

Original Research

Impacts of Working Capital Management on Profitability: A Comparative Study on Cement and Tannery Industry of Bangladesh

Syed Md. Khaled Rahman¹ and Salman Ahmed

Department: Business Administration, Shahjalal University of Science & Technology, Sylhet, Bangladesh

Abstract

Short term asset and liability management is significant in corporate finance literature. This paper investigated on the impacts of working capital management (WCM) on profitability of listed companies of cement and tannery industry in Bangladesh. The data of companies has been collected from Dhaka Stock Exchange over the period 2008-2017. Five firms were chosen from each industry by applying simple random sampling method. Study found that WCM has significant impact on profitability. Result revealed that if average payment period, and cash conversion cycle increase it leads to decrease in all four profitability ratios of cement industry's firms. Cash conversion cycle has significant negative impact on ROE while current ratio (CR) has significant positive effect on NPM. In contrast, tannery industry impacted by days sales outstanding (DSO) negatively. More inventory turnover has reduced ROE & ROCE while stretching payables reduced ROA & NPM. DSO has significant negative and CR has significant positive impact on NPM of tannery industry's firms. The managers can increase their companies' profitability by reducing the days sales outstanding, days inventory turnover, cash conversion cycle and average payment period. The study has practical and policy implications for corporate managers, suppliers, customers, and competitors as enhanced profitability has direct and indirect effect on all stakeholders.

Keywords: Inventory, Cash, Conversion, Days, Sales, Payment

¹ Corresponding Author's Email: kr15sust@gmail.com

Introduction

Working capital management (WCM) is the most crucial thing for any sorts of firms because improper management of working capital create a lot hassles. Even though it directs to business failure. WCM ensures liquidity and profitability. Inadequate liquidity directs drastic pitfall and affected the business, in contrast, optimum level of WCM is greatly influenced on firms' profitability. Singh & Asress (2011) opined that a positive working capital indicates the solvency of an organization, when any demand arises they can easily meet up. In contrast, a negative working capital denotes the insolvency, which is alarming for a firms due to their inability to fulfill short term obligations, daily operating activities as well. As such, excessive working capital depicts idle fund accumulate in firms cash which could have invested in lucrative sectors. On the other hand, inadequate working capital reveals unsound financial condition which directs to credit risk (Wanguu & Kipkirui, 2015). Mukkopadday (2004) mentioned working capital as the life blood of an organization. Any types of firm, irrespective of size, operation they require keep decent amount of working capital due to maintaining liquidity, solvency, profitability, survival of a business (Raheman et al. 2010). According to Smith (1973), investment on working capital in relatively high proportion of total asset affect the entire organizations' profitability. WCM ensures sufficient cash flow in order to meeting short term obligations and operating activities as well as it is an excellent way to improve earnings (Parveen et al. 2014).

Anojan et al. (2013) stated that "Implementing an effective working capital management system is an excellent way for companies to improve their earning. The two main aspects of WCM are management of individual components of working capital and ratio analysis. A few key performance indicators of a working capital management system are the Debtors' Conversion Period (DCP), Creditors Conversion Period (CCP), Inventory Conversion Period (ICP) and Cash Conversion Cycle (CCC). Ratio analysis will lead management to identify areas, they have to focus in future such as inventory management, cash management, account receivable and payable management". WCM investigation and making judgment is not really an easy task because there are some obstacles which makes it obscure. Firstly, one have to investigate their historical annual report which is tricky as well as require huge time. Secondly, the annual report produces by company himself so reliability and credibility of this report under questioned. Thirdly, statistical as well as technical knowledge highly require unless one can't reach the ultimate point.

A plenty of works has been done by different scholars, they provide different results. This paper is apart from others because our variable scale is larger than other papers. For instance, in order to investigate the effect, four profitability ratios, five working capital variables and three firm-specific variables were used.

Literature Review

Working capital management plays a significant role in any types of firm and it leads to impact on profitability. Eventually, management of working capital is most vital rather than others. A lot of works has been conducted on this phenomena as well as they got positive and negative impact combination of both. Some researchers findings are given

below which motivates to take such topic. Deloof (2003) opined, a significant amount of capital is invested in working capital by most of the company which is depicted on their statement. It is found on his study that, there is a negative association between gross operating profit and days' sales outstanding, payment period and days' inventory of Belgian firms. He added that less profitable firms delayed payment to suppliers which leads to reduction of profit (Anojan et al. 2013). Ponsian et al. (2014) studied on three manufacturing company of Dar es Salam Stock Exchange (DSE) to gauge the influence of working capital management on profitability. Their findings was, cash conversion cycle is positively associated with profitability likewise, and there was an inverse association between liquidity and profitability. In addition, a very significant adverse relationship exists between the average collection duration and profitability. Besides, payable deferral period have a significant positive association with profitability.

Nimalathan (2010) illustrated that, a negative association exists between the period of cash conversion and the return on assets. If conversion cycle increases, it directs to reduce Return on Assets. He added that company can increase their profitability by reducing days' inventory conversion period and account receivable. Qureshi (2015) conducted a study on pharmaceuticals and biotechnology firms listed on FTSE to assess effect of working capital on profitability. Study found that, inventory conversion period has positive but average collection period have negative effect on profitability whereas, average payment period and cash conversion cycle have insignificant impact on assets' return. The study concludes that, firms should reduce the duration of collection period which leads to boost up the value of shareholder. Parveen et al. (2014) concluded that, cash conversion cycle is negatively correlated with Return on Assets in terms of profitability. In addition, firms can increase profit by reducing the number of collection period and inventory turnover days. Angahar and Alematu (2014) described that, Return on Assets in terms of profitability and days' sales outstanding are positively correlated, on the contrary, there is an adverse relationship between inventory turnover days' and profitability. Moreover, the study depicts that cash conversion cycle and profitability are positively correlated as well as inventory turnover days' and cash conversion cycle influence profitability.

Azam and Haider (2011) stated that, there is a positive relationship between management of current asset and financial performance of listed non-financial institution in Karachi Stock Exchange. Canonical correlation analysis has been used for statistical analysis. The researchers also suggested that, the manager of company can increase Return on Assets by reducing cash conversion cycle, inventory size and net trading cycle and also suggested that, performance depends on liquidity and conversion period. Saghir et al. (2011) have investigated the relationship between working capital management and profitability on some textile company of Karachi Stock Exchange during 2001-2006. They found that, there is a negative association between account receivable and profitability. They added that in accordance with regression, profitability in terms of Return on Assets and conversion cycle are negatively correlated. Safiah and Nizam (2015) undertaken a research to examine the effect of WCM on Plantation & Petroleum firms' profitability in Malaysia during 2010-2014. Study revealed insignificant association between profitability proxied by ROA and working capital variables such as inventory turnover, payment period and current ratio. Jayarathne (2014) opined, profitability is negatively correlated with days' sales outstanding, inventory turnover

period and cash conversion cycle. He added that, there is positive relationship between profitability and account payable period. By the way, the increase in leverage directs to reduce in profitability. He concluded that, manufacturing companies can boost up their profitability by managing working capital smoothly.

