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Trends in working capital management and its impact on firms' performance - An analysis of SMEs

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ABSTRACT: This paper aims to explore the relationship between the performance of small and medium enterprises (SMEs) and working capital management. To make the research robust, accounting performance and measures of market related performance have been used to gauge the SMEs performance. This research utilizes secondary data obtained from the Alternative Investment Market concerning SMEs listed in the London Stock Exchange, to investigate the significance of working capital management towards the performance of SMEs. The working capital management components that were used in research are; account payable period APP, average collection period (ACP), return on assets (ROA) and inventory holding period (IHP). The analysis of data involved the use of regression analysis and extensive use of correlation analysis in order to establish the relationship between working capital management and SME performance. The study established that the use of WCM components such as cash conversion cycle, return on assets, cash conversion cycle and inventory holding period have a significant impact on the performance of SMEs. Further, it was established that when SMEs invested heavily in inventories and receivables, they amassed low profits while investment in current assets in relation to total assets lead to elevated profitability. Hence, it was concluded that there is a compelling relationship between WCM and SME performance.

Keywords: WCM; SMEs; AIM; performance; correlation analysis; Qratio

1 INTRODUCTION

The financial crisis of 2007-2008 led to a collapse of business organisations and decline of consumer wealth due to economic downtown[10]. The effects of this economic downtown were significantly felt by SMEs whose performance was greatly affected because most organisations financial positions were altered[33]. This event has led to extensive focus on working capital management which is seen as mitigation measure in such events when companies are required to survive detrimental financial issues by putting emphasis on the progressive working capital management. It is therefore essential that a firm ought to maintain equilibrium between liquidity and profitability in its daily operation[13]. Liquidity and stability are challenging options to undertake in any SME on a daily basis hence embracing working capital management summarily eliminates the firms need for a last minute scramble for liquidity.

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The implementation of a comprehensive WCM policy should help the SME to create value[27]. Hence, a company must strive to run efficiently in its operations in order to strike a balance between liquidity and profitability. In the process of running this operations and striking a balance between liquidity and stability, inconsistencies in the assets-liability relationship may occur leading to short term profitability but increase the risk of insolvency of the business[33]. Conversely, if the SME solely focuses of liquidity, the firm may risk having detrimental effects on the firm's profitability[13]. Further, if the firm is negligent of the scale of its working capital by severely ignoring the business' liquidity, the firm may have a bad reputation with its creditors[17]. Consequently, a successful SME should continuously focus on keeping the working capital ratio on the possible minimum while maintaining cash flow so that profitability is heightened.

Efficient working capital is fundamental for SMEs that have assets that are typically current assets because the management directly impacts on the liquidity and profitability of the SME[31]. Lack of efficient

working capital management predisposes the business to bankruptcy even if the company has constantly had positive profitability in its operations[7]. A study conducted by[20] shows that weak working capital management and insufficient financing in the long-term are two chief precursors of failures in business enterprises. However, there is significantly less research work done to evaluate the effects of WCM on performance of SMEs hence this research will seek to answer this question in order to benefit leading institutions in finance, regulatory institutions, and scholars and researchers.

To accomplish this, the research will be guided by the following objectives:

(1) To establish the WCM practices used by SMEs

(2) To establish the impact of WCM practices on the financial performance of SMEs

(3) To establish the effects of liquidity and stability on the performance of SMEs

(4) To establish the relationship between current assets and profitability of an SME

2 LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Traditionally, finance has been associated with funds managements and designating the use of the funds in order to achieve certain goals set by the company[8]. Robust financial strategies and policies usually guarantee increased returns while minimising the financial risks the organisation may encounter[8] . One of these strategies is the working capital management which is employed in the daily financial operation of the business. According to [34], WCM is essentially used to lessen the cash conversion cycle (CCC) by reducing the amount of capital vested in the company's current assets. Further, the WCM entails manipulating the account receivables and the mode of collection, and controlling the inventory. All this functions holistically contribute towards the firm's survival, profitability, sustainability and generally, its level of performance [(15)]. This concept is shown in Figure 1.

