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Impact of Working Capital Management on Profitability Among Sugar Manufacturing Companies in India

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Abstract

Working capital management plays a vital role in sustaining a company's short-term operational cash requirements. For sugar manufacturing companies, the most important component of working capital is inventory. Thus, working capital management is all the more important due to the long inventory cycles they face. The present study examines the impact of working capital on profitability among sugar manufacturing companies in India. The data for the study was collected from a sample of 15 major Indian sugar manufacturing companies, pertaining to the study period 2008-18. The study uses fixed-effects panel regression analysis rather than pooled regression, as the fixed-effects panel regression allows control for company-specific differences in profitability as well as for year-to-year differences in profitability for the industry as a whole. The results of the study suggest that from among the working capital variables, payables was found to have significant negative impact on the profitability of sugar manufacturing companies; and from among the control variables, debt-equity ratio was found to have a significant negative impact on profitability, and fixed assets turnover ratio was found to have a significant positive impact on profitability.

Keywords: Working Capital Management, Sugar Industry, Inventory, Receivables, Payables, Fixed-Effects Panel Regression Analysis

Introduction

Effective working capital management involves a trade-off between the twin objectives of liquidity and profitability (Dash and Hanuman, 2015). The main components of working capital, viz. cash & equivalents, inventory, receivables and payables, may have a complex relationship with the company's liquidity and profitability, affecting and being affected by each other in turn, and complicated further by the nature of the industry and the company's strategies. This is an intricacy that companies have to be careful of when planning for their short-term operational finances.

Working capital management plays a vital role in sustaining a company's short-term operational cash requirements, i.e., liquidity. Excess build-up of inventory and receivables reduce the cash available to the company for day-to-day operations, and can lead to insolvency under conditions of recession/stress. On the other hand, excess build-up of payables improves the liquidity position of the company, but can also lead to insolvency under conditions of recession/stress. From the liquidity perspective, the company should aim at minimising their levels of inventory and receivables and maximising their level of payables, along with minimising the risk of insolvency.

Working capital management also has a potential impact on company profitability. Excess build-up of inventory may improve sales to a certain extent, but has cost implications, while insufficient inventory can lead to loss of sales and/or shortage costs. Excess build-up of receivables may increase the probability of bad debts, which can cut into profits; on the other hand, in order to reduce receivables, the company may have to offer discounts, which also reduces profits. Excess build-up of payables may also impact profits, as suppliers may be unwilling to supply at lower prices or offer good credit terms. Thus, from a profitability perspective, the company has to identify the optimal levels of inventory, receivables and payables that maximise the company's profit.

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Working capital cycles in the sugar industry generally tend to be relatively long, primarily due to the seasonal nature of its raw material inputs, typically requiring longer storage period[1]. In 2010-11, the average net working capital cycle for sugar manufacturing companies was reported to be 57 days; in which inventory accounted for 124 days, receivables 17 days and payables 84 days. Thus, it is important for sugar manufacturing companies to identify the impact of working capital management on their profitability.

Literature Review

Many studies have examined the impact of working capital management on firm profitability. The following is a partial review of the related literature.

Generally, studies have found a negative relationship between working capital cycle and profitability (Soenen, 1993; Jose et al., 1996; Shin and Sonen, 1998; Deloof, 2003; Rehman, 2006; Azhar and Noriza, 2010; Chatterjee, 2012). Deloof (2003) found significant negative relationships between profitability and the number of days' accounts receivable, inventories and accounts payable, suggesting that firm profitability can be improved by reducing the number of days' accounts receivable and inventories, while the negative relationship between profitability and accounts payable may reflect the tendency for less profitable firms to delay their payments. Rehman (2006) also found a strong negative relationship between profitability and working capital variables (average payment period, average collection period, inventory turnover in days and cash conversion cycle), suggesting that firms should reduce their cash conversion cycle to an optimal level in order to improve their profitability. Ganesan (2007) found a negative relationship between liquidity and profitability in the Indian telecommunication sector, suggesting that reducing the days of working capital can improve working capital efficiency, in turn leading to improvement in profitability. Azhar and Noriza (2010) found a strong negative relationship between firm performance and working capital variables. Chatterjee (2012) found a strong negative association between the firm profitability ratios and the components of the working capital for Indian firms, along with a positive relationship between firm profitability and firm size. Singhania et al. (2014) found a negative relationship between firm profitability and the cash conversion cycle, suggesting that firm performance can be improved by decreasing the receivables cycle and increasing the payables cycle.

However, some studies have reported mixed results on the impact of working capital on profitability. Raheman and Nasr (2007) found negative relationships between firm profitability and working capital management, liquidity and debt, and a positive relationship between firm profitability and size. Vishanani and Shah (2007) found no significant relationship between profitability and liquidity in the Indian consumer electronic industry as a whole, though individually several firms showed significant positive relationship between profitability and liquidity. Afza and Nazir (2009) found an inverse relationship between firm profitability and aggressiveness of working capital policies among Pakistani firms, suggesting that a conservative approach towards working capital investment would increase profitability. Mathuva (2009) found a significant negative relationship between profitability and accounts payable period and significant positive relationships between profitability and inventory turnover period and accounts receivables period for Kenyan firms. Ponsian et al. (2014) found significant negative relationships between profitability and average collection period and inventory turnover period, and significant positive relationships between profitability and average payment period and cash conversion cycle. Aggarwal and Chaudhary (2015) found that inventory cycle, debtors' cycle and cash conversion cycle had strong negative impacts on firm profitability, while creditors' cycle had a moderate positive impact on firm profitability.

Thus, most studies have found evidence of a negative impact of working capital components (average inventory days, average receivables days, average payables days and cash conversion cycle) on firm profitability (return on assets or return on equity). Further, taking size as a control factor, many studies have found positive size effect on profitability. However, most of the studies have used pooled correlation/regression, which has serious limitations when used with panel data. Driscoll and Kraay (1998) suggested using fixed-effects panel regression, as it allows for controlling company-specific differences in profitability as well as year-to-year differences in profitability for the industry as a whole. The present study contributes to the working capital literature by comparing

[1] https://www.equitymaster.com/detail.asp?date=11/30/2011&story=10&title=Working-capital-management-across-industries

the results of fixed-effects panel regressions with different sets of independent variables and control variables.

Methodology

The objective of the study was to examine the impact of working capital on profitability in the Indian sugar industry. The dependent variables considered include four measures of firm profitability: return on assets (ROA) and return on equity (ROE), which are the most commonly-used in the literature, and further, return on net worth (RONW) and net profit margin (NPM).