Wanguu and Kipkirui (2015) stated that, they investigated impacts of working capital management on profitability of selected companies of Nairobi Securities Exchange. They have found that, inventory turnover period positively influence profitability while, average account receivable period had a positive insignificant relationship with profitability. In contrast, account payable period had negatively related with profitability. They further said that, there is a significant positive relationship between leverage and profitability whereas size and liquidity are positive insignificantly correlated with profitability. In addition, inventory days', receivable period, leverage and firm size influence profitability positively on the contrary, payable period adversely influences the profitability. Hoque et al. (2015) in their study on cement industry of Bangladesh revealed that there were significant positive association between profitability and working capital components. The average period of collection has a major adverse impact on profitability. Naeem et al. (2017) in their study investigated the relationship between working capital variables and profitability in different industries of Pakistan during 2008-2016. Study found that in case of food and personal care industry sluggish inventory turnover has negative impact on profitability. In case of textile industry the association was insignificant while in case of cement industry slow collection of receivables reduced profitability. Raheman et al. (2010) described, they observed 204 manufacturing firms of Karachi Stock Exchange to examine the impacts of working capital management on profitability. The finding of the study was, cash conversion cycle, net trade cycle and age of inventory influences performance in terms of profitability. In addition, leverage, sales growth and firm size had significantly affect the performance of the firms. The paper concludes the firms should concentrate on payment of accounts payable as well as to change their working capital policy. Moreover, efficient working capital management and financing of working capital can magnify the profitability of manufacturing firms. Qayyum (2011) opined, the study based on cement industry of Bangladesh for the period of 2005 to 2009. She investigated the impacts of working capital management on liquidity. This paper findings was, significant level of impacts of the profitability indices, liquidity indices and working capital indices.

Therefore, all of this preceding discussion motivates to work on this topic because from the context of Bangladesh no comprehensive research works were done on impact of turnover ratios on profitability. Besides Return on Assets (ROA) and Return on Capital Employed (ROCE), some other profitability measures were also taken into consideration. The study has been used all of those parameters which relates with profitability.

Objectives of the Study

The main purpose of the study was to identify the impact of Working Capital Management (WCM) on Profitability of Dhaka Stoke Exchange (DSE) listed companies of Cement and Tannery industry. Specific objectives were as follows:

- a. To examine the effect of the inventory days' on profitability.

- b. To explore the effect of the receivables days' on profitability.
- c. To analyze the effect of the payables days' on profitability.
- d. To examine the effect of the cash conversion cycle on profitability.

Methodology of the Study

Data & Sample

The area of research of this study is cement and tannery industry of Bangladesh. It was found that in Dhaka stock exchange (DSE) 8 cement companies and 5 tannery companies were enlisted. Five companies were taken as sample from each industry. The study was based on secondary data which were collected from annual reports, websites and company documents. Study period was 10 years (2008-2017)

Statistical Tools & Techniques

The research has been conducted by descriptive as well as inferential statistics. As descriptive statistical tool mean, median, mode, maximum, minimum and standard deviation were used. In contrast, inferential statistics depicted the correlation between variables as well as multiple linear regression has been applied for measuring the impact of WCM on profitability. SPSS has been used for data analysis.

Variable Description

Dependent Variables

The study picks as dependent variables as Net profit margin (NPM), Return on Assets (ROA), Return on Equity (ROE) and Return on Capital Employed (ROCE).

Independent Variables

This paper considers firm size in terms of log of total assets, sales growth, current ratio, leverage, average collection period, average payment period, average age of inventory and cash conversion cycle as independent variables.

Model Specification

The following regression model developed based on dependent and independent variables for identifying the relationship between WCM and profitability. Some prominent researcher used this model (Asaduzzaman & Chowdhury, 2014).

$$ROA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CR_{it} + \beta_3 LEV_{it} + \beta_4 GROWTH_{it} + \beta_5 DSO_{it} + \beta_6 APP_{it} + \beta_7 DIV_{it} + \beta_8 CCC_{it} + \epsilon_{it} \dots\dots\dots(1)$$

$$ROE_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CR_{it} + \beta_3 LEV_{it} + \beta_4 GROWTH_{it} + \beta_5 DSO_{it} + \beta_6 APP_{it} + \beta_7 DIV_{it} + \beta_8 CCC_{it} + \epsilon_{it} \dots\dots\dots(2)$$

$$ROCE_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CR_{it} + \beta_3 LEV_{it} + \beta_4 GROWTH_{it} + \beta_5 DSO_{it} + \beta_6 APP_{it} + \beta_7 DIV_{it} + \beta_8 CCC_{it} + \epsilon_{it} \dots\dots\dots(3)$$

$$NPM_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 CR_{it} + \beta_3 LEV_{it} + \beta_4 GROWTH_{it} + \beta_5 DSO_{it} + \beta_6 APP_{it} + \beta_7 DIV_{it} + \beta_8 CCC_{it} + \epsilon_{it} \dots\dots\dots(4)$$

Where,

GROWTH_{it} = Revenue growth of firm i at period t

CR_{it} = Current Ratio of firm i at period t

LEV_{it} = Leverage of firm i at period t

DSO_{it} = Days' sales outstanding of firm i at period t

APP_{it} = Days' account payable. / Average payment period of firm i at period t

DIV_{it} = Days' inventory turnover of firm i at period t

CCC_{it} = Cash Conversion Cycle of firm i at period t

SIZE_{it} = Firm size in terms of total assets of firm i at period t

ROA_{it} = Return on Assets of firm i at period t

ROE_{it} = Return on Equity of firm i at period t

ROCE_{it} = Return on Capital Employed of firm i at period t

NPM_{it} = Net Profit Margin of firm i at period t

Results and Discussion

Descriptive Statistics of Working Capital and Profitability:

Table 1 shows the descriptive statistics of Cement industry. The mean of DSO is about 71 days with close to 3% standard deviation. The mean of DIV, APP and CCC are 21, 42 and 75 days respectively. Industries sales growth is about 18% while 34% standard deviation. On the contrary, the mean of dependent variable such as ROA, ROE, NPM and ROCE are 6%, 11%, 12% and 13% respectively. It is mentionable that the industry's mean of leverage is 54% which means their prime financing source is debt capital. Table 2 represents the descriptive statistics of Tannery industry. It can be mentioned that the industry collects major portion of capital from debt which is 57%. The firms' mean DSO and DIV are much lengthy (157 and 414 days respectively) which results in much longer CCC of 528 days.

