricter. Maintaining the survival of the business in the face of intense competition, well controlled management and management of resources is necessary. In addition to being necessary for the management to be able to organize the usage of resources owned by the organization effectively and efficiently is also important to be able to make decisions that will help the achievement of organizational objectives in the future. The company strives to always be one step ahead of its competitors in order to accomplish the purpose of the company, namely to achieve profitability as much as possible in order to ensure its existence.

Organizations have often considered the amount of days it would take them to turn revenues to cash. The duration can have an effect on the profitability of such organizations in terms of the return on the asset. The ability of companies to assess the days of inventory or stock sales, which is the cash management, to achieve successful profitability in terms of return on the asset. Firm has the potential to continue operating with adequate cash flow to finance both the maturation of short-term debt and the anticipated operating expenses. It therefore requires important decisions on several aspects, including the management of accounts payable and receivable, the maintenance of a certain amount of inventories and the investment of accessible cash.

The Cash Conversion Cycle is one of the measures of Working Capital Management which is the time period needed by the company as the raw material purchased is paid to the accounts receivable from the collection of collectible goods. Cash Conversion Cycled can be said to be adequate to reinforce short-term financing decisions, in particular to figure out how the company's strategy is to resolve the cash deficit, whether by holding back the debt or by accelerating the collection time of its debts. CCC is used to calculate how long a corporation will receive cash from the company's financial profits, which would eventually impact the amount of money required to deposit into its existing assets (current assets). This condition would undoubtedly have an effect on the management of assets and liabilities in the company, which depends on the profitability of the company. The profitability of the company will always have a partnership with (CCC) that will show the company how long it will take to adjust or repay the cash used for operating activities in cash.

Cash Conversion Cycle is an important method for estimating how effectively businesses handle their working capital.

Profitability is one indicator of the company's success that can be calculated in ratios to describe the company's ability to produce income across the company. The company's capabilities and resources, such as sales, cash, money, number of employees, number of branches, and so on. Profitability ratios are used to assess the efficiency of management as a whole on the basis of the amount of profit received as a result of the return on working capital, revenue and expenditures calculated as a percentage. Profitability will indicate how good the company's future prospects are in sustaining its existence or improving its business. The higher the profitability levels of a company, the more the company will be able to produce profits that indicate The Company's prospect of sustaining its existence and expanding its market is stronger. Companies with strong prospects would certainly attract investors to invest in the business as well.

Aim of this paper is to observe the impact of cash conversion cycle which is considered as an important tool used by management to measure the company's ability to perform working capital management as ccc is one of the key metrics of WC, on the firms profitability as a practical aspect, and how is compatible with the theoretical aspect.

Previous researchers on the relationship between cash conversion cycle and firm's profitability have focused on general relationships. Some observed that there is strong negative relationship between ccc and profitability (Anser & Malik, 2013) ,(Attari & Raza, 2012), (Chand et al., 2019) , (Hashini & A.M.C, 2019), (M. Nguyen, 2017) ,(Nwude et al., 2018) ,(Olorunfemi et al., 2020), (Rafiq et al., 2019), (Rizky & Mayasari, 2018), (Shah, 2016) and (Sugathadasa, 2018) others considered that there is positive relationship (Qazi et al., 2011), (Samosir, 2018), (Sharma & Kumar, 2011), (Zakari & Saidu, 2016) and finally there are researchers consideredthat there is no relationship between cash conversion cycle and profitability of firms such as (Al-Abass, 2019) , (Al-Shubiri & Aburumman, 2013), (Yilmaz & Acar, 2019), Based on these considerations the research problem could be summarized in the following question:

What is the impact of cash conversion cycle on firm's profitability?

Many studies have reported the correlations between CCC and profitability, the results have been mixed and non-conclusive. In view of these inconsistent findings,

it is crucial to test the relationship between CCC (AIP, ACP, and APP) and profitability (ROE and ROA) to see if it is positive, negative or neutral, especially for specific industries. In theory, if firms can sell their inventories, collect money from customers quickly, and delay paying their suppliers; it will save costs and as aresult increase the profits. As such, the following hypothesis is proposed:

H1: Cash conversion cycle has a significant effect on firm's ROE.