The independent variables considered for the study are related to the three major components of working capital, viz. inventory, receivables and payables. These have been included in terms of their contribution to the working capital cycle, i.e., inventory cycle, receivables cycle and payables cycle, defined as the respective component as a ratio to total sales multiplied by the number of days in a year, as well as in terms of their turnover ratios, i.e., the ratio of total sales to the respective component.

Several control variables have been included in the study. The first set of control variables includes size, represented by the logarithm of total assets, and productive capacity, represented by the logarithm of fixed assets. The next control variable was the debt-equity ratio, representing capital structure. Another control variable considered was the current ratio, representing liquidity. Finally, with the working capital turnover ratios, the total assets turnover ratio and fixed assets turnover ratio were taken as control variables.

The data for the study was collected from the Capitaline database for a sample of 15 listed sugar manufacturing companies. The sample companies are listed in the table below. The study period selected was 2008-18. The descriptive statistics of the variables are presented in Tables 1-3 in the Annexures.

Sample Sugar Manufacturing Companies

1	Balarampur Chini	9	Kothari
2	Bannari Amman	10	Ponni
3	Dalmia Bharat	11	Rajshree
4	DCM Shriram	12	Sakthi
5	Dhampur Mills	13	Sir Shadi Lal
6	Dharani	14	Triveni
7	Eid Parry	15	Ugar
8	Kesar		

The study used fixed-effects panel regression methodology, which allows control for company-specific differences in profitability as well as for year-to-year differences in profitability for the industry as a whole (Driscoll and Kraay, 1998). Seven models were considered for the analysis. In model I, the independent variables of inventory cycle, receivables cycle and payables cycle are considered, along with all the control variables, log of total assets, log of fixed assets, debt-equity ratio and current ratio. Subsequently, in model II, the independent variables are dropped, showing the effect of the control variables only. In model III, the independent variables are restored, and only size (log of total assets) is retained as a control variable. In model IV, only the independent variables are considered; all control variables are dropped. In model V, the independent variables of inventory turnover ratio, receivables turnover ratio and payables turnover ratio are considered, along with the control variables of log of total assets, total assets turnover ratio and fixed assets turnover ratio. Subsequently, in model VI, the control variables of total assets turnover ratio and fixed assets turnover ratio are dropped. Finally, in model VII, the control variable of log of total assets is dropped, showing the effect of the independent variables only. The results of the fixed-effects panel regressions for ROA, ROE, RONW and NPM are presented in Tables 4-7, respectively.

Findings

There were found to be significant differences in profitability between companies in most of the models. However, the pattern of differences varied between the models. Balarampur Chini, Bannari Amman, DCM Sriram, Eid Parry and Ponni had significantly higher ROA than Ugar, while Sir Shadi Lal had significantly lower ROA than Ugar, controlling for differences across years and controlling for the working capital variables (models III, IV and VII in Table 4). Balarampur Chini, Bannari Amman, Dalmia Bharat, Dhampur Mills and Eid Parry had significantly higher ROE than Ugar, controlling for differences across years and controlling for the working capital variables (models III and VI in Table 5), while Rajshree had significantly higher ROE than Ugar, while Ponni and Sir Shadi Lal had significantly lower ROE than Ugar, controlling for differences across years and controlling for the control variables (models I and II in Table 5). Balarampur Chini, Bannari Amman, DCM Sriram, Eid Parry and Ponni had significantly higher

RONW than Ugar and Sir Shadi Lal, controlling for differences across years and controlling for the working capital variables (model VII in Table 6). Balarampur Chini, Bannari Amman and Eid Parry had significantly higher NPM than Ugar, and Kesar and Sakthi had significantly lower NPM than Ugar, controlling for differences across years and controlling for the working capital variables (model VII in Table 7).

There were also found to be significant differences in profitability across years in most of the models. ROA, RONW and NPM were found to be significantly higher in 2009, 2010 and 2017 than in 2018, and significantly lower in 2015 than in 2018, controlling for differences between companies and controlling for the working capital variables (model VII in Tables 4, 6 and 7).

From the results in Table 4, there was found to be a significant negative association between the payables cycle and ROA and no significant association between inventory and receivables cycles and ROA, controlling for differences between companies and across years, as observed in models I, III and IV. Also, there was found to be a significantly negative impact of fixed assets on ROA in model I, which was coupled with a positive impact of total assets/size on ROA in model II, and reflected by a significant positive impact of fixed assets turnover ratio on ROA in model V.

From the results in Table 5, there was found to be no significant association between the working capital cycle variables and ROE, controlling for differences between companies and across years. However, there was found to be a significantly negative impact of fixed assets and debt-equity ratio on ROE in model I, which was coupled with a positive impact of current ratio on ROE in model II, and reflected by a significant negative impact of total assets/size on ROE in model VI. On the other hand, in model V, there was found to be a significant positive impact of total assets turnover ratio on ROE; and in models IV and VI, none of the variables was significant.

From the results in Table 6, there was found to be a significant negative association between the payables cycle and RONW and no significant association between inventory and receivables cycles and RONW, controlling for differences between companies and across years, as observed in models I, III and IV. Also, there was found to be a significantly negative impact of fixed assets on RONW in model I, which was coupled with a positive impact of total assets/size on RONW in model II, and reflected by a significant positive impact of fixed assets turnover ratio on RONW and a significant negative impact of total assets turnover ratio on RONW in model V.

From the results in Table 7, there was found to be a significant negative association between the payables cycle and NPM and no significant association between inventory and receivables cycles and NPM, controlling for differences between companies and across years, as observed in models I, III and IV. Also, there was found to be a significantly negative impact of fixed assets on NPM and a significant negative impact of debt-equity ratio on NPM in model I, which was coupled with a positive impact of total assets/size on NPM in model II, and reflected by a significant positive impact of fixed assets turnover ratio on NPM in model V.

Discussion

The results of the study indicate that the impact of the working capital variables and the control variables is sensitive to the choice of profitability measure. ROE, when taken as the dependent variable, did not have any significant association with the working capital variables. This could be due to the high variability in ROE among some of the sample companies. On the other hand, NPM, ROA and RONW had significant association with the working capital variables. Out of these, NPM showed the best results. Further studies should investigate this issue in more detail.

The results of the study suggest that payables was the only component of working capital playing a significant role in profitability of sugar manufacturing companies, and that payables and profitability of sugar manufacturing companies were negatively associated. This is contrary to conventional working capital principles, which suggest that longer payables cycles should be beneficial to the company, decreasing the need for short-term external funding. However, this result is consistent with that of Deloof (2003), who had suggested that the negative relationship between profitability and payables may reflect the tendency for less profitable firms to delay their payments. This raises the issue of causality of working capital management on profitability or vice versa, which should be examined further.