Table 1: Descriptive Statistics of Variables of Cement Industry Firms

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Size	49	15.59	23.25	19.4131	2.69427
DSO	49	4.28	444.93	70.5814	75.90112
DIV	49	26.73	103.91	62.0500	21.93656
APP	49	10.11	177.96	60.5694	42.61813
CCC	49	-30.75	360.05	72.0622	75.35642
GROWTH	48	-28.42	158.00	17.7203	33.92816
CR	48	.27	2.91	1.2502	.65710
LEV	49	19.48	96.81	54.3586	21.12200
ROA	49	-11.79	15.00	6.3504	5.56266
ROE	49	-26.64	27.00	11.4167	11.23527
NPM	49	-35.88	207.17	12.0673	29.95239
ROCE	49	-27.78	33.10	12.9029	10.71090

Table 2: Descriptive Statistics of Variables of Tannery Industry Firms

Variables	N	Minimum	Maximum	Mean	Std. Deviation
SIZE	50	13.90	23.35	19.6726	3.08002
DSO	50	6.28	1473.00	157.36	239.52120
DIV	50	46.11	3243.19	414.43	661.00691
APP	50	.59	585.14	43.4868	82.86795
CCC	50	-403.01	3631.50	528.30	792.73341
GROWTH	46	-60.46	303.00	14.1269	54.19006
CR	50	.86	90.83	10.6804	20.88122
LEV	50	18.96	93.28	57.1222	17.56738
ROA	50	-2.12	18.10	5.2452	5.77508
ROE	50	-13.09	46.23	12.8158	14.20528
NPM	50	-53.70	12.67	3.2092	9.36404
ROCE	50	-5.80	58.98	15.2626	16.52862

Relationship between Working Capital and Profitability variables

Table 3 demonstrates the correlation between the variables, it is observed that ROA in terms of profitability with WCM has negative relationship except CR. On the other hand, ROE and WCM also the same result as like previous. But, NPM is positively related with DIV, APP and CR. Other variables of WCM are negatively correlated with NPM in terms of profitability. In addition, ROCE has a positive relationship with DIV, GROWTH and CR, yet rest of the variables are negatively correlated. With the regard to correlation between dependent variables, maximum values found between ROA and ROE (.861). Likewise, between the independent variables the maximum values between DSO and CCC (.807). Table 4 illustrates the correlation among variables, ROA has a negative relation with DSO, CCC, CR and LEV as well as APP and GROWTH are positively correlated with ROA. On the contrary, days sales outstanding (DSO), inventory turnover days (DIV), cash conversion cycle (CCC), GROWTH and leverage have a negative

relationship with ROE. In addition, NPM is positively related with APP, GROWTH and CR, despite there is a negative relationship among NPM and DSO, DIV, CCC & LEV. Moreover, ROCE is positively related with APP and LEV but rest of independent variables are negatively correlated.

Table 3: Correlation between variables of Cement Industry Firms

LEV	CR	GROWTH	CCC	APP	DIV	DSO	Size	ROCE	NPM	ROE	ROA	
-.562**	.603**	-.098	-.42**	-.05	-.174	-.39**	-.40**	.561**	.361*	.861**	1	ROA
-.532**	.420**	-.050	-.35*	-.24	-.093	-.45**	-.233	.658**	.289*	1		ROE
-.306*	.386**	-.066	-.133	.004	.025	-.137	-.187	.207	1			NPM
-.383**	.074	.153	-.117	-.24	.264	-.331*	-.092	1				ROCE
.403**	-.48**	.127	.525**	-.27	-.069	.38**	1					Size
.434**	-.198	.005	.807**	.261	-.180	1						DSO
-.003	-.357*	.167	.082	.049	1							DIV
.196	.076	-.447**	-.288*	1								APP
.326*	-.347*	.305*	1									CCC
.163	-.241	1										GROWTH
-.725**	1											CR
1												LEV

*significant at the 0.05 level (2-tailed). **significant at the 0.01 level (2-tailed).

Table 4: Correlation between variables of Cement Industry Firms

LEV	CR	GROWTH	CCC	APP	DIV	DSO	SIZE	ROCE	NPM	ROE	ROA	
-.282*	-.269	.005	-.47**	.359*	-.37**	-.42**	.084	.78**	.48**	.83**	1	ROA
.010	-.297*	-.039	-.52**	.43**	-.41**	-.45**	.327*	.83**	.54**	1		ROE
-.199	.144	.076	-.45**	.063	-.49**	-.131	.043	.39**	1			NPM
.161	-.359*	-.072	-.51**	.48**	-.38**	-.47**	.44**	1				ROCE
.557**	-.009	.018	-.002	.224	.027	-.004	1					SIZE
-.051	.822**	-.148	.613**	-.163	.352*	1						DSO
.241	-.031	-.090	.949**	-.084	1							DIV
.081	-.171	-.142	-.224	1								APP
.177	.240	-.117	1									CCC
.058	.069	1										GROWTH
-.125	1											CR
1												LEV

*. Significant at the 0.05 level (2-tailed). **. Significant at the 0.01 level (2-tailed).

Impact of Working Capital Variables on Profitability of Cement Industry Firms:

Model – 1 has 37.6% explanatory power and is as follows:

$$ROA = 8.364 - .115*SIZE + .000*DIV - .020*CCC - .012*APP + 3.409*CR - .040*LEV + .012*GROWTH$$

All independent variables have insignificant effect on ROA. In addition, SIZE, CCC, APP and LEV have negative impact on ROA which means that increase of these variables

leads to decrease of ROA of Cement industry of Bangladesh. Rest of variables have positive effect.

Model – 2 has 27.6% explanatory power and is as follows:

$$ROE = 18.337 + .186*SIZE + .014*DIV - .069*APP - .048*CCC + 2.958*CR - .142*LEV + .002*GROWTH$$

Only cash conversion cycle (CCC) affect ROE significantly as p value of coefficient is less than 5%. In addition, CCC, APP and LEV have negative effect on ROE which means that increase of these variables leads to decrease of ROE of Cement industry of Bangladesh. Rest of variables have positive effect.