H2: Cash conversion cycle has a significant effect on Firm's ROA.

Different results were provided as articlesvaried between there is positive, negative and no effect of CCC on Firm's profitability from the period (2011-2020). (Marisetty & Madasu, 2020), they found various aspects of the cash conversion cycle and its effect on profitability related to non-financial companies established in the SENSEX S&P BSE (Bombay Stock Exchange) Index in India during the period 2006-2020. The main purpose of their research was to explore the factors that influence the cash conversion cycle and the statistically important effect on the profitability of companies in the nature and size of the organization, they used DIT, DRO, and DPO to measure the cash conversion cycle and used ROCE, ROE, ROA, D/E Ratio and firm cycle to evaluate firm's profitability.

They used regression analysis in their studies so the result showed that there was a significant negative impact of cash conversion cycle on profitability of the firm. (Iqbal et al., 2020), they tested the impact of the cash conversion cycle on the company's profitability. The data was obtained using pooled data comprising a sample of 10 companies listed on PSX for the period 2010-2018 from two manufacturing sectors such as Oil & Gas and Engineering. For analysis, regression and correlation approaches were used. For the calculation of cash conversion periods (CCC), three components were used: average receivable period (ARP), average inventory period (AIP) and average payable period (APP).

The findings revealed that the lower the number of CCC days, the greater the profitability of the organization. A strongly negative major association exists between CCC and the profitability of the organization as ROA. (Olorunfemi et al., 2020), they observed the effect of the Cash Conversion Cycle (CCC) on the profitability of Nigeria's selected food and beverage companies. Fiveyears from 2014 to 2018 have been included in the paper. During the paper period, there were

43 food and beverage companies listed on the Nigerian stock exchange. Based on the criteria and the sample size of ten (food and beverage firms in Nigeria),the paper used significant sampling techniques to select the sample. The paper useda panel regression and assessed the data using a 9.00 e-view statistical package. Theresults said that the Cash Conversion Cycle (CCC) had a significant negative relationship with profitability (as calculated by ROA). (Saraswatia & Bernawatib, 2020), their research had shown how the cash conversion period and firm size affects the profitability of manufacturing firms. In the period 2011-2013, the data used were 309 companies listed on the Indonesian Stock Exchange, which had positive profit and equity.

The cash conversion period and firmsize, calculated by the natural logarithm (Ln) of the total assets, was the independentvariable of this analysis, while profitability was the dependent variable as measuredby Return on Asset and Return on Equity. The findings showed that the cash conversion period had a negative impact on the company's profitability. (Telly & Muslim Ansori, 2019), their research designed to evaluate the impact of firm sizeand Cash Conversion Period on profitability of manufacturing companies listed on the Indonesian Stock Exchange, during the period from 2013 to 2015. The size of the company and the Cash Conversion Period became independent variable, while the dependent variable was the profitability calculated by ROA (Return on Asset). A multiple regression analysis was used to evaluate the hypothesis in this paper.

Theresults of the analysis showed that the first hypothesis of firm size did not affect theprofitability of the company. The second hypothesis was the effect of Cash conversion Cycle on profitability. (Rafiq et al., 2019), in their paper, they expected the effect of modified cash; the conversion cycle (CCC) on the income of companies in three separate sectors of Pakistan, including the automotive, pharmaceutical and cement industries. It used panel data from 2009 to 2018 using a panel regression model to evaluate data for 14registered companies operating in three different industries. The dependent variable was profitability of the firm represented as earning per share. Independent variable was modified cash conversion cycle, and control variables were size, debt ratio andgrowth of a firm. The major results provided empirical evidence that the cash conversion cycle substantially affects profitability. (Hashini & A.M.C, 2019), aimed to identify the impact of CCC on profitability of selected corporations in Sri Lanka. The