Studies by [5] and [6] show that better credit man-

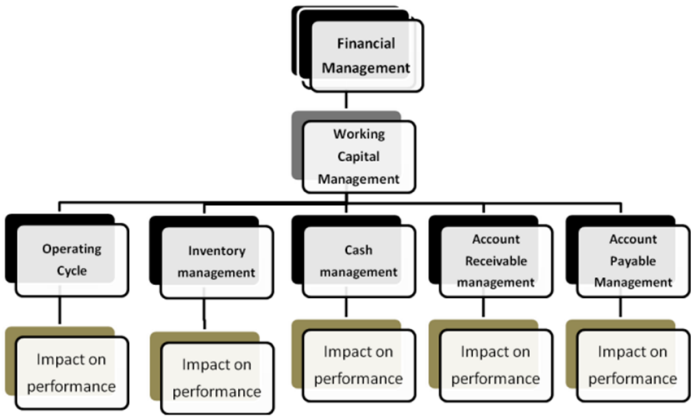

Figure 1. Relationship between WCM and performance (Source:[18])

Table 1. Abbreviations and formulae

Variables	Abbreviation	Measurement
Tobin's q ratio	QRATIO	$\frac{total\ market\ value\ of\ company + liabilities}{book\ value + liabilties}$
Inventory holding period	IHP	$inventoreis * 365 / sales\ costs$
Accounts receivable period	ARP	$\frac{accounts\ receivables * 365}{sales}$
Accounts payable period	APP	$\frac{accounts\ payable * 356}{purchases}$
Cash conversion cycle	CCC	IHP +ARP – APP
Company age	COAGE	Duration of years since incorporation end of each financial year
Financial Leverage	LEV	$\frac{debt}{total\ assest\ at\ the\ end\ of\ the\ year}$
Assets tangibility	ATAN	$\frac{fixed\ assets}{total\ assets\ at\ the\ end\ of\ the\ year}$
Liquidity ratio	LIQ	$\frac{current\ assets}{current\ liabilities}$
Short-term financing	SFIN	$\frac{current\ liabilites}{total\ assets}$

agement policies are fundamental towards improving the firm's performance while poor WCM is one of the major factors in the collapse of many SMEs. However, this relationship is not as direct as it seems because the increase in SME performance is highly dependent on the depth of the WCM strategy and the availability of resources to implement it. As shown by [32], large companies are endowed with resources hence they can easily implement better WCM strategies as compared to SMEs, given the inherently severe lack of finance and resources in most SMEs. Despite the fact that resources may be challenging in SMEs, these firms normally depend on owner-manager and creditors to acquire relevant resources in implementing WCM.

2.1 *Working capital management components*

2.1.1 *Inventory holding period*

As posited by [7], the level of inventory that a firm keeps impacts on the performance because, as argued by[31], it augments the ability to grow sales. Further, inventory improves the firm's performance owing to the fact that it will shield the company from emergency purchases. The high inventory levels in a company also cushion the company from price fluctuations [11]. Studies by [14] and [32] show that higher inventories in the firm may reduce the firm's performance because it depicts the amount of cash not in circulation. Additionally, high inventory may also lower the performance of the firm due to inherent costs related to inventory keeping such as security cost, depreciation and rent. Empirical studies by [3] and [4] show that there is a negative relationship between inventory holding period and firms' performance. The scale of the impact of IHP differs in small and medium SMEs leading to the following hypothesis, when non-linear relationship is accounted for;

***Ha*:** A non-linear relationship exists between inventory holding period and the firm's performance

***Hb*:** The effect of IHP on SME performance is considerably different in Small and medium companies

2.1.2 *Accounts receivable period*

The proportion of ARP typically affects the firms' performance[25] . As argued by [15] if the level of ARP increases, then the sales of the company also increase. Further, high ARPs serve as quality guarantee hence giving the clients a more sustained relationship in terms of quality thus improving the company performance. An empirical confirmation by [2], showed that there is a desirable relationship between accounts receivable period and the firms performance. Despite offering these advantages, high ARP may prove detrimental to the firm's performance in cases where the firm has a bad debt or failure to grant credit. However, a study by [23] has established that ARP has a negative effect on a firm's performance.