Model – 3: Thus the following model has 20.5% explanatory power

$$ROCE = 16.226 + .302*SIZE + .134*DIV + .023*CCC - .020*APP - 2.310*CR - .237*LEV + .046*GROWTH$$

All variables have insignificant effect on ROCE. In addition, APP, CR and LEV have negative impact on ROCE which means that increase of these variables leads to decrease of ROCE of Cement industry of Bangladesh. Rest of variables have positive impact.

Model – 4: Thus the following model has 4.4% explanatory power

$$NPM = -62.415 + .710*SIZE - .014*CCC + .361*DIV - .057*APP + 27.040*CR + .176*LEV - .022*GROWTH$$

Only current ratio has significant positive effects on NPM as its coefficient's p value is less than 5%. In addition, CCC, APP and GROWTH have negative effect on NPM which means that increase of these variables leads to decrease of NPM of Cement industry of Bangladesh. Rest of variables have positive impact.

Table 5: Coefficients, standard error and VIF of variables (Cement Industry)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	8.364	9.753	.858	.396		
	Size	-.115	.326	-.056	.727	.540	1.852
	DIV	.000	.039	-.002	.987	.591	1.693
	APP	-.012	.021	-.089	.580	.530	1.886
	CCC	-.020	.011	-.268	.074	.635	1.574
	GROWTH	.012	.024	.074	.517	.656	1.525
	CR	3.409	1.944	.402	.087	.258	3.875
	LEV	-.040	.057	-.155	.484	.281	3.557
a. Dependent Variable: ROA							
	(Constant)	18.337	21.183	.866	.392		

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
2	Size	.186	.708	.045	.264	.794	1.852
	DIV	.014	.086	.028	.169	.866	1.693
	APP	-.069	.046	-.262	-1.519	.137	1.886
	CCC	-.048	.024	-.322	-2.046	.048	1.574
	GROWTH	.002	.051	.007	.046	.964	1.525
	CR	2.958	4.222	.173	.701	.488	3.875
	LEV	-.142	.125	-.270	-1.139	.262	3.557
a. Dependent Variable: ROE							
3	(Constant)	16.226	20.608		.787	.436	
	Size	.302	.688	.078	.438	.664	1.852
	DIV	.134	.083	.275	1.609	.116	1.693
	APP	-.020	.044	-.080	-.445	.659	1.886
	CCC	-.023	.023	-.165	-.998	.324	1.574
	GROWTH	.046	.050	.150	.925	.360	1.525
	CR	-2.310	4.107	-.146	-.562	.577	3.875
	LEV	-.237	.121	-.484	-1.953	.058	3.557
a. Dependent Variable: ROCE							
4	(Constant)	-62.415	65.591		-.952	.347	
	Size	.710	2.191	.064	.324	.748	1.852
	DIV	.361	.265	.255	1.362	.181	1.693
	APP	-.057	.141	-.080	-.405	.688	1.886
	CCC	-.014	.073	-.035	-.195	.847	1.574
	GROWTH	-.022	.159	-.025	-.140	.889	1.525
	CR	27.040	13.072	.587	2.069	.045	3.875
	LEV	.176	.386	.124	.457	.650	3.557
a. Dependent Variable: NPM							

From the above table it is seen that VIF values of all variables are less than 10 which indicates that there is no multicollinearity problem. The table description given below.

Impact of Working Capital Variables on Profitability of Tannery Industry Firms

Table 6: Coefficients, standard error and VIF of variables (Tannery Industry)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.043	4.677		.865	.393	
	SIZE	.588	.312	.332	1.883	.067	1.882
	DSO	-.010	.008	-.449	-1.332	.191	6.863
	DIV	.000	.002	-.096	-.525	.603	2.029
	APP	-.04830	.033	.000	-.001	.999	1.530

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	GROWTH	−.005	.015	−.051	−.355	.724	.813	1.229
	CR	.012	.085	.045	.139	.890	.156	6.391
	LEV	−.152	.053	−.479	−2.874	.007	.596	1.679
a. Dependent Variable: ROA								
2	(Constant)	−7.397	10.380		−.713	.480		
	SIZE	1.617	.694	.396	2.331	.025	.531	1.882
	DSO	−.026	.017	−.489	−1.506	.140	.146	6.863
	DIV	−.003	.004	−.144	−.816	.420	.493	2.029
	APP	.061	.073	.129	.838	.407	.654	1.530
	GROWTH	−.026	.033	−.108	−.788	.435	.813	1.229
	CR	.068	.189	.112	.358	.723	.156	6.391
	LEV	−.160	.118	−.219	−1.361	.182	.596	1.679
a. Dependent Variable: ROE								
3	(Constant)	−21.639	10.975		−1.972	.056		
	SIZE	2.396	.733	.507	3.267	.002	.531	1.882
	DSO	−.018	.018	−.289	−.976	.335	.146	6.863
	DIV	−.006	.004	−.274	−1.696	.098	.493	2.029
	APP	.005	.077	.010	.069	.945	.654	1.530
	GROWTH	−.037	.035	−.133	−1.059	.296	.813	1.229
	CR	−.096	.200	−.137	−.478	.635	.156	6.391
	LEV	−.074	.124	−.087	−.593	.557	.596	1.679
a. Dependent Variable: ROCE								
4	(Constant)	1.840	3.627		.507	.615		
	SIZE	.436	.242	.300	1.800	.080	.531	1.882
	DSO	−.017	.006	−.895	−2.811	.008	.146	6.863
	DIV	.000	.001	−.078	−.452	.654	.493	2.029
	APP	−.007	.025	−.040	−.264	.793	.654	1.530
	GROWTH	−.010	.011	−.116	−.860	.395	.813	1.229
	CR	.190	.066	.884	2.875	.007	.156	6.391
	LEV	−.089	.041	−.340	−2.160	.037	.596	1.679
a. Dependent Variable: NPM								

Model – 1 is as follows:

$$ROA = 4.043 + .588*SIZE - .010*DSO + .000*DIV - .000483*APP + .012*CR - .152*LEV - .005*GROWTH$$

Only Lev have significant positive effect on ROA as their coefficients' p value is less than 5%. 1% increase of firm size and current ratio results in 0.58% and 0.012% increase of ROA respectively. In addition, DSO, APP, GROWTH and LEV have negative impact on ROA which implies that increase of these variables leads to decrease the ROA. Rest of variables have positive impact.