profitability of corporations was measured in terms of Return on Equity (ROE) and Return on Assets (ROA) while CCC was measured by Inventory Conversion Period (ICP), Debtor Conversion Period (DCP), and Payable Conversion Period (PCP) considering the financial data for two years period from 2015 to 2016. By considering the results it revealed that ICP and DCP had positive strong relationship with the profitability.by using regression he had found that the PCP were negatively affected to the ROE and ROA. According to his paper CCC was negatively correlated with the profitability and CCC had a significant effect on profitability. (Yilmaz & Acar, 2019), They used the cash conversion cycle (CCC) and its components as the measure of working capital management and used different profitability ratios such as gross profit margin, EBIT margin, and return on assets (ROA) to determine the impact of ccc on firms profitability. By using the data from 66 non-financial companies for a four-year period from 2013 to 2016, dynamic panel data analysis was performed. The generalized method of moments (GMM) to test how WCM affected profitability was applied. Results showed that CCC had nonlinear significant effect on GPM and EBITM, whereas, among its components, only Accounts Payable Days (APD) had a significant effect on GPMand EBITM. However, ROA was not affected by CCC and its components. (Al-Mohareb, 2019) considered the impact of working capital management and its components on profitability as a practical aspect, and how was it compatible with the theoretical aspect.

Also, he studied other financial factors that may affect profitability by using a sample of Jordanian manufacturing firms listed in the Amman Stock Exchange for the period (2016-2018). The results showed that there was a significant relationship between the cash conversion cycle- which was considered as a proxy of working capital management- and profitability of the manufacturing firms. (Chand et al., 2019), they had observed the impact of working capital management (cash conversion cycle) on firm profitability and offered a comparison between seasonal and non-seasonal businesses of Pakistan by using the time period of 5 years(2013-2018). They recommended reducing the length of cash conversion cycle to increase profitability. (Rizky & Mayasari, 2018), purpose of their paper was to explore the impact of Cash Conversion Cycle on firm profitability of retail companies listed in the Indonesian Stock Exchange for the period of 2012-2015. Their paper used purposivesampling; therefore the data included was 76 observations covering 19

firms in 4 years period. The hypothesis testing used was the panel data regression. The resultsindicated that CCC had negative effect on firm profitability. The short cycle of CCCwill increase firm profitability. (Samosir, 2018), aimed to provide empirical evidence about effect of cash conversion cycle, firm size, and firm age to profitability. The population in this research was manufacturing companies listed in Indonesia Stock Exchange (BEI) inthe period 2012-2014.

With total sample of 101 companies and total of as many as 303 samples of whole observation. He used panel data regression in his paper. Theresults indicated that the variable cash conversion cycle, firm size, firm age had positive effect on the variable return on assets. (Sugathadasa, 2018) examined the relationship between the cash conversion cycle and profitability of the manufacturing sector organizations listed on the Colombo Stock Exchange. The paper collected data for a period of 5 years from 2013 to 2017 for 10 listed companies operating in the manufacture of electrical appliances using a stratified sampling process. Regression Analysis was performed to test the two-linear multiple regression model. The identified variables for this paper were inventory conversion period, receivable conversion period and payable conversion period collectively to calculate the cash conversion duration as a proxy for independent variables while asset returns and equity returns as a proxy for dependent variables. The results found that there were positive correlation betweeninventory conversion period and receivable conversion period while negative correlation between payable conversion periods on ROA as one measure of profitability. There was negative correlation between all the components of cash conversion cycle and ROE. (L. Nguyen & Mohanlingam, 2017) examined the relation between cash conversion cycle and firms profitability that existed in the agriculture and food industries in Thailand. They aimed to inspect the effect of production cycle, cash collection cycle, and cash payment cycle on profitability.

In addition, they alsoaimed to measure the influence of control variables such as size and debt ratios have on profitability.by using data of 34 listed companies in agriculture and food industryin the Stock Exchange of Thailand from 2009 to 2013, Pearson's correlation and theregression analysis approach were used to observe the relationship between cash conversion cycle and profitability. The outcomes showed that cash conversion cycle (CCC) had a significant inverse relationship with profitability in the agriculture andfood companies in Thailand. (Nwude et al., 2018)