The effects emanating from ARP slightly differ in scale when small and medium firms are observed [5], because an increase in size of the company leads to better performance in the accounts receivable period [25]. On the other hand, a research by [24], showed that small firms experience longer ARPs. This culminates into the second pair of hypotheses;

***Hc*:** A non-linear relationship exists between average receivable period and SME performance.

***Hd*:** The effect of ARP on medium and small enterprises differs considerably.

2.1.3 *Accounts payable period*

The accounts payable period presents two scenarios in SMEs. First, the period has a positive effect on the company performance in that during the credit period, transaction costs are minimised[31]. Additionally, firms have a better chance of overcoming constraints because APP functions as a source of finance albeit in the short term. Conversely, APP has a detrimental effect in that, there may be loss of discount hence the firms performance is negatively impacted [21].

The magnitude of APP in SMEs differs significantly hence the effect on performance is also different[5]. This is attributed to the fact that, the larger the firm's size, the better the APP performance[28]. A study conducted by [21], shows that small companies heavily depend on trade credit leading to an increase in APP. Based on this, we form a pair of hypotheses that;

***He*:** A non-linear relationship between accounts payable period and SME performance.

***Hf*:** The impact of APP on small and medium companies differs considerably.

2.1.4 *Cash conversion cycle*

According to [26], the impact of CCC on small and medium firms differs significantly because small firms have more capital in assets and liabilities; hence their CCC is longer as compared to medium firms[30]. Ideally, shorter cash conversion cycle increases the level of performance[5] because it reduces the company's dependence on external financial resources. This positive effect is elicited when a longer CCC triggers improves the company's ability to offer its customers credit. However, [6] shows that there is negative effect on performance to the company attributed to the CCC.

The impact of the CCC on the performance of the firm lead to these hypotheses;

***Hg*:** A non-linear relationship exists between the cash conversion cycle and SME performance.

***Hh*:** The impact of CCC on small companies differs significantly from medium companies.

3 CONTROL VARIABLES

As argued by [12], the importance of controlling confounding variables is significant because ignoring these variables may lead to erroneous discarding of hypothesis. On the basis of earlier research on work-

ing capital management and SME performance by [2] and [15], the following variables ought to be controlled; Company age, assets tangibility, financial leverage, liquidity ratio and short-term financing.

4 RESEARCH METHODOLOGY AND DATA

4.1 *Sample selection and collection of data*

Data for this study was acquired from 140 SME firms listed on the AIM as at 13th of December 2016. The 140 firms were selected on the basis that they satisfy the SME classification criteria as per the UK companies Act 2006. Further, the firms chosen had their financial statements under the time line given of 1st January 2008 up to 31st December 2016. Hence the data analysed was sourced from financial reports spanning to an 8 year period from 2008 to 2016. The financial data used was mined from the Analyse Major Databases from European Sources (AMEDEUS).

4.2 *Dependable variables*

QRATIO is the chief dependant variable that was analysed. The QRATIO is defined by [22], is the ratio of market value of a firm's assets divided by the book value.

$$\text{Q Ratio} = \frac{total\ market\ value\ of\ company + liabilities}{book\ value + liabilties}$$

The ratio has been used in this case because it has better distributional properties and it is robust enough to withstand tax anomalies and accounting flaws [29]. Additionally, the ratio is responsive to industrial effects hence it can be used to detect small differences in WCM ability as exhibited by small and medium firms' performance. Typically the ratio gauges the ability of a company's management to utilise resources and produce value for its shareholders. This ability is expressed as a performance measure because it has an impact on an individual's choice to invest in the company or lend the establishment some financial resources[7].