Model – 2 is as follows:

$$ROE = -7.397 + 1.617*SIZE - .026*DSO + .003*DIV + .061*APP + .068*CR - .160*LEV - .026*GROWTH$$

Only size of the firm has significant effect on ROE as its coefficients' p value is less than 5%. 1% increase of firm size results in 1.61% increase of ROE. In addition, DSO, GROWTH & LEV have negative impact on ROE which implies that increase of these variables leads to decrease the ROE. Rest of variables have positive impact.

Model – 3 is as follows:

$$ROCE = -21.639 + 2.396*SIZE - .018*DSO - .006*DIV + .005*APP - .097*CR - .074*LEV - .037*GROWTH$$

Only size of the firm has significant effect on ROCE as its coefficients' p value is less than 5%. 1% increase of firm size results in 2.39% increase of ROCE. In addition, DSO, DIV, GROWTH, CR, LEV, & GROWTH have negative impact on ROCE which implies that increase of these variables leads to decrease ROCE. APP has positive impact.

Model – 4:

$$NPM = 1.840 + .436*SIZE - .007*DSO - .000*DIV - .007*APP + .190*CR - .089*LEV - .010*GROWTH$$

CR, DSO & LEV have significant negative effect on NPM as its coefficients' p value is less than 5%. 1% increase of CR and LEV results in 0.19% increase and 0.089% decrease of NPM respectively. One day increase of DSO results in 0.007% decrease of NPM. In addition, DSO, APP, GROWTH, & LEV are negatively related which implies that increase of these variables leads to decrease the NPM. Firm size has positive impact on NPM.

Fitness of Models

Table 7: Model Summary (Cement industry)

Model	R ^a	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Durbin-Watson
1	.686	.471	.376	4.447	.471	1.837
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROA						
2	.621 ^a	.386	.276	9.65922	.386	1.902
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROE						
3	.571 ^a	.326	.205	9.39718	.326	1.936
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROCE						
4	.435 ^a	.290	.22	29.90854	.190	2.178
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: NPM						

Table 8: Model Summary (Tannery industry)

Model	R ^a	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Durbin-Watson
1	.609 ^a	.371	.255	4.86009	.371	1.859
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROA						
2	.645 ^a	.416	.309	10.78725	.416	2.069
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROE						
3	.716 ^a	.513	.423	11.40608	.513	2.180
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROCE						
4	.662 ^a	.439	.335	3.76912	.439	2.092
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: NPM						

From table 7 and 8 it is seen that all models showed a moderate explanatory power of independent variables which is evident from the value of adjusted R square. The Durbin-Watson value is near 2 which indicates absence of autocorrelation problem.

Table 9: ANOVA (Cement industry)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	687.127	7	98.161	4.963	.000 ^a
	Residual	771.337	39	19.778		
	Total	1458.464	46			
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROA						
2	Regression	2285.655	7	326.522	3.500	.005 ^a
	Residual	3638.720	39	93.301		
	Total	5924.375	46			
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROE						
3	Regression	1666.108	7	238.015	2.695	.022 ^a
	Residual	3443.972	39	88.307		
	Total	5110.080	46			
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: ROCE						
4	Regression	8161.671	7	1165.953	1.303	.275 ^a
	Residual	34886.316	39	894.521		
	Total	43047.987	46			
a. Predictors: (Constant), LEV, DIV, APP, CCC, GROWTH, Size, CR						
b. Dependent Variable: NPM						

From the above table it is seen that except model 4, all the models are significant as p value of is below 0.05.

Table 10: ANOVA (Tannery industry)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	529.076	7	75.582	3.200	.009 ^a
	Residual	897.579	38	23.620		
	Total	1426.655	45			
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROA						
2	Regression	3150.921	7	450.132	3.868	.003 ^a
	Residual	4421.861	38	116.365		
	Total	7572.782	45			
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROE						
3	Regression	5206.800	7	743.829	5.717	.000 ^a
	Residual	4943.752	38	130.099		
	Total	10150.551	45			
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: ROCE						
4	Regression	421.589	7	60.227	4.239	.002 ^a
	Residual	539.838	38	14.206		
	Total	961.427	45			
a. Predictors: (Constant), LEV, DSO, GROWTH, APP, DIV, SIZE, CR						
b. Dependent Variable: NPM						

From the above table it is seen that all the models are significant as p value of F statistic is below 0.05. From the table 5 and 6 it is seen that VIF values of all variables are less than 10 which indicates that there is no multicollinearity problem.

Recommendations and Conclusion

Strategic level managers of companies of both industries should concentrate on reducing collection period, inventory turnover days and cash conversion cycle with a view to enhance profitability. More efforts to expedite receivables collection could reduce DSO. Inventory holding period could also be reduced by aligning production schedule with market demand. Reducing APP could improve corporate relationship with suppliers which may have indirect positive impact although in tannery industry average payment period is positively related with some profitability ratios. Study revealed that in case of companies of cement industry CCC has significant negative effect on ROE and CR has significant positive impact on NPM. In case of companies of tannery industry CR, DSO & LEV have significant negative effect on NPM. The research has policy implications as formulating corporate policy and strategy to enhance short term asset & liability turnover will eventually boost profitability of firms of both the industries. The study is beneficial for corporate managers and all other stakeholders such as investors, creditors, customers etc. Further studies can be undertaken to assess the effect of working capital or asset utilization on solvency of non-manufacturing firms.