studied the impact of the CCC on the return on assets forthe duration of (2000–2011) of selected Nigerian insurance companies. Data were obtained from the sampled insurance companies' annual financial reports. For testingthe hypothesis, multiple regression techniques were used. The dependent variable was ROA. The explanatory variable was CCC. The current ratio, debt asset ratio, fixed financial total asset ratio, growth and size were all incorporated in the model as control variables. The results showed that CCC had negative and significant effect on profitability. (Tsagem et al., 2018), investigate the relationship betweenthe cash conversion period and the performance of SMEs in Nigeria. They used panel data regression analysis using financial data from a sample of 311 Nigerian SMEs for the period 2007-2013.The research findings showed that cash conversion,inventory holding period and accounts payable period had a negative relationship with profitability of SMEs and that account receivables period had a statistically significant negative relationship with SMEs profitability. (Sin-Huei Ng et al. 2017), aimed to observe the impact of working capital management from the aspects of aggressive working capital policy and efficiency ofworking capital management. For the six years 2007 to 2012, the data were derivedfrom the annual reports of 122 companies listed in the Industrial Goods sector of Bursa Malaysia main board for defining the relationships between working capital variables and gross operating income of companies. In order to consider, theworking capital relationship and the profitability of the firm, the multiple regressionanalysis that uses pooled panel data over 6 years with 732 company year observations was then applied. The paper found that the period of cash conversion was positively related to gross operating income. It had shown that an improvementin the time of inventory conversion was good for the profitability of businesses. Companies may also improve profitability by reducing accounts receivables collection period. (AL-ABASS, 2019), focused on checking the length of cash conversion cycle with respect to the size of the firms and examining the length of CCC with respect to the profitability of the firm. For the purpose of research, the data was collected from the listed companies of Karachi Stock Exchange (KSE) over the period of 2012-2016. Descriptive statistics of the paper showed that all firms of thesample have satisfactory Cash conversion cycle but Tobacco sector was at number one with the lowest value of Cash conversion cycle. The Pearson correlation and regression analysis was conducted for the empirically testing of the results. The results of the paper showed that the

relationship of Cash conversion cycle with profitability and size was insignificant. It means that the Cash conversion cycle wasnot due to the firm size and the favorable answer was that it had not positive impacton the profitability of the firms. (Zakari & Saidu, 2016), their paper was to empirically find the influence of cash conversion cycle on corporate profitability of the ICT firms listed on the floor of theNigerian Stock Exchange. Data were gathered from all the listed firms from 2010 to2014. The data were analyzed using multiple linear regression analysis and the robustness check showed that the data were normal. The outcomes indicated a significant positive relationship between cash conversion cycle and corporate profitability. (Oseifuah & Gyekye, 2017) explored the Cash Conversion Cycletheory to examine the impact of working capital management efficiency and its separate components on the profitability. by using sample of 75 non-financial firms listed on the Johannesburg Stock Exchange (JSE), Panel data regressionmethodology was used to paper financial data obtained from I-Net Bridge and BF McGregor for the 10year period, 2003 to 2012 to determine the nexus between working capital management and profitability (proxied by return on assets). the paper outcomes were consistent with the CCC theory that: 1) existing a negative relationship between working capital management and corporate profitability; 2) existing a negative relationship between inventory conversion period andprofitability; 3) there was a negative relationship between accounts receivables conversion period and profitability; and 4) there was a positive relationship betweenaccounts payable deferral period (PDP) and profitability. (Shah, 2016) investigated the impact of working capital management on firms' profitability under different business cycles in 65 non-financial firms listed onKarachi stock exchange of Pakistan by using the annual panel data for 10 years fromthe period of 2004 to 2013. They used Pedroni panel co-integration and Kao residualpanel co-integration approaches to check the valid long run relationship between considered variables. The result of regression analysis showed that the significant negative relationship exists between cash conversion cycle and its components withfirms' profitability. (Majanga, 2015), inspected the relation between the company's liquidity measured by the length of cash conversion cycle, and its profitability measured by return on capital, the paper used data from sample of twelve Malawian manufacturing firms from 2007 to 2015 using correlation and regression test. The paper showed that there was an inverse relationship between the cash conversion cycle and the company's return on