4.3 *Regression model framing*

In order to evaluate the association between Working capital management and SME performance for the selected companies, several regression analysis models are specified as shown Figure 2:

$$QRATIO_{it} = \beta_0 + \beta_1(IHP) + \beta_2(IHP^2) + \sum_{K=1}^{6} \beta_2 CONTROLS_{it} + \mu_i + \varepsilon_{it} 1$$

$$QRATIO_{it} = \beta_0 + \beta_1(ARP) + \beta_2(ARP^2) + \sum_{K=1}^{6} \beta_2 CONTROLS_{it} + \mu_i + \varepsilon_{it} 2$$

$$QRATIO_{it} = \beta_0 + \beta_1(APP) + \beta_2(APP^2) + \sum_{K=1}^{6} \beta_2 CONTROLS_{it} + \mu_i + \varepsilon_{it} 3$$

$$QRATIO_{it} = \beta_0 + \beta_1(CCC) + \beta_2(CCC^2) + \sum_{K=1}^{6} \beta_2 CONTROLS_{it} + \mu_i + \varepsilon_{it} 4$$

Figure 2. Regression model framing (Source: [1]; Notes: *i* denotes the *n*-th firm, i.e. 1-140; *t* denotes the year (1-9); μ_i represents individual effects; ε_{it} represents error term)

The data was subject to outliers because the sample was highly varied hence the data was winsorized from 1% to 99% by eliminating extreme observation. Further, a Haussmann test was conducted and it was evident that random effects were nearly the same as fixed effect hence the random effects were used due to ease of use. To determine the solution to the first hypotheses, a chow test, which is a statistical tool for comparing a pair of coefficients to ascertain their equality [19], was conducted to determine the extent of WCM effects on the small and medium enterprises.

As shown in Table 2, the QRATIO posted a mean of 1.2785. The IHP averaged at 39 days, which is an indicator that it takes more than a month for an SME to turn over the inventory. On the other hand, the ARP, APP, CCC averaged at 57, 50 and 45 days respectively. The CCC average of 45 days shows that the 140 SME firms are sluggish to changing their inventory to sales and claiming debts but they are fast when remitting finances to suppliers.

Table 2 also shows that the QRATIO for small and medium firms is 1.3602 and 1.1788 respectively. This indicates that, averagely, medium companies are bet-

Table 2. Descriptive statistics

	FULL SAMPLE			Small firms			Medium firms		
Variables	Mean	SD	Observation	Mean	SD	Observation	Mean	SD	Observation
QRATIO	1.2785	1.2088	1122	1.36029	1.1548	484	1.1788	1.3485	657
IHP	39.9105	81.3414	1122	33.7457	40.4507	484	36.3087	83.9016	657
ARP	66.8137	52.0471	1122	47.9546	56.9176	484	68.0165	51.3654	657
APP	50.7846	76.8436	1122	52.9536	72.6735	484	49.3656	79.2212	657
CCC	54.7774	58.4559	1122	31.7437	30.1948	484	44.9596	56.3358	657
COAGE	13.6057	14.0667	1122	10.7006	12.4560	484	15.7887	16.8789	657
ATAN	0.3773	0.2600	1122	0.2840	0.2717	484	0.4897	0.2154	657
LEV	0.4563	0.8238	1122	0.3868	0.2569	484	0.6352	0.7271	657
SFIN	0.4487	3.6583	1122	0.42141	0.3903	484	0.6493	3.9517	657
LIQ	2.5036	3.2020	1122	2.2702	2.1242	484	2.5175	3.2693	657

Table 3. Correlation analysis

	QRATIO	IHP	ARP	APP	CCC	COAGE	ATAN	LEV	SFIN	LIQ
QRATIO	1									
IHP	-0.09268	1								
ARP	-0.0382	0.2135	1							
APP	-0.2351	0.2231	0.2635	1						
CCC	-0.0323	0.3254	0.3841	-0.2111	1					
COAGE	0.230	0.0243	0.0622	-0.0312	0.0315	1				
ATAN	-0.0228	0.0247	0.0023	0.0913	-0.0293	-0.0073	1			
LEV	0.0710	0.0227	0.0693	0.0053	0.0342	0.0334	0.2022	1		
SFIN	0.0323	-0.0217	-0.0215	0.0282	0.0122	0.0078	-0.0357	-0.0041	1	
LIQ	-0.0697	0.00927	0.0226	0.0512	-0.0024	-0.0412	-0.2325	0.212	-0.072	1

ter off in performance as compared to small companies because medium companies have higher WCM in all components apart from the APP. The medium and small firms averaged at 36 and 34 days, respectively in terms of IHP while the ARP was at 67 and 48 days respectively. On average, the CCC for medium and small companies was 55 and 30 days respectively.