An interesting finding from the study is that of a significant negative impact of debt-equity ratio on

profitability. This is consistent with several studies (e.g. Kebewar, 2013), and is related to the Pecking Order Theory of capital structure, which suggests that more profitable companies would prefer internal sources of finance over external sources. Kebewar (2013) further suggested that debt has a significant negative non-linear effect on profitability in the case of small- and medium-sized enterprises (SMEs).

Another interesting finding from the study is that of a significant positive impact of fixed assets turnover on profitability. Thus, profitability can be improved by increasing the productivity and/or efficiency of fixed assets. There was also found to be a negative impact of fixed assets on profitability, i.e., a negative assets-tangibility effect. This could reflect overinvestment in/underutilisation of fixed assets, leading to reduced profitability. This may suggest a non-linear relationship between asset tangibility and profitability.

There are some limitations inherent in the present study. The sample size considered for the study was relatively small, only 15, selected from among the large/medium-sized sugar manufacturing companies, and the study period is limited to 10 years, so that the results of the study may not be generalisable. Further, the study has only considered some control variables, viz. log of total assets, log of fixed assets, debt-equity ratio and current ratio; there is scope to consider other control variables such as short-term vs. long-term debt to augment the results of the present study.

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Annexure

Table 1: Descriptive Statistics of Independent Variables Across the Sample Companies

Company	*log(TA)*		*log(FA)*		*D/E Ratio*		*Current Ratio*		*ATR*		*FATR*	
	Mean	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*
Balarampur Chini	7.95	0.15	7.69	0.23	1.25	0.31	3.52	1.68	1.02	0.26	1.41	0.65
Bannari Amman	7.33	0.38	7.07	0.20	0.81	0.43	5.44	2.29	0.76	0.21	0.96	0.18
Dalmia Bharat	7.51	0.49	7.34	0.44	1.63	0.52	2.86	0.88	0.76	0.15	0.89	0.13
DCM Shriram	6.43	0.17	6.30	0.24	1.47	0.32	2.25	0.40	1.90	0.22	2.34	1.14
Dhampur Mills	7.52	0.28	7.45	0.25	2.29	0.74	2.22	0.83	1.03	0.38	1.11	0.40
Dharani	6.44	0.19	6.33	0.42	7.51	8.92	2.28	1.01	0.84	0.28	0.99	0.44
Eid Parry	7.77	0.28	7.40	0.27	0.89	0.39	2.52	1.32	0.85	0.13	1.24	0.22
Kesar	5.91	0.42	5.85	0.66	4.07	2.23	2.38	1.82	0.85	0.24	1.00	0.57
Kothari	5.67	0.06	5.76	0.25	1.32	0.29	2.49	0.82	1.14	0.15	1.06	0.29
Ponni	5.16	0.43	4.81	0.47	0.46	0.25	2.05	0.54	1.34	0.69	2.00	1.24
Rajshree	6.50	0.13	6.52	0.22	6.69	5.39	1.99	0.49	0.94	0.19	0.94	0.26
Sakthi	7.43	0.19	7.36	0.07	2.45	0.59	1.04	0.64	0.62	0.18	0.69	0.27
Sir Shadi Lal	5.18	0.51	4.96	0.39	0.78	5.66	2.12	1.26	2.43	1.19	2.87	1.07
Triveni	7.63	0.11	7.24	0.26	1.57	0.75	2.87	0.94	1.17	0.37	1.83	0.91
Ugar	5.99	0.16	6.08	0.12	3.61	1.74	2.18	0.72	1.68	0.46	1.51	0.25
overall	6.69	0.97	6.54	0.95	2.45	3.67	2.55	1.45	1.15	0.63	1.39	0.86

Table 2: Descriptive Statistics of Independent Variables Across the Sample Companies (contd.)

Company	*Inventory Cycle*		*Receivables Cycle*		*Payables Cycle*		*ITR*		*RTR*		*PTR*	
	Mean	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*	*Mean*	*Std. Dev.*
Balarampur Chini	193.21	61.80	15.02	6.89	62.62	37.64	2.14	0.92	32.27	21.77	10.32	11.45
Bannari Amman	239.78	113.72	25.53	7.82	34.57	12.10	1.82	0.74	15.81	5.66	11.48	3.04
Dalmia Bharat	193.48	56.93	22.92	11.49	73.95	22.52	2.09	0.79	22.21	16.38	5.48	2.12
DCM Shriram	131.71	14.08	30.34	3.61	67.75	11.60	2.80	0.32	12.19	1.49	5.56	1.16
Dhampur Mills	185.20	56.51	33.12	11.70	95.89	47.26	2.19	0.86	13.15	7.54	4.87	2.70
Dharani	158.83	66.40	30.48	15.80	82.80	53.87	2.90	1.74	16.35	10.02	8.24	7.72
Eid Parry	105.51	56.92	34.87	8.21	47.12	20.59	4.83	3.07	11.11	3.16	9.17	3.84
Kesar	165.36	85.21	26.94	16.25	94.24	45.40	3.52	3.51	17.59	8.12	5.65	5.13
Kothari	107.02	38.25	15.41	5.38	47.77	22.06	3.83	1.38	27.15	11.80	9.30	4.86
Ponni	108.56	33.40	25.79	16.87	50.71	15.31	3.70	1.24	27.33	29.01	8.01	3.27
Rajshree	110.40	24.64	24.17	9.51	65.21	24.69	3.47	0.83	17.50	7.20	6.40	2.51
Sakthi	42.08	17.45	25.56	17.20	100.44	39.95	10.40	5.32	23.10	17.00	4.35	2.34
Sir Shadi Lal	194.88	42.20	4.22	2.23	107.72	67.87	1.96	0.46	113.87	63.43	6.41	6.15
Triveni	144.14	64.03	38.72	8.73	59.59	33.85	3.00	1.24	10.01	3.04	8.50	5.29
Ugar	212.64	25.94	20.87	16.10	78.20	33.78	1.74	0.22	25.98	16.67	10.40	18.32
overall	152.85	74.10	24.93	13.88	71.24	40.42	3.36	2.84	25.71	31.66	7.61	6.86

Table 3: Descriptive Statistics of Dependent Variables Across the Sample Companies