investment and returns on equity, and provided indication that the cash conversion cycle, a measure of business liquidity, had an impact on a firm's performance. (Yazdanfar & Öhman, 2014), the purpose was to explore the impact of cash conversion cycle (CCC) profitability in Swedish small and medium-sized enterprises (SMEs) over the period of 2008-2011. The paper used a seemingly unrelated regression (SUR) model to analyze cross-sectional panel data covering 13,797 SMEs operating in four industries. The paper provided empirical evidence that CCC significantly affects profitability. In addition, the firm-level control variables size, age, and industry affiliation significantly affect firm profitability. Results suggested that managers could increase firm profitability by improving their working capital management and those firms with longer CCCs were less profitable. (Al-Shubiri & Aburumman, 2013) paper examined the relationship between cashconversion cycle and financial characteristics. A sample of Jordanian different industrial sector of 11 was selected covering the period 2005-2011 listed on the Amman Stock Exchange (ASE). Paper used a quantitative methodology analysis. The consequences of this paper indicated that there was statistically significant and positive relationship between cash conversion cycle and independent variables, suchas: debt, market, productivity, liquidity and dividends indicator at different significant level 1% and 5%, and the size indicator is weak relationship with significant level at 10% and there was no significant relationship with profitability indicator and cash conversion cycle. (Anser & Malik, 2013) was concerned about estimating how cash conversioncycle affected the profitability of manufacturing sector organizations listed at Karachi stock exchange of Pakistan. Paper took into consideration 5 years financialstatements data starting from 2007 to 2011. Regression results to examine the impactof length of cash cycle management on profitability showed that cash conversion cycle was having significantly inverse association with both return on assets and equity showing that lesser the cash conversion cycle greater would be the profitability measured through return on assets and equity. (Panigrahi, 2013) was conducted with the purpose to look into the association of the cash conversion cycle with the size and profitability of the firm. Paper took into consideration top five Indian cement companies for a period of 10 years starting from 2001 to 2010. Regression results showed that there was positive relationship between cash conversion cycle and both return on assets and equity andthere was a negative relationship between cash conversion cycle and firms profitability. (Murugesu,

2013), paper was an attempt to observe the effect of cash conversion cycle on profitability in ten listed plantation companies in Sri Lanka between 2008 and 2012. Results showed that there was negative relationship between return on equity and cash conversion cycle. Cash conversion cycle also had negative impact on Return on asset. Cash conversion cycle had negative impact on net profit. Therefore, the effect of cash conversion cycle on total profitability as whole contained significant value. (Attari & Raza, 2012), paper was conducted with the purpose to look into the relationship of the cash conversion cycle with the size and profitability of the firmsin the four specific manufacturing sectors listed at Karachi Stock Exchange. The data was collected from the annual reports of 31 sampled firms out of the total firmsin the related sectors i.e. 143 covering the period of 2006- 2010. The data analysis was conducted by using One-Way ANOVA and Pearson correlation techniques. TheCCC length was measured by calculating accounts receivable, inventory and accounts payable. Firm size was measured in terms of values of total assets and totalsales. Profitability was measured in terms of return on assets and return on equity. There was a significant negative correlation between the CCC and the firm size in terms of total assets, and negative correlation between CCC and profitability in termsof return on total assets. (Sharma & Kumar, 2011), the main purpose of this article was to observe the effectof working capital on profitability of Indian firms. They collected data about a sample of 263 non-financial BSE 500 firms listed at the Bombay Stock (BSE) from2000 to 2008 and evaluated the data using OLS multiple regression. The paper further revealed that inventory of number of days and number of days accounts payable was negatively correlated with a firm's profitability, whereas number of days accounts receivables and cash conversion period showed a positive relationshipwith corporate profitability. (Qazi et al., 2011), they studied the relationship between working capital management and profitability of firms. Working capital was made by the three important factors, debtor, creditor and stock. When they included cash conversion cycle (CCC) to working capital then it became working capital management (WCM). Two sectors were selected as a sample size: automobile and oil and gas sector. The time period was from 2004 - 2009. Different variables affected the profitability of firms were selected. In this paper, networking capital, inventory turnover in days, average account receivable and financial asset to total assets weretaken as independent variables. The outcomes indicated positive movement of working capital

management on firm's profitability.