References

- Angahar, P. A., Alematu. A. (2014). Impact of working capital on the profitability of the Nigerian cement industry. *European Journal of Accounting Auditing and Finance Research*, 2(7), 17–30.
- Anojan, V., N. Arulalon, N., & Nimalathasan, B. (2013). Working capital management and its impact on profitability: A study of selected listed beverage, food and tobacco companies in Colombo stock exchange, Sri Lanka. *The International Journal of Business & Management*, 1(6), 10–17.
- Asaduzzaman, M., & Chowdhury, T. (2014). Effect of working capital management on firm profitability: Empirical evidence from textiles industry of Bangladesh. *Research Journal of Finance and Accounting*, 5(8), 175–185.
- Azam, M., & Haider, S. I. (2011). Impact of working capital management on firms' performance: Evidence from non-financial institutions of KSE-30 index. *Interdisciplinary Journal of Contemporary Research in Business*, 3 (5).
- Deloof, M. (2003). Does working capital management affect profitability of Belgian firms? *Journal of Business Finance & Accounting*, 30(3-4), 573-588. <https://doi.org/10.1111/1468-5957.00008>
- Hoque, M. A., Mia, M. A., & Rakibul, S. M. (2015). Working capital management and profitability: A study on cement industry in Bangladesh. *Research Journal of Finance and Accounting*, 6(1), 18–29.
- Jayarathne, T. A. N. R. (2014). Impact of working capital management on profitability: Evidence from listed companies in Sri Lanka. *Faculty of Management and Finance Journal, University of Ruhuna, Sri Lanka Impact* (February), 269–274.
- Mukhopadhyay, D. (2004). Working capital management in heavy engineering firms—A case study. [Online] Available: <http://www.myicwai.com/knowledgebank/fm48>
- Naeem, M. U., Awais, M., & Shahzadi, I. (2017). Working capital management: A comparative study of cement, food and textile industry. *International Journal of Engineering and Information Systems*, 1(1), 179–191.
- Nimalathasan, B. (2010). Working capital management and its impact on profitability: A study listed manufacturing companies in Sri Lanka. *Manager Journal*, 12(1), 76-82. <https://EconPapers.repec.org/RePEc:but:manage:v:12:y:2010:i:1:p:76-82>
- Parveen, S., Khattak, J. H., Qayyum, H., & Afzal, I. (2014). Impact of working capital on profitability of cement sector of Pakistan. *International Journal of Management Sciences and Business Research*, 3(11), 661–667.
- Ponsian, N., Kiemi Chrispina, K., Tago, G., & Mkiiibi, H. (2014). The effect of working capital management on profitability. *International Journal of Economics, Finance and Management Sciences*, 2(6), 347.

- Quayyum, S. T. (2011). Effects of working capital management and liquidity: Evidence from the cement industry of Bangladesh. *Journal of Business and Technology (Dhaka)*, 6(1), 37–47.
- Qureshi, M. A. (2017). Impact of working capital management on profitability of UK pharmaceuticals and biotechnology FTSE all share index firms. *Journal of Quantitative Methods*, 1(1), 58-70.
- Raheman, A., Afza, T., Quayyum, A., & Bodla, M. A. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *International Research Journal of Finance and Economics*, 47, 156–169.
- Safiah, F., & Nizam, I. (2015). The effects of working capital management on the profitability of plantation and petroleum sector in Malaysia. *International Journal of Accounting and Business Management*, 3(2), 87–108.
- Saghir, A., Hashmi, M. F. & Hussain, N. M. (2011). *Working capital management and profitability: Evidence from Pakistan firms*. Journal of Contemporary Research in Business, 3(8)
- Singh, K., & Asress, F. C. (2011). Determining working capital solvency level and its effect on profitability in selected Indian manufacturing firms. *International Journal of Research in Commerce, Economics and Management*, ICBI, University of Kelaniya, Sri Lanka
- Smith, K. (1973). State of the art of working capital management. *Financial Management*, 2(3), 50-55. Retrieved February 19, 2021, from <http://www.jstor.org/stable/3664987>
- Wanguu, K. C., & Kipkirui, S. E. (2015). The effect of working capital management on profitability of cement manufacturing companies in Kenya.” *IOSR Journal of Economics and Finance*, 6(6), 53-61. DOI: 10.9790/5933-06635361

Acronyms

WCM	Working Capital Management
DSE	Dhaka Stock Exchange
DSO	Days Sales Outstanding
APP	Average Payment Period
DIV	Inventory Turnover Days
CCC	Cash Conversion Cycle
LEV	Leverage
CR	Current Ratio
GROWTH	Sales/Revenue Growth
ROA	Return on Assets
ROE	Return on Equity
ROCE	Return on Capital Employed
NPM	Net Profit Margin
SIZE	Size of the firms in terms of Total assets

Appendix A

Firm specific variables of firms of Cement Industry

Serial	Company Name	Year	Size (Taka)	Log(size)	DSO (Days)	DIN (Days)	DAP (Days)	CCC (Days)	ROA (%)	ROE (%)	NPM (%)	ROCE (%)	Growth (%)	CR	LEV (%)
1	Lafarge Cement	2008	17,638,839	16.6856	37.64	103.91	13.58	127.97	3.60	15.23	10.23	18.67	158	0.35	76.44
		2009	17,012,631	16.6495	18.78	89.48	70.77	37.48	3.43	12.26	7.73	19.62	21.44	0.33	72.06
		2010	16,558,697	16.6224	85.95	83.77	76.19	93.53	-3.16	-12.38	-9.26	-0.54	-25	0.27	75
		2011	18,559,381	16.7365	31.93	103.66	107.03	28.55	-11.79	-24.58	-35.88	3.14	7.84	0.57	49
		2012	18,523,368	16.7345	4.28	93.90	11.71	86.47	10.01	22.12	30.55	33.10	74.47	0.85	56
		2013	19,027,323	16.7614	25.76	87.76	73.05	40.47	13.38	23.05	22.47	30.83	6.5	0.46	43
		2014	19,995,999	16.8110	27.27	80.23	72.24	35.26	14.10	21.27	24.34	24.20	2.23	1.44	33
		2015	20,695,036	16.8454	30.23	74.03	82.32	21.93	3.89	5.61	7.34	17.25	-5.31	1.99	31
		2016	20,979,585	16.8591	46.32	65.73	79.36	32.70	10.61	14.48	207.17	16.25	-2.19	2.56	27
		2017	21,550,657	16.8859	51.66	59.72	97.83	13.55	10.62	14.99	21.16	7.23	0.84	2.24	29
2	Heidelberg Cement	2008	5,870,540	15.5855	34.65	42.00	82.15	-5.49	10.00	18.00	9.30	17.00	11.75	1.27	44
		2009	6,030,450	15.6123	29.72	58.04	67.54	20.22	14.00	21.00	11.81	19.00	13	2.03	34
		2010	7,182,699	15.7872	25.85	69.54	68.15	27.24	14.00	21.00	12.00	19.00	15.46	2.38	33.79
		2011	8,010,817	15.8963	34.34	57.05	83.36	8.04	9.00	14.00	9.33	13.00	2.34	2.14	34.3
		2012	9,181,511	16.0327	30.78	39.85	63.66	6.96	14.00	20.00	11.86	18.00	27.81	2.64	31
		2013	10,722,048	16.1878	29.92	40.11	78.26	-8.23	14.00	20.00	15.00	18.00	-8.53	2.91	30
		2014	10,172,859	16.1352	33.18	35.78	86.91	-17.95	12.00	18.00	11.00	9.00	5.5	2.33	35.87
		2015	9,771,707	16.0950	34.43	34.11	94.89	-26.34	14.00	24.00	13.00	11.00	-0.19	1.96	40.86
		2016	10,188,507	16.1368	38.42	51.41	120.58	-30.75	15.00	27.00	14.00	11.00	1.97	1.73	45
		2017	8,730,488	15.9823	42.94	43.45	32.51	53.88	9.00	17.00	8.00	7.00	-7.53	1.59	46