5 EMPIRICAL ANALYSIS

As posited by [9], when the correlation coefficient is above 0.80, multi correlation becomes intricate hence it is difficult to check misspecification of data. From Table 3, it is established that a positive correlation is exhibited in the association of Q ratio and, ARP, IHP and APP at one per cent level. Further, the correlation is significant between IHP and ARP (0.2135) while correlation between APP and CCC is -0.2111. IHP and CCC have a coefficient of 0.2231 while ARP and CCC are 0.3841.

5.1 *Regression analysis*

The regression results in Table 4 indicate that modified R^2 the 1st model is 39.43%. In line with the theory, IHP is positively linked to Q ratio at 10 per cent while IHP^2 is magnified negatively at 5%. This shows that there is a concave association between IHP and Q RATIO which shows that elevation of the IHP augments the SME performance to a certain level after which further elevation leads to reduced performance. This confirms the idea that SMEs lack external and internal resources hence locking up the inventory up to a certain stage will minimise the performance level by wasting financial resources. This relationship is in line with hypothesis ***Hc.***

Model 2 has an R^2 of 20.06% and shows that ARP has a positive relation with Q RATIO at 1% and ARP^2 is associated negatively with the Q ratio at this level. This concave association conforms to hypothesis ***Hc*** while the positive and negative values of ARP and ARP^2 show that ARP bolsters SME performance to a certain level then its' influence turns detrimental afterwards. In Model 3 the APP and APP^2 are positively and negatively related with performance thus ascertaining hypothesis ***Hf.*** CCC and CCC^2 are less important in relation to the QRATIO because the difference between APP from ARP and IHP offsets is impact. The table also shows that control variables are weighty in terms of performance.

Table 4. Impact of WCM on QRATIO

Regression models	(1)	(2)	(3)	(4)
Variables	QRATIO	QRATIO	QRATIO	QRATIO
Adjusted R^2	0.3943	0.2006	0.2142	0.2140
Haussmann's test	0.6742	0.5304	0.5334	0.6765
Chow test	13.83	13.34	11.77	12.90
WCM variables				
IHP	0.0342			
(1.85)				
IHP2	–0.0043			
(–2.39)				
ARP	0.0278			
(5.83)				
ARP2	–0.0556			
(–5.90)				
APP	0.013			
(3.55)				
APP2	–0.0345			
(–3.27)				
CCC	0.0260			
(0.78)				
CCC2	–0.0112			
(–0.41)				
Control variables				
COAGE	0.054823	0.0467	0.057	0.0520
(4.68)	(4.33)	(4.02)	(4.61)	
ATAN	–2.587	–2.587	–2.534	–2.82
(–3.466)	(–3.560)	(–3.938)	(–4.152)	
LEV	–0.0794	–0.0786	–0.0839	–0.0795
(–1.40)	(–1.57)	(–1.51)	(–0.67)	
SFIN	–7.960	–8.0675	–7.285	–7.8978
(–7.60)	(–8.00)	(–7.670)	(–7.62)	
LIQ	–0.565	–0.534	–0.574	–0.548
(–7.40)	(–5.88)	(–5.43)	(–5.88)	
Industry classification	Included	Included	Included	Included
Constant	–2.749	–3.546	–2.780	–2.823
(–7.57)	(–6.77)	(–7.61)	(–8.62)	
N	1122	1122	1122	1122

To further evaluate the impact of WCM on performance, the SMEs' random effect regression analysis results are divided into small companies and medium firms as shown in Table 5 and Table 6. In the small companies, the adjusted R^2 is 17.55% while the IHP and IHP^2 have positive and negative relationship with

the QRATIO. Hence better management IHP leads to improved performance but its effect wanes after the critical point. A quick comparison between the small and medium companies shows that IHP management ought to be more robust in small firms because its coefficients of IHP and IHP ² are higher. This phenomenon is attributed to the fact that small firms have less financial resources hence the effects of better management in IHP are more pronounced. Additionally, releasing locked up funds in small firms triggers performance improvement much significantly than in medium companies. The results for the chow test in Table 4 show that there is evident disparity on the impact of IHP on the performance level of the SME. Therefore hypothesis ***Hb*** is confirmed.