After reviewing the previous studies, it's obvious that most of it is focusing on cash conversion cycle and its relationship with firm's profitability by taking sampleof larger firms & SMES, also on different industries. There were three main debates as some researchers found there was positive relationship between cash conversion cycle and firms profitability (Qazi et al., 2011), (Samosir, 2018), (Sharma & Kumar, 2011), (Zakari & Saidu, 2016) while others found there was negative relation between cash conversion cycle and firms profitability (Anser & Malik, 2013) , (Attari & Raza, 2012), (Chand et al., 2019), (Hashini & A.M.C, 2019), (Nguyen et al. 2017), (Nwude et al., 2018), (Olorunfemi et al., 2020), (Rafiq et al., 2019), (Rizky & Mayasari, 2018) , (Shah, 2016), (Sugathadasa, 2018) and some researchersfound there was no significant relation between cash conversion cycle and firms profitability as CCC had no impact on profitability of firms (AL-ABASS, 2019), (Al-Shubiri & Aburumman, 2013), (Yilmaz & Acar, 2019).There is a Gap in the Egyptian stock exchange context in exploring the impact of cash conversion cycle on firm's profitability. This paper will try to capture the impact of CCC on Egyptian firm's profitability during the period from 2013 to 2019.

Data Analysis

The analysis of this paper was done using the statistical package for social sciences (SPSS V26) for bothdescriptive and inferential statistics. Section one provides a presentation of some descriptive statistics for the selected variables. Section two offers the hypothesis testing through multiple regression analysis. Descriptive statistics for the selected variables were calculated and reported in table (1). These statistics are the minimum (Min), maximum (Max), mean (M), standard deviation (SD), and coefficient of variation.

Table (1): Descriptive Statistic for the Selected Variables

Variable	Symbol.	Min	Max	Mean	SD	CV
AIP	x11	36.6	867.6	172.036	104.6789	60.85%
ACP	x12	0	717.29	155.0441	141.5542	91.30%
APP	x13	25.22	588.77	208.6335	116.1895	55.69%
CCC	X1	-298	798.4	118.4466	237.7453	200.72%
Firm size	X2	7.48	10.6	9.278	0.74961	8.08%
Leverage	X3	1.1	8.5	2.62	1.43752	54.87%
ROE %	Y1	-7.4	18.91	3.3779	4.21359	124.74%
ROA %	Y2	-14	52	3.3369	7.10652	212.97%

The basic descriptive statistics for the dependent variables "ROE" were($M = 3.378$, $SD = 4.214$, $CV = 124.74\%$), and for "ROA" were ($M = 3.337$, $SD = 7.106$, $CV = 212.97\%$), while for the independent variables "AIP" wehave ($M = 172.036$, $SD = 104.679$, $CV = 60.85\%$), for "ACP" we have ($M = 155.04$, $SD = 141.55$, $CV = 91.30\%$), for "APP" we have ($M = 208.63$, $SD = 116.19$, $CV = 55.69\%$), for "CCC" we have ($M = 118.44$, $SD = 237.75$, $CV = 200.72\%$), for "$Firm\ size$" we have ($M = 9.278$, $SD = 0.7496$, $CV = 8.08\%$), andfinally for "$Leverage$" we have ($M = 2.62$, $SD = 1.438$, $CV = 54.87\%$).

Result of first Hypothesis test: *Effect of Cash Conversion Cycle on ROE*

The linear regression analysis was carried out to investigate the effect of Cash Conversion Cycle and its components on ROE.

Table 2: Results of the First Hypothesis ^{NS} = Not Significant

Hypothesis	Dependent Variable	Independent Variables	R Square	F-value	B	t-value	Remark
H1.1		AIP	.014	1.950^{NS}	-.005	-1.396 ^{NS}	
H1.2	ROE	ACP	.009	1.277 ^{NS}	-.003	-1.130 ^{NS}	Not Supported
H1.3		APP	.007	.993 ^{NS}	.003	.996 ^{NS}	
H1		**CCC**	**.023**	**3.189** ^{NS}	**-.003**	**-1.786** ^{NS}	

The value of F-statistic, which measures the common importance of the explanatory variables, is not statistically significant at the 5% level, according to the corresponding value of probability greater than 0.05. The values of R^2 suggest that small amount of the variation in ROE is explained by joint variations in the independent variables. Results show that all coefficients were statistically insignificant since the values of t-statistics were below 1.96 and a corresponding p-value greater than 0.05. In conclusion the results of the regression analysis show that no single variable of the selected ones has a statistically significant effect on ROE.