Company	ROA		ROE		RONW		NPM	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Balarampur Chini	0.06	0.06	0.12	0.13	0.06	0.06	0.06	0.06
Bannari Amman	0.07	0.06	0.11	0.08	0.07	0.06	0.08	0.06
Dalmia Bharat	0.03	0.03	0.06	0.07	0.03	0.03	0.04	0.04
DCM Shriram	0.04	0.05	0.10	0.12	0.04	0.05	0.02	0.03
Dhampur Mills	0.02	0.04	0.05	0.11	0.02	0.04	0.02	0.04
Dharani	-0.02	0.06	-0.48	1.33	-0.02	0.07	-0.04	0.10
Eid Parry	0.05	0.05	0.09	0.08	0.05	0.05	0.06	0.05
Kesar	-0.05	0.10	-0.22	0.49	-0.05	0.10	-0.07	0.13
Kothari	0.02	0.02	0.04	0.05	0.02	0.02	0.02	0.02
Ponni	0.08	0.13	0.11	0.20	0.08	0.13	0.04	0.07
Rajshree	-0.01	0.05	-0.20	0.52	-0.01	0.05	-0.01	0.06
Sakthi	-0.04	0.05	-0.17	0.20	-0.04	0.05	-0.08	0.10
Sir Shadi Lal	-0.13	0.20	0.03	0.96	-0.14	0.21	-0.05	0.06
Triveni	0.02	0.07	0.04	0.20	0.02	0.07	0.02	0.06
Ugar	-0.01	0.07	-0.13	0.52	-0.01	0.07	0.00	0.04
overall	0.01	0.09	-0.03	0.50	0.01	0.10	0.01	0.08

Table 4: Fixed Effects Panel Regression Results - ROA

	Model I		*Model II*		*Model III*		*Model IV*		*Model V*		*Model VI*		*Model VII*	
	F Stat	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*
Corrected Model	7.3693	0.0000	7.6566	0.0000	7.5228	0.0000	7.7536	0.0000	7.9402	0.0000	6.9836	0.0000	7.2696	0.0000
Intercept	3.1792	0.0771	0.6850	0.4095	1.4414	0.2322	0.4788	0.4903	0.1969	0.6581	0.4168	0.5198	0.0022	0.9628
company	3.8130	0.0000	5.5503	0.0000	3.7746	0.0000	3.9002	0.0000	5.2200	0.0000	5.0272	0.0000	5.3798	0.0000
year	5.8600	0.0000	7.2555	0.0000	7.9426	0.0000	7.9835	0.0000	6.9646	0.0000	8.6835	0.0000	8.6765	0.0000
logTA	1.9143	0.1691	4.5095	0.0357	1.1976	0.2760			0.1163	0.7337	0.4275	0.5144		
logFA	7.3423	0.0077	9.5367	0.0025										
DE Ratio	0.1753	0.6762	0.0820	0.7751										
Current Ratio	1.6380	0.2031	0.0599	0.8070										
Inventory Cycle	0.7679	0.3826			2.9678	0.0875	2.3409	0.1286						
Receivables Cycle	0.3812	0.5381			0.1612	0.6887	0.0001	0.9917						
Payables Cycle	7.0407	0.0091			8.1195	0.0051	6.9116	0.0097						
ATR									3.8759	0.0513				
FATR									16.0136	0.0001				
ITR									0.1669	0.6836	0.9292	0.3370	0.8419	0.3606
RTR									2.5353	0.1140	2.8551	0.0936	2.4423	0.1207
PTR									0.7585	0.3855	0.7019	0.4038	0.9066	0.3429
R^2	65.00%		62.90%		62.50%		62.10%		65.70%		60.70%		60.60%	
adj R^2	56.20%		54.70%		54.20%		54.10%		57.50%		52.00%		52.20%	
	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value
Intercept	0.2232	0.1191	0.0749	0.5507	0.1228	0.3789	-0.0230	0.5660	-0.1149	0.5244	-0.1359	0.3088	-0.0509	0.0684
[Balarampur Chini]	0.1110	0.0353	0.0699	0.1487	0.1110	0.0365	0.0628	0.0299	0.0224	0.6665	0.0379	0.4617	0.0656	0.0246
[Bannari Amman]	0.0899	0.0294	0.0655	0.1064	0.0789	0.0430	0.0518	0.0828	0.0549	0.1496	0.0628	0.1173	0.0806	0.0061
[Dalmia Bharat]	0.0700	0.1089	0.0389	0.3501	0.0730	0.0977	0.0364	0.1995	0.0177	0.6743	0.0208	0.6354	0.0421	0.1505
[DCM Shriram]	0.0477	0.1361	0.0397	0.1896	0.0698	0.0256	0.0602	0.0444	0.0255	0.4115	0.0593	0.0563	0.0648	0.0299
[Dhampur Mills]	0.0778	0.0766	0.0421	0.3182	0.0789	0.0766	0.0425	0.1465	0.0173	0.6871	0.0201	0.6456	0.0410	0.1664
[Dharani]	-0.0018	0.9546	-0.0180	0.5518	0.0104	0.7338	0.0000	0.9989	-0.0191	0.5270	-0.0075	0.8050	-0.0019	0.9484
[Eid Parry]	0.0717	0.1424	0.0503	0.2803	0.1019	0.0356	0.0621	0.0489	0.0307	0.5047	0.0516	0.2754	0.0750	0.0150
[Kesar]	-0.0347	0.2536	-0.0501	0.0796	-0.0222	0.4423	-0.0212	0.4633	-0.0381	0.2602	-0.0226	0.4508	-0.0241	0.4171
[Kothari]	0.0131	0.6810	0.0206	0.4792	0.0237	0.4555	0.0303	0.3318	0.0315	0.3430	0.0384	0.2081	0.0337	0.2539
[Ponni]	0.0173	0.6791	0.0380	0.2933	0.0727	0.0467	0.0939	0.0026	0.0601	0.1573	0.1084	0.0021	0.0968	0.0013
[Rajshree]	0.0186	0.5736	0.0087	0.7749	0.0269	0.4088	0.0139	0.6467	0.0032	0.9149	0.0084	0.7879	0.0151	0.6103