Table 5. Impact of WCM on 'small' firm's performance

Regression models	(1)	(2)	(3)	(4)
Variables	QRATIO	QRATIO	QRATIO	QRATIO
Adjusted R-squared	0.1755	0.1820	0.1817	0.1829
WCM variables				
IHP	2.453			
(1.92)				
IHP2	–0.744			
(–1.91)				
ARP	0.0868			
(2.46)				
ARP2	–0.1305			
(–2.26)				
APP	0.0383			
(1.92)				
APP2	–0.0637			
(–1.72)				
CCC	0.0065			
(0.82)				
CCC2	–0.0100			
(–0.73)				
Control variables				
COAGE	0.0746	0.0664	0.0678	0.0678
(8.55)	(9.35)	(8.53)	(7.96)	
ATAN	–2.884	–2.630	–2.849	–3.017
(–1.67)	(–1.77)	(–1.83)	(–1.90)	
LEV	–0.0477	–0.0573	–0.0578	–0.0434
(–1.10)	(–1.01)	(–1.10)	(–0.78)	
SFIN	–6.291	–6.303	–6.430	–6.130
(–4.98)	(–5.06)	(–4.18)	(–4.60)	
LIQ	–0.405	–0.381	–0.401	–0.37
(–3.40)	(–3.24)	(–2.67)	(–2.91)	
Industry classification	Included	Included	Included	Included
Constant	–2.77	–3.42	–2.48	–2.91
(–2.88)	(–2.78)	(–2.33)	(–2.93)	
N	484	484	484	484

Table 6. Impact of WCM on 'medium' firms' performance

Regression models	(1)	(2)	(3)	(4)
Variables	QRATIO	QRATIO	QRATIO	QRATIO
Adjusted R-squared	0.3194	0.4413	0.2642	0.4885
Working capital management variables				
IHP	0.0510			
(2.78)				
IHP2	–0.0156			
(–2.17)				
ARP	0.0250			
(7.47)				
ARP2	–0.0536			
(–5.13)				
APP	0.0184			
(4.62)				
APP2	–0.0461			
(–6.209)				
CCC	0.0301			
(0.89)				
CCC2	–0.0990			
(–0.70)				
Control Variables				
COAGE	–0.042	–0.038	–0.0420	–0.039
(–1.93)	(–1.99)	(–1.83)	(–1.93)	
ATAN	–2.46	–2.59	–2.46	–2.84
(–2.36)	(–2.27)	(–2.09)	(–2.36)	
LEV	–0.0092	–0.00895	–0.0103	–0.0119
(–1.08)	(–1.10)	(–1.09)	(–1.07)	
SFIN	–9.00	–9.27	–9.23	–8.89
(–3.81)	(–4.19)	(–4.28)	(–4.11)	
LIQ	–0.68	–0.63	–0.66	–0.64
(–5.74)	(–4.74)	(–5.13)	(–5.18)	
Industry classification	Included	Included	Included	Included
Constant	2.84	3.52	3.23	2.86
(5.14)	(5.28)	(8.18)	(5.23)	
N	650	650	650	650

In model 2, the R ²is rated at 18.20% and the coefficients of ARP and ARP ² are negatively and positively associated with the Q ratio. This shows that better management of ARP has desirable impact on the impact of the SME but after the critical point, the ARP has detrimental effects. From the table, it is shown that the ARP and ARP ²coefficients are slightly higher in small firms as compared to medium firms. This means that management of ARP is more essential in small companies because minimal bargaining power in the business environment hence the capability to mitigate excess ARP which in turn bolsters performance. By subjecting the data to a chow test, it is established that there is a difference in the magnitude of the ARP on performance of small and medium companies. Hence, hypothesis ***Hd*** is confirmed to be true.

Hypothesis ***Hf*** confirmed by applying evidence from Table model 3 of Table 5 and 6. In this case, the adjusted R ² is 17.11% for small companies and 25.35%for medium companies. The APP and APP ² coefficient indicates that management of APP is more critical in small companies than medium ones. As posited by [23], small companies can achieve high performance levels if they maintain better APPs. Additionally, the chow test indicated that there exists significant difference on the impact of APP on the two sets of SMEs.