Result of second Hypothesis: *Effect of Cash Conversion Cycle on ROA*

The linear regression analysis was carried out to investigate the effect of Cash Conversion Cycle and its components on ROA.

Table (3): Results of the Second Hypothesis

Hypothesis	Dependent Variable	Independent Variables	R Square	F-value	B	t-value	Remark
H2.1	ROA	AIP	.058	8.560** (.004)	-.016	-2.926** (.004)	Supported
H2.2		ACP	.040	5.719* (.018)	-.010	-2.391* (.018)	Supported
H2.3		APP	.007	.919 (.339)	-.005	-.959 (.339)	Not Supported
H2		**CCC**	**.034**	**4.914*** (.028)	**-.006**	**-2.217*** (.028)	Supported

For sub-hypothesis "H2.1" the value of F-statistic, indicates that the model is statistically significant at the 5% level, according to the corresponding value of probability .004. Results show that the coefficient AIP is statistically significant at the 5% level with a probability of .004 and implies a negative correlation between the variables. Keeping all other coefficients constant, an increase of 1 unit in the variable AIP will lead to a reduction in the variable ROA by .016 units. The R^2 value of .058 (5.8%) suggests that 6% of the total variation in ROA is explained by the variation in AIP. With respect to sub-hypothesis "H2.2" the value of F-statistic,

indicates that the model is statistically significant at the 5% level, according to the corresponding value of probability .018. Results show that the coefficient ACP is statistically significant at the 5% level with a probability of .018 and implies a negative correlation between the variables. Keeping all other coefficients constant, an increase of 1 unit in the variable ACP will lead to a reduction in the variable ROA by .010 units. The R^2 value of .040 (4.0%) suggests that 4% of the total variation in ROA is explained by the variation in ACP. Regarding the sub-hypothesis "H2.3" the value of F-statistic, indicates that the model is statistically insignificant at the 5% level, according to the corresponding value of probability .339. Results show that the coefficient APP is statistically insignificant at the 5% level with a probability of .339. Finally, the main hypothesis"H2" the value of F-statistic, indicates that the model is statistically significant at the5% level, according to the corresponding value of probability .028. Results show that the coefficient CCC is statistically significant at the 5% level with a probabilityof .028 and implies a negative correlation between the variables. Keeping all other coefficients constant, an increase of 1 unit in the variable CCC will lead to a reduction in the variable ROA by .006 units. The R^2 value of .034 (3.4%) suggests that 3.4% of the total variation in ROA is explained by the variation in CCC.

Results

The cash conversion cycle of firms was used in this paper to highlight the performance of these firms in terms of liquidity management and its impact on profitability. It also identified areas for further improvement in terms of optimizing the cash conversion cycle. Based on the findings, the first hypothesis is rejected as it was found that CCC does not affect the firm's ROE due to the results of the regression analysis showing that no single variable of the selected ones has a statistical significant effect on ROE. While the second hypothesis is accepted as it was found that CCC affect firm's ROA , because the results of regression analysis showing that there is an inverse and substantial relationship between cash conversion cycle and company's profitability, showing that cash conversion cycle has opposite effect on return on assets. This represents the firm's shorter cash conversion cycle, inventory conversion period, and receivables period are more profitable, whereas firms with a longer cash conversion cycle, inventory conversion period, and receivables period are less profitable. Furthermore, because return on assets and

return on equity are unaffected by the average payment period, making early payments to creditors will have no effect on firm's profitability. Response to the research question: does the cash conversion cycle affect a firm's profitability in Egypt? Yes, the cash conversion cycle has a significant impact on a firm's ROA, but it has no significant impact on its ROE.

The paper is limited to Egyptian firms listed on the EGX, where there has been almost few research on CCC. Future researchers should add additional businesses or test the hypothesis using a different statistical approach. In addition, researchers can further analyses per sub-sectors for more specific results.

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