	Model I		Model II		Model III		Model IV		Model V		Model VI		Model VII	
	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value
[Sakthi]	0.0237	0.6324	-0.0208	0.6242	0.0444	0.3733	0.0044	0.8972	-0.0366	0.4293	-0.0235	0.6309	-0.0043	0.9118
[Sir Shadi Lal]	-0.1461	0.0001	-0.1600	0.0000	-0.1151	0.0006	-0.1022	0.0010	-0.1832	0.0000	-0.1474	0.0002	-0.1525	0.0001
[Triveni]	0.0406	0.3705	0.0154	0.7256	0.0663	0.1397	0.0305	0.3166	-0.0168	0.7100	0.0181	0.6839	0.0400	0.1760
[Ugar]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
[year 2009]	0.0475	0.0487	0.0600	0.0123	0.0498	0.0425	0.0563	0.0184	0.0793	0.0021	0.0713	0.0044	0.0683	0.0053
[year 2010]	0.0956	0.0001	0.1046	0.0000	0.0955	0.0001	0.0997	0.0000	0.1159	0.0000	0.1089	0.0000	0.1068	0.0000
[year 2011]	-0.0024	0.9266	0.0140	0.5758	-0.0060	0.8167	0.0003	0.9899	0.0214	0.3739	0.0221	0.3823	0.0196	0.4316
[year 2012]	0.0054	0.8268	0.0246	0.2971	0.0095	0.7033	0.0163	0.5018	0.0374	0.1103	0.0364	0.1343	0.0342	0.1537
[year 2013]	0.0256	0.2768	0.0395	0.0907	0.0214	0.3726	0.0226	0.3444	0.0448	0.0511	0.0337	0.1616	0.0346	0.1491
[year 2014]	-0.0244	0.3085	-0.0197	0.3964	-0.0383	0.1057	-0.0373	0.1143	-0.0121	0.6000	-0.0349	0.1445	-0.0343	0.1498
[year 2015]	-0.0472	0.0552	-0.0466	0.0547	-0.0669	0.0057	-0.0640	0.0078	-0.0363	0.1135	-0.0578	0.0156	-0.0586	0.0140
[year 2016]	0.0031	0.8996	0.0114	0.6209	0.0000	0.9994	0.0043	0.8627	0.0225	0.3154	0.0134	0.5702	0.0131	0.5789
[year 2017]	0.0648	0.0074	0.0807	0.0008	0.0709	0.0040	0.0715	0.0038	0.0730	0.0024	0.0822	0.0012	0.0840	0.0009
[year 2018]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
logTA	0.0456	0.1691	0.0658	0.0357	-0.0244	0.2760			0.0089	0.7337	0.0140	0.5144		
logFA	-0.0791	0.0077	-0.0832	0.0025										
DE Ratio	-0.0008	0.6762	-0.0005	0.7751										
Current Ratio	-0.0094	0.2031	0.0014	0.8070										
Inventory Cycle	0.0001	0.3826			0.0002	0.0875	0.0002	0.1286						
Receivables Cycle	0.0004	0.5381			0.0002	0.6887	0.0000	0.9917						
Payables Cycle	-0.0006	0.0091			-0.0006	0.0051	-0.0005	0.0097						
ATR									-0.0459	0.0513				
FATR									0.0519	0.0001				
ITR									-0.0012	0.6836	-0.0028	0.3370	-0.0027	0.3606
RTR									0.0004	0.1140	0.0005	0.0936	0.0004	0.1207
PTR									0.0008	0.3855	0.0008	0.4038	0.0009	0.3429

a. This parameter is redundant.

Table 5: Fixed Effects Panel Regression Results - ROE

	model I		*model II*		*model III*		*model IV*		*model V*		*model VI*		*model VII*	
	F Stat	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*
Corrected Model	14.3205	0.0000	15.9196	0.0000	1.5299	0.0625	1.4072	0.1110	2.0790	0.0032	1.5265	0.0635	1.3689	0.1302
Intercept	7.2252	0.0082	5.6347	0.0192	4.6250	0.0335	1.4184	0.2360	0.9574	0.3298	4.0640	0.0460	1.1969	0.2761
company	3.0611	0.0005	3.0497	0.0005	1.4236	0.1521	1.1338	0.3356	1.3034	0.2152	1.5608	0.1000	1.2188	0.2702
year	1.6483	0.1093	1.7724	0.0802	1.3705	0.2087	1.2859	0.2512	2.3958	0.0156	1.6005	0.1223	1.5249	0.1464
logTA	0.5046	0.4789	1.4948	0.2238	3.8680	0.0515			0.3495	0.5555	4.5860	0.0342		
logFA	6.9874	0.0093	9.2379	0.0029										
DE Ratio	275.4183	0.0000	286.8361	0.0000										
Current Ratio	0.7296	0.3947	4.7054	0.0320										
Inventory Cycle	0.4199	0.5182			0.2602	0.6109	0.8491	0.3586						
Receivables Cycle	0.3894	0.5338			0.0319	0.8587	0.9579	0.3296						
Payables Cycle	2.0684	0.1530			1.6710	0.1986	0.3115	0.5778						
ATR									8.4805	0.0043				
FATR									0.1006	0.7516				
ITR									0.1382	0.7108	0.3375	0.5623	0.1666	0.6838
RTR									0.3493	0.5556	0.2213	0.6389	0.0937	0.7601
PTR									2.2580	0.1355	1.5295	0.2186	0.8183	0.3675
R^2	78.30%		77.90%		25.30%		22.90%		33.40%		25.30%		22.40%	
adj R^2	72.80%		73.00%		8.80%		6.60%		17.40%		8.70%		6.00%	
	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value
Intercept	1.5371	0.0117	1.1831	0.0242	2.0305	0.0561	0.0470	0.8780	-1.8657	0.1682	1.7231	0.0824	-0.3378	0.1073
[Balarampur Chini]	0.2391	0.2798	0.1225	0.5392	0.8534	0.0337	0.1979	0.3674	0.3687	0.3437	0.9126	0.0177	0.2411	0.2682
[Bannari Amman]	-0.1035	0.5490	-0.1647	0.3255	0.6047	0.0404	0.2369	0.2980	0.5080	0.0753	0.6633	0.0261	0.2306	0.2908
[Dalmia Bharat]	0.1786	0.3312	0.0944	0.5838	0.6762	0.0432	0.1791	0.4089	0.5086	0.1078	0.7351	0.0250	0.2181	0.3216
[DCM Shriram]	-0.0245	0.8557	-0.0480	0.7009	0.3216	0.1712	0.1912	0.4005	0.1283	0.5802	0.3848	0.0935	0.2508	0.2608
[Dhampur Mills]	0.3226	0.0822	0.2342	0.1807	0.7175	0.0339	0.2218	0.3208	0.3652	0.2571	0.7243	0.0263	0.2174	0.3283
[Dharani]	0.1919	0.1565	0.1507	0.2288	-0.2086	0.3676	-0.3493	0.1178	0.0285	0.8998	-0.2054	0.3637	-0.3423	0.1209
[Eid Parry]	0.0829	0.6867	0.0178	0.9264	0.7051	0.0544	0.1625	0.4972	0.4401	0.2017	0.7682	0.0293	0.1997	0.3847
[Kesar]	-0.0750	0.5577	-0.1109	0.3465	-0.1075	0.6230	-0.0938	0.6712	0.3704	0.1435	-0.1151	0.6030	-0.0767	0.7315
[Kothari]	-0.1989	0.1423	-0.1930	0.1117	-0.0446	0.8528	0.0453	0.8493	0.5006	0.0454	0.0442	0.8442	0.1574	0.4784
[Ponni]	-0.4977	0.0054	-0.4513	0.0030	-0.1292	0.6379	0.1600	0.4946	0.5669	0.0750	-0.0458	0.8575	0.2359	0.2885
[Rajshree]	0.4315	0.0024	0.3956	0.0020	0.0287	0.9071	-0.1481	0.5224	0.2701	0.2334	0.1009	0.6638	-0.0602	0.7869
[Sakthi]	0.2064	0.3242	0.0789	0.6539	0.4094	0.2782	-0.1351	0.6004	0.4298	0.2153	0.3833	0.2910	-0.0821	0.7798
[Sir Shadi Lal]	-0.4126	0.0062	-0.4518	0.0019	-0.0778	0.7523	0.0970	0.6767	0.0595	0.8317	-0.0002	0.9994	0.1222	0.6658