Serial	Company Name	Year	Size (Taka)	Log(size)	DSO (Days)	DIN (Days)	DAP (Days)	CCC (Days)	ROA (%)	ROE (%)	NPM (%)	ROCE (%)	Growth (%)	CR	LEV (%)
3	Premier Cement	2008													
		2009	1,119,378,742	20.8360	104.24	41.05	13.36	131.94	11.26	22.78	9.23	32.34		1.15	51
		2010	1,878,866,794	21.3539	67.56	53.59	22.99	98.16	9.43	24.26	9.51	29.29	36.45	1.14	48
		2011	4,127,930,690	22.1410	52.13	90.11	17.63	124.61	7.91	15.94	9.52	23.54	84	0.98	50
		2012	6,039,526,565	22.5216	56.77	59.54	35.34	80.97	2.64	7.72	4.06	19.33	22.32	0.62	66
		2013	8,496,225,473	22.8629	54.80	45.97	48.05	52.72	5.88	15.51	7.78	26.67	53	0.75	62
		2014	9,803,419,795	23.0060	64.04	60.53	38.37	86.20	5.19	15.40	6.75	23.23	17.5	0.77	66
		2015	10,089,329,608	23.0347	62.71	68.87	18.39	113.19	4.05	12.03	5.04	17.18	7.42	0.87	66
		2016	10,843,738,775	23.1069	64.15	56.68	21.55	99.27	6.42	16.37	7.43	20.67	17.78	1.06	64
		2017	12,473,442,468	23.2469	84.69	41.91	13.79	112.80	5.00	13.00	5.44	16.04	10.37	0.88	66
4	Confidence Cement	2008	628,290,250	20.2585	51.95	26.73	17.39	61.29	-4.53	-4.67	-2.31	-27.78	11.56	1.07	83.69
		2009	1,870,099,460	21.3493	43.70	35.95	17.46	62.19	7.67	7.93	11.81	13.99	-1.26	1.42	24.34
		2010	3,233,338,953	21.8968	27.57	102.07	18.28	111.36	7.45	13.20	14.20	11.33	41.55	1.36	19.48
		2011	3,734,534,286	22.0409	37.77	61.54	34.51	64.80	6.50	9.89	8.85	6.77	30.36	1.23	32.66
		2012	4,083,976,310	22.1303	49.74	48.52	19.50	78.76	2.46	15.25	8.57	9.50	46	1.3	37.48
		2013	451,030,900	19.9270	61.14	30.81	10.11	81.85	7.34	17.82	9.51	10.00	6.41	1.52	37.52
		2014	506,145,300	20.0423	74.21	47.76	20.22	101.75	4.73	21.98	6.58	7.33	4.42	1.31	42.75
		2015	5,568,009,703	22.4403	76.52	76.52	21.45	131.58	6.53	14.87	12.72	15.83	0.063	1.39	43
		2016	772,405,500	20.4650	86.45	86.45	27.71	145.19	4.70	14.03	13.72	13.63	-0.22	1.01	46.88
		2017	820,081,700	20.5249	95.24	95.24	44.55	145.93	4.78	9.49	9.55	9.22	7.93		49.96
5	Aramit Cement	2008	653,837,037	20.2984	36.12	44.62	33.98	46.76	0.37	1.05	0.32	8.87	27.63	0.68	89.78
		2009	718,871,757	20.3932	53.82	50.34	76.04	28.12	8.44	9.08	7.19	5.81	10.65	0.59	96.81
		2010	981,625,298	20.7047	67.88	87.95	55.77	100.07	8.08	6.00	8.65	5.64	8.75	0.73	86.53
		2011	1,276,680,666	20.9675	45.71	56.59	113.26	-10.96	3.98	2.80	5.19	3.03	6.5996	0.69	85.8
		2012	1,542,929,078	21.1569	99.07	54.15	156.63	-3.40	3.32	2.22	4.65	2.86	12.87	0.68	85
		2013	1,586,740,176	21.1849	125.03	62.50	177.96	9.57	2.74	1.58	4.99	1.85	-21	0.67	82.69
		2014	1,869,616,264	21.3490	196.57	92.41	155.64	133.34	0.81	2.90	3.95	16.63	-28.42	0.92	71.93
		2015	1,869,616,264	21.3490	141.99	79.18	110.04	111.12	0.88	3.14	1.91	3.13	38.44	1.19	71.93
		2016	2,597,155,749	21.6777	444.93	39.76	124.65	360.05	0.46	2.44	1.80	1.74	-20	1.01	81.31
		2017	3,348,288,090	21.9317	337.94	29.58	41.19	326.33	-3.01	-26.64	-6.46	-7.18	119	0.98	88.71

Appendix B

Firm specific variables of firms of Tannery Industry

Serial	Company Name	Year	Size (Taka)	log	DSO (Days)	DIN (Days)	DAP (Days)	CCC (Days)	ROA (%)	ROE (%)	NPM (%)	ROCE (%)	Growth (%)	CR	LEV(%)
6	A p e x	2008	1,568,380	14.2656	40.61	290.71	43.72	287.59	9.36	19.67	9.03	12.36	1.79	1.42	58.29
		2009	1,568,380	14.2656	40.61	290.71	43.72	287.59	9.36	19.67	9.03	12.22	0	1.42	58.29
		2010	1,090,410	13.9021	53.49	137.19	4.40	186.28	13.10	16.66	8.29	20.99	6.06	1.36	21.39
		2011	1,613,300	14.2938	28.34	119.90	1.95	146.29	6.00	10.57	3.85	13.68	45.96	1.23	43.22
		2012	1,596,575	14.2834	21.15	103.13	1.72	122.57	6.74	11.01	3.51	12.66	21.91	1.3	38.93
		2013	1,436,147	14.1775	20.76	48.95	2.06	67.65	6.97	9.77	3.08	11.21	6.399	1.41	36.16
		2014	1,485,024	14.2109	15.53	46.11	0.59	61.04	5.66	8.02	2.22	5.87	16.77	3.54	26.46
		2015	1,752,941	14.3768	15.85	54.34	4.09	66.10	5.43	8.87	2.53	9.73	-0.57	2.11	36.12
		2016	1,873,906	14.4435	23.53	118.82	7.41	134.93	4.88	8.37	4.24	8.47	-42.77	1.59	39.5
		2017	2,376,001	14.6809	31.50	154.04	21.66	163.89	1.90	4.19	2.31	5.75	-9.57	0.96	52.82
7	A p e x A d e l c h i	2008	3,248,434,601	21.9014	58.70	87.33	82.64	63.38	5.84	33.72	3.37	41.65		1.03	82.67
		2009	3,487,131,645	21.9723	44.42	100.41	74.96	69.87	6.07	28.78	3.63	35.30	3.63	1.07	78.92
		2010	4,677,073,785	22.2659	46.42	139.96	95.62	90.76	4.88	31.43	3.29	34.83	18.81	1.1	84.48
		2011	7,180,040,973	22.6946	36.64	126.83	62.78	100.68	3.64	12.87	2.75	12.99	37	1.14	71.77
		2012	8,168,272,798	22.8235	29.68	149.61	57.13	122.15	3.17	11.32	2.66	27.03	2.63	1.2	72
		2013	9,574,539,218	22.9824	32.16	174.52	54.95	151.72	2.77	10.69	2.43	26.01	12.22	1.19	73.94
		2014	12,387,620,391	23.2400	46.53	237.28	19.15	264.66	1.64	7.70	1.77	22.58	4.79	1.16	78.71
		2015	12,874,385,574	23.2785	45.41	264.10	12.04	297.46	0.41	1.99	0.46	24.91	-1	1.08	79.6
		2016	13,264,975,729	23.3084	53.54	263.80	11.26	306.09	0.58	7.03	0.63	20.76	7.92	1.07	91.71
		2017	13,763,058,807	23.3453	42.49	231.69	11.34	262.84	0.60	8.87	0.58	21.07	16	1.03	93.28