The support for hypothesis ***Hh*** emanates from data in Table 5 model number 4. From the statistical evidence, the coefficients of CCC and CCC ²exhibit both positive and negative relationship with the Q RATIO. The chow test shows that the level of CCC impact on small and medium enterprises is different across the companies hence confirming the aforementioned hypothesis.

6 DISCUSSION

The results of the research indicate that WCM is a fundamental aspect towards a firm's performance hence business organisation should strive to implement it in their premises. The implementation of WCM entails careful balance of the WCM components in the firms operations because the components can only increase performance when they are at optimum levels. Therefore this study shows the importance having optimal and efficient WCM in an SME and the reasons why the thresholds of optimum functioning should not be breached. The results dictate that SMEs should strive to maintain optimal inventory levels, firm's receivables and payables in order to increase their levels of performance. Such activities will reduce the inherent costs of keeping large inventories such as security, loss of clients and rent[7]. Further, managing receivables at an optimum level reduces the risks of over-investment which may increase the costs of administration and reduce the performance of the SME. Lastly, better management of payables gives the SME a chance to strike equilibrium between costs and enjoying the use of resource credit form the supplier and the discounts associated with early payments[16].

6.1 *Test for robustness*

To assess the level of comprehensiveness of the results, the ROA is employed to gauge the SMEs performance. As defined by [26], ROA is an indicator of the level of profits of the firm in relation to the firm's total assets. Table 7 shows results of ROA results when it is evaluated as a dependent variable. By using econometric approach, the postulated coefficients of CCC, APP, IHP and ARP are significant and positively related to performance while IHP ², CCC ², ARP ² and APP ²have a considerable magnitude at 1%. These results are compatible with the impact of working capital management on the Q ratio because the results obtained strongly suggest that there is a concave correlation linking WCM and ROA.

Table 6. Impact of WCM on Medium firm performance

Regression models	(1)	(2)	(3)	(4)
Variables	QRATIO	QRATIO	QRATIO	QRATIO
Adjusted R ²	0.2080	0.3302	0.1531	0.3774
WCM variables				
IHP	0.0510			
(2.88)				
IHP2	–0.0166			
(–2.17)				
ARP	0.0350			
(7.37)				
ARP2	–0.0536			
(–5.12)				
APP	0.0194			
(4.61)				
APP2	–0.0450			
(–6.28)				
CCC	0.0201			
(0.89)				
CCC2	–0.0880			
(–0.70)				
Control variables				
COAGE	–0.0426	–0.038	–0.042	–0.039
(–1.93)	(–1.99)	(–1.83)	(–1.93)	
ATAN	–2.461	–2.599	–2.46	–2.84
(–2.26)	(–2.28)	(–2.10)	(–2.37)	
LEV	–0.0102	–0.00975	–0.0100	–0.0108
(–1.09)	(–1.00)	(–1.05)	(–1.17)	
SFIN	–9.00	–9.27	–9.236	–8.89
(–3.91)	(–4.09)	(–4.18)	(–4.01)	
LIQ	–0.68	–0.631	–0.666	–0.64
(–5.74)	(–4.74)	(–5.13)	(–5.18)	
Industry classification	Included	Included	Included	Included
Constant	2.84	3.52	3.23	2.86
(5.15)	(5.27)	(8.18)	(5.32)	
N	650	650	650	650

7 CONCLUSION

The aim of this research was to establish the relationship between WCM on the performance of SMEs. To achieve this, the study used WCM components to evaluate their impact on performance of the SMEs by subjecting them to regression analysis. Additionally, the research showed individual impact of the components on small and medium firms with the results showing that there is a concave relation linking WCM components to the Q ratio. It was established, by employing chow tests, that the size of the firm dictates the relative significance of WCM on the chosen firm with small enterprises expressing that they need WCM than medium enterprises.

The study was subjected to two limitations, that is; the sample size used of 140 SMEs may not be sufficient enough for a study of this magnitude and the use of secondary data made is impossible to justify how WCM components have varied impacts on small and medium companies. However, the contributions made by the research towards the management of SME are more significant than the limitations encountered.

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