	Model I		Model II		Model III		Model IV		Model V		Model VI		Model VII	
	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value
[Triveni]	0.0771	0.6870	0.0105	0.9537	0.6575	0.0536	0.1713	0.4619	0.2579	0.4443	0.7039	0.0344	0.1755	0.4284
[Ugar]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
[year 2009]	0.2210	0.0302	0.2481	0.0124	0.1551	0.4004	0.2438	0.1787	0.4698	0.0139	0.1825	0.3170	0.2546	0.1622
[year 2010]	0.2844	0.0042	0.3036	0.0019	0.2634	0.1426	0.3204	0.0745	0.4386	0.0123	0.2843	0.1096	0.3352	0.0611
[year 2011]	0.0284	0.7950	0.0614	0.5530	-0.0069	0.9719	0.0793	0.6823	0.1178	0.5128	0.0269	0.8858	0.0872	0.6423
[year 2012]	0.0811	0.4339	0.1282	0.1892	0.0308	0.8704	0.1229	0.5076	0.1882	0.2805	0.0533	0.7657	0.1049	0.5599
[year 2013]	0.1954	0.0506	0.2259	0.0201	0.1325	0.4646	0.1500	0.4126	0.2162	0.2055	0.1690	0.3417	0.1470	0.4140
[year 2014]	0.1725	0.0901	0.1863	0.0543	0.2005	0.2615	0.2131	0.2378	0.2314	0.1810	0.2073	0.2402	0.1938	0.2785
[year 2015]	0.1049	0.3104	0.1135	0.2556	-0.2247	0.2145	-0.1847	0.3097	-0.1884	0.2712	-0.2481	0.1575	-0.2299	0.1957
[year 2016]	0.1349	0.1920	0.1660	0.0836	0.0539	0.7748	0.1115	0.5537	0.0858	0.6087	0.0338	0.8470	0.0419	0.8135
[year 2017]	0.1035	0.3053	0.1398	0.1524	0.2581	0.1613	0.2657	0.1538	0.3144	0.0764	0.2733	0.1388	0.2294	0.2170
[year 2018]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
logTA	0.0988	0.4789	0.1568	0.2238	-0.3314	0.0515			0.1151	0.5555	-0.3388	0.0342		
logFA	-0.3260	0.0093	-0.3391	0.0029										
DE Ratio	-0.1273	0.0000	-0.1265	0.0000										
Current Ratio	0.0266	0.3947	0.0516	0.0320										
Inventory Cycle	0.0004	0.5182			-0.0004	0.6109	-0.0008	0.3586						
Receivables Cycle	0.0015	0.5338			-0.0008	0.8587	-0.0040	0.3296						
Payables Cycle	-0.0015	0.1530			-0.0019	0.1986	-0.0008	0.5778						
ATR									0.5073	0.0043				
FATR									-0.0307	0.7516				
ITR									-0.0081	0.7108	0.0127	0.5623	0.0090	0.6838
RTR									-0.0012	0.5556	-0.0010	0.6389	0.0006	0.7601
PTR									0.0098	0.1355	0.0084	0.2186	0.0062	0.3675

a. This parameter is redundant.

Table 6: Fixed Effects Panel Regression Results - RONW

	Model I		*Model II*		*Model III*		*Model IV*		*Model V*		*Model VI*		*Model VII*	
	F Stat	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*
Corrected Model	7.1756	0.0000	7.4575	0.0000	7.3794	0.0000	7.6397	0.0000	7.7562	0.0000	6.8829	0.0000	7.1346	0.0000
Intercept	2.4906	0.1172	0.3982	0.5292	1.0343	0.3112	0.3724	0.5428	0.2011	0.6547	0.7317	0.3940	0.0003	0.9871
company	3.7214	0.0000	5.4860	0.0000	3.6789	0.0000	3.8523	0.0000	5.1190	0.0000	4.9621	0.0000	5.2914	0.0000
year	5.6491	0.0000	7.0174	0.0000	7.6721	0.0000	7.7313	0.0000	6.6107	0.0000	8.4451	0.0000	8.3875	0.0000
logTA	1.9771	0.1623	4.6822	0.0324	0.8515	0.3580			0.1329	0.7161	0.7366	0.3924		
logFA	6.6887	0.0109	8.9617	0.0033										
DE Ratio	0.1272	0.7220	0.0433	0.8355										
Current Ratio	1.6635	0.1996	0.0654	0.7987										
Inventory Cycle	0.8930	0.3466			3.0823	0.0817	2.5654	0.1118						
Receivables Cycle	0.3432	0.5591			0.1493	0.6998	0.0018	0.9659						
Payables Cycle	7.0001	0.0093			7.9398	0.0056	7.1376	0.0086						
ATR									4.4962	0.0360				
FATR									15.6948	0.0001				
ITR									0.1487	0.7004	0.9898	0.3218	0.8675	0.3535
RTR									2.8684	0.0929	3.1776	0.0771	2.5043	0.1161
PTR									0.7003	0.4043	0.6726	0.4137	0.9311	0.3365
R^2	64.40%		62.30%		62.00%		61.80%		65.20%		60.40%		60.10%	
adj R^2	55.40%		53.90%		53.60%		53.70%		56.80%		51.60%		51.70%	
	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value
Intercept	0.2021	0.1741	0.0529	0.6851	0.1018	0.4814	-0.0256	0.5363	-0.1164	0.5347	-0.1688	0.2223	-0.0533	0.0655
[Balarampur Chini]	0.1062	0.0525	0.0639	0.2032	0.1055	0.0549	0.0633	0.0343	0.0172	0.7497	0.0283	0.5944	0.0660	0.0290
[Bannari Amman]	0.0868	0.0429	0.0615	0.1441	0.0745	0.0649	0.0508	0.1000	0.0504	0.2020	0.0572	0.1678	0.0814	0.0075
[Dalmia Bharat]	0.0664	0.1428	0.0344	0.4257	0.0689	0.1309	0.0370	0.2083	0.0127	0.7709	0.0140	0.7586	0.0429	0.1574
[DCM Shriram]	0.0483	0.1461	0.0391	0.2136	0.0698	0.0310	0.0614	0.0473	0.0263	0.4144	0.0587	0.0679	0.0662	0.0324
[Dhampur Mills]	0.0745	0.1025	0.0377	0.3900	0.0753	0.1030	0.0434	0.1518	0.0139	0.7556	0.0136	0.7633	0.0420	0.1709
[Dharani]	-0.0025	0.9407	-0.0200	0.5229	0.0097	0.7602	0.0006	0.9836	-0.0230	0.4647	-0.0091	0.7735	-0.0014	0.9627
[Eid Parry]	0.0680	0.1804	0.0449	0.3531	0.0976	0.0519	0.0627	0.0544	0.0258	0.5888	0.0444	0.3645	0.0762	0.0171
[Kesar]	-0.0337	0.2860	-0.0505	0.0889	-0.0217	0.4684	-0.0208	0.4860	-0.0419	0.2326	-0.0219	0.4800	-0.0240	0.4360
[Kothari]	0.0162	0.6257	0.0229	0.4509	0.0263	0.4248	0.0321	0.3214	0.0303	0.3798	0.0413	0.1911	0.0349	0.2540
[Ponni]	0.0218	0.6148	0.0414	0.2707	0.0765	0.0436	0.0950	0.0032	0.0587	0.1830	0.1135	0.0018	0.0977	0.0017
[Rajshree]	0.0181	0.5972	0.0069	0.8269	0.0265	0.4320	0.0151	0.6290	0.0001	0.9963	0.0069	0.8308	0.0160	0.6028
[Sakthi]	0.0211	0.6822	-0.0261	0.5552	0.0413	0.4234	0.0064	0.8553	-0.0434	0.3671	-0.0296	0.5591	-0.0035	0.9306
[Sir Shadi Lal]	-0.1498	0.0001	-0.1648	0.0000	-0.1196	0.0005	-0.1084	0.0008	-0.1920	0.0000	-0.1548	0.0002	-0.1617	0.0001

	Model I		Model II		Model III		Model IV		Model V		Model VI		Model VII	
	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value
[Triveni]	0.0370	0.4321	0.0101	0.8240	0.0619	0.1828	0.0307	0.3310	-0.0207	0.6578	0.0111	0.8095	0.0407	0.1829
[Ugar]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
[year 2009]	0.0499	0.0462	0.0627	0.0119	0.0522	0.0402	0.0579	0.0191	0.0801	0.0027	0.0744	0.0041	0.0704	0.0056
[year 2010]	0.0979	0.0001	0.1071	0.0000	0.0978	0.0001	0.1015	0.0000	0.1175	0.0000	0.1117	0.0000	0.1088	0.0000
[year 2011]	-0.0003	0.9905	0.0162	0.5332	-0.0042	0.8752	0.0013	0.9600	0.0233	0.3515	0.0248	0.3440	0.0214	0.4076
[year 2012]	0.0073	0.7755	0.0268	0.2738	0.0114	0.6596	0.0173	0.4899	0.0391	0.1077	0.0392	0.1187	0.0363	0.1440
[year 2013]	0.0268	0.2727	0.0413	0.0888	0.0227	0.3602	0.0238	0.3361	0.0461	0.0529	0.0352	0.1579	0.0364	0.1428
[year 2014]	-0.0246	0.3248	-0.0190	0.4302	-0.0382	0.1191	-0.0374	0.1265	-0.0117	0.6245	-0.0348	0.1592	-0.0340	0.1676
[year 2015]	-0.0487	0.0573	-0.0476	0.0586	-0.0681	0.0066	-0.0656	0.0085	-0.0370	0.1203	-0.0585	0.0180	-0.0595	0.0159
[year 2016]	0.0044	0.8607	0.0132	0.5828	0.0015	0.9533	0.0052	0.8378	0.0244	0.2954	0.0155	0.5260	0.0151	0.5377
[year 2017]	0.0669	0.0078	0.0832	0.0009	0.0729	0.0043	0.0734	0.0041	0.0744	0.0028	0.0842	0.0013	0.0866	0.0009
[year 2018]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
logTA	0.0481	0.1623	0.0696	0.0324	-0.0213	0.3580			0.0099	0.7161	0.0190	0.3924		
logFA	-0.0785	0.0109	-0.0838	0.0033										
DE Ratio	-0.0007	0.7220	-0.0004	0.8355										
Current Ratio	-0.0099	0.1996	0.0015	0.7987										
Inventory Cycle	0.0001	0.3466			0.0002	0.0817	0.0002	0.1118						
Receivables Cycle	0.0003	0.5591			0.0002	0.6998	0.0000	0.9659						
Payables Cycle	-0.0007	0.0093			-0.0006	0.0056	-0.0005	0.0086						
ATR									-0.0513	0.0360				
FATR									0.0533	0.0001				
ITR									-0.0012	0.7004	-0.0030	0.3218	-0.0028	0.3535
RTR									0.0005	0.0929	0.0005	0.0771	0.0004	0.1161
PTR									0.0008	0.4043	0.0008	0.4137	0.0009	0.3365

a. This parameter is redundant.

Table 7: Fixed Effects Panel Regression Results - NPM

	Model I		*Model II*		*Model III*		*Model IV*		*Model V*		*Model VI*		*Model VII*	
	F Stat	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*	*F Stat*	*p-value*
Corrected Model	11.0759	0.0000	10.8778	0.0000	9.4721	0.0000	9.4833	0.0000	9.5417	0.0000	8.5049	0.0000	8.8618	0.0000
Intercept	8.2920	0.0047	1.6617	0.1998	4.7569	0.0311	2.4430	0.1206	2.0836	0.1515	0.2875	0.5928	0.5962	0.4415
company	4.3507	0.0000	5.4818	0.0000	4.7047	0.0000	4.6277	0.0000	6.3329	0.0000	6.2053	0.0000	6.9963	0.0000
year	7.4954	0.0000	9.3609	0.0000	9.3708	0.0000	9.2643	0.0000	10.3418	0.0000	9.9074	0.0000	10.0527	0.0000
logTA	3.2669	0.0732	5.2628	0.0235	3.7225	0.0560			1.2567	0.2645	0.3829	0.5372		
logFA	15.4991	0.0001	12.7496	0.0005										
DE Ratio	10.0114	0.0020	10.6587	0.0014										
Current Ratio	0.7638	0.3839	0.1150	0.7351										
Inventory Cycle	0.1416	0.7074			0.1616	0.6884	0.0001	0.9942						
Receivables Cycle	2.3845	0.1252			0.9963	0.3202	0.0850	0.7711						
Payables Cycle	8.4574	0.0043			11.4024	0.0010	7.9319	0.0057						
ATR									1.0228	0.3139				
FATR									4.5739	0.0345				
ITR									0.6619	0.4175	1.3959	0.2397	1.2979	0.2568
RTR									0.0253	0.8739	0.1092	0.7417	0.3482	0.5562
PTR									1.0601	0.3053	0.6989	0.4048	0.5647	0.4538
R^2	73.60%		70.70%		67.70%		66.70%		69.80%		65.30%		65.20%	
adj R^2	67.00%		64.20%		60.60%		59.70%		62.40%		57.60%		57.80%	
	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value	coeff	p-value
Intercept	0.2941	0.0067	0.1020	0.2907	0.2106	0.0611	0.0047	0.8850	-0.2608	0.0766	0.0206	0.8490	-0.0447	0.0486
[Balarampur Chini]	0.1033	0.0093	0.0602	0.1055	0.1225	0.0042	0.0545	0.0202	0.0279	0.5081	0.0796	0.0582	0.0583	0.0140
[Bannari Amman]	0.0861	0.0057	0.0647	0.0385	0.1015	0.0013	0.0634	0.0093	0.0798	0.0105	0.0962	0.0035	0.0825	0.0006
[Dalmia Bharat]	0.0723	0.0279	0.0414	0.1964	0.0902	0.0112	0.0386	0.0939	0.0393	0.2503	0.0592	0.0979	0.0429	0.0721
[DCM Shriram]	-0.0009	0.9688	0.0061	0.7932	0.0320	0.1985	0.0184	0.4434	-0.0074	0.7697	0.0297	0.2358	0.0255	0.2889
[Dhampur Mills]	0.0688	0.0373	0.0361	0.2653	0.0817	0.0227	0.0302	0.2013	0.0135	0.6982	0.0440	0.2149	0.0280	0.2439
[Dharani]	-0.0268	0.2633	-0.0281	0.2260	-0.0241	0.3247	-0.0387	0.1012	-0.0224	0.3618	-0.0358	0.1497	-0.0402	0.0918
[Eid Parry]	0.0537	0.1427	0.0471	0.1884	0.1012	0.0095	0.0449	0.0779	0.0350	0.3491	0.0717	0.0630	0.0537	0.0315
[Kesar]	-0.0744	0.0013	-0.0746	0.0008	-0.0597	0.0109	-0.0582	0.0138	-0.0345	0.2087	-0.0665	0.0069	-0.0652	0.0076
[Kothari]	-0.0202	0.3986	0.0012	0.9573	-0.0031	0.9022	0.0062	0.8057	0.0430	0.1122	0.0092	0.7087	0.0128	0.5926
[Ponni]	-0.0636	0.0437	-0.0177	0.5235	0.0025	0.9305	0.0326	0.1900	0.0579	0.0936	0.0314	0.2631	0.0403	0.0935
[Rajshree]	0.0071	0.7724	0.0116	0.6178	0.0050	0.8467	-0.0133	0.5863	0.0074	0.7639	-0.0039	0.8791	-0.0090	0.7085
[Sakthi]	-0.0411	0.2688	-0.0663	0.0439	-0.0139	0.7271	-0.0704	0.0108	-0.0867	0.0223	-0.0842	0.0357	-0.0989	0.0022
[Sir Shadi Lal]	-0.0924	0.0006	-0.0969	0.0004	-0.0498	0.0581	-0.0317	0.1994	-0.0721	0.0189	-0.0597	0.0575	-0.0558	0.0688

	Model I		Model II		Model III		Model IV		Model V		Model VI		Model VII	
	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value	F Stat	p-value
[Triveni]	0.0189	0.5771	0.0079	0.8140	0.0619	0.0852	0.0115	0.6411	-0.0152	0.6773	0.0378	0.2965	0.0211	0.3775
[Ugar]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
[year 2009]	0.0537	0.0033	0.0679	0.0003	0.0545	0.0059	0.0637	0.0011	0.0930	0.0000	0.0658	0.0012	0.0681	0.0007
[year 2010]	0.0903	0.0000	0.0995	0.0000	0.0898	0.0000	0.0957	0.0000	0.1143	0.0000	0.0984	0.0000	0.1000	0.0000
[year 2011]	-0.0004	0.9819	0.0192	0.3173	-0.0026	0.9004	0.0063	0.7567	0.0249	0.2037	0.0178	0.3855	0.0197	0.3300
[year 2012]	0.0090	0.6251	0.0309	0.0892	0.0118	0.5568	0.0213	0.2777	0.0434	0.0229	0.0320	0.1051	0.0336	0.0850
[year 2013]	0.0325	0.0666	0.0430	0.0170	0.0261	0.1738	0.0280	0.1499	0.0475	0.0112	0.0383	0.0506	0.0376	0.0539
[year 2014]	-0.0038	0.8340	-0.0085	0.6314	-0.0174	0.3567	-0.0161	0.3989	-0.0017	0.9296	-0.0146	0.4505	-0.0150	0.4360
[year 2015]	-0.0210	0.2535	-0.0250	0.1768	-0.0489	0.0115	-0.0448	0.0210	-0.0298	0.1091	-0.0450	0.0201	-0.0445	0.0212
[year 2016]	0.0052	0.7771	0.0126	0.4771	-0.0004	0.9820	0.0055	0.7811	0.0186	0.3076	0.0100	0.6036	0.0102	0.5933
[year 2017]	0.0597	0.0011	0.0742	0.0001	0.0696	0.0005	0.0704	0.0005	0.0805	0.0000	0.0816	0.0001	0.0802	0.0001
[year 2018]	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.	0(a)	.
logTA	0.0446	0.0732	0.0545	0.0235	-0.0344	0.0560			0.0237	0.2645	-0.0107	0.5372		
logFA	-0.0861	0.0001	-0.0739	0.0005										
DE Ratio	-0.0043	0.0020	-0.0045	0.0014										
Current Ratio	-0.0048	0.3839	0.0015	0.7351										
Inventory Cycle	0.0000	0.7074			0.0000	0.6884	0.0000	0.9942						
Receivables Cycle	0.0007	0.1252			0.0005	0.3202	0.0001	0.7711						
Payables Cycle	-0.0005	0.0043			-0.0005	0.0010	-0.0004	0.0057						
ATR									0.0191	0.3139				
FATR									0.0225	0.0345				
ITR									0.0019	0.4175	0.0028	0.2397	0.0027	0.2568
RTR									0.0000	0.8739	0.0001	0.7417	0.0001	0.5562
PTR									0.0007	0.3053	0.0006	0.4048	0.0006	0.4538

a. This parameter is redundant.