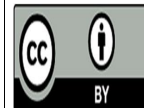
Serial	Company Name	Year	Size (Taka)	log	DSO (Days)	DIN (Days)	DAP (Days)	CCC (Days)	ROA (%)	ROE (%)	NPM (%)	ROCE (%)	Growth (%)	CR	LEV(%)
8	Bata	2008	2,483,380,658	21.6329	6.28	175.86	585.14	-403.01	18.10	46.23	9.72	58.98		1.45	60.86
		2009	2,722,964,025	21.7250	7.38	161.58	58.26	110.69	16.50	40.11	9.00	52.38	8.05	1.48	58.85
		2010	7,494,033,180	22.7374	8.51	171.67	39.05	141.13	7.24	41.07	9.58	13.03	13.37	1.45	56.75
		2011	8,499,358,450	22.8633	10.46	149.56	38.98	121.03	6.81	37.17	8.71	12.74	17.41	1.48	56.05
		2012	3,980,023,320	22.1046	13.67	146.11	38.25	121.52	16.88	36.24	9.10	26.60	11.08	1.49	53.42
		2013	4,610,437,455	22.2516	20.18	162.89	41.91	141.16	17.64	36.03	10.32	50.16	6.7	1.62	51.05
		2014	4,666,747,196	22.2637	21.48	159.35	39.45	141.38	15.01	27.25	8.67	38.86	2.51	1.8	44.91
		2015	5,236,593,585	22.3789	39.67	162.38	38.45	163.59	15.88	28.05	9.76	39.65	5.52	1.95	43.37
		2016	6,554,222,082	22.6034	42.29	204.18	59.71	186.76	15.91	29.33	11.87	38.39	3.07	1.98	45.74
		2017	7,751,831,462	22.7712	50.24	252.54	76.05	226.73	14.78	27.12	12.67	36.77	2.91	2.01	45.5
9	Samatha Leather	2008	377,352,371	19.7487	267.16	1912.45	52.39	2127.22	-0.42	-13.09	-53.70	-5.80		0.89	67.76
		2009	379,790,015	19.7551	174.93	1717.86	31.46	1861.32	-2.12	-1.80	-5.28	-0.61	40.18	0.89	67.74
		2010	380,161,790	19.7561	406.44	3243.19	18.13	3631.50	0.02	0.06	0.34	-2.32	-50.9	0.89	67.15
		2011	383,002,500	19.7636	333.28	2655.66	9.92	2979.02	-0.34	-1.03	-4.82	-0.72	32.33	0.9	67.15
		2012	305,852,109	19.5386	255.39	1759.04	13.14	2001.29	-0.30	-1.78	-2.35	-0.42	44.72	0.86	83.09
		2013	169,522,179	18.9485	55.89	128.62	11.79	172.73	4.47	3.69	3.48	3.57	303	6.51	64
		2014	171,092,421	18.9577	174.08	291.65	34.10	431.63	0.30	0.84	0.82	0.31	-60.46	6.09	64.09
		2015	176,305,187	18.9877	268.93	519.20	85.09	703.04	-0.88	-2.61	-4.50	-1.02	-44.57	6.16	66.4
		2016	187,995,303	19.0519	210.67	332.20	84.93	457.94	-0.34	-0.42	-1.50	-0.36	22.38	2.64	18.96
		2017	196,746,809	19.0974	172.95	177.21	74.18	275.98	-0.90	-1.18	-3.52	-1.10	18.8	1.76	23.46
10	Legacy footwear	2008	174,341,014	18.9765	224.34	202.24	6.97	419.62	2.18	3.75	4.89	2.78		28.57	70.29
		2009	270,808,143	19.4169	262.76	226.47	8.57	480.66	1.95	5.82	6.70	2.43	1.03	28.57	48.07
		2010	286,215,220	19.4723	252.96	211.00	7.25	456.71	2.88	7.30	9.19	3.61	14.1	23.76	50.53
		2011	330,040,922	19.6147	257.19	190.13	4.85	442.47	3.33	3.33	8.94	4.16	36.95	33.84	54.48
		2012	354,110,828	19.6851	312.97	234.22	43.27	503.92	1.66	3.65	4.94	2.07	2.99	38.75	54.46
		2013	380,704,721	19.7575	354.67	275.56	43.59	586.63	1.61	3.56	5.07	2.00	1.17	37.48	54.86
		2014	380,374,377	19.7567	355.60	243.32	4.71	594.22	1.49	2.81	4.73	2.24	1.03	34.87	47.19
		2015	382,122,086	19.7613	610.50	365.47	4.48	971.50	0.70	1.36	3.32	1.44	-32.39	56.31	48.36
		2016	370,356,306	19.7300	1473.00	825.05	5.08	2292.96	0.36	0.74	3.32	0.36	-50	90.83	50.99



		2017	401,490,504	19.8107	496.77	325.49	2.00	820.26	2.86	5.99	11.33	2.88	150.88	89.33	52.